

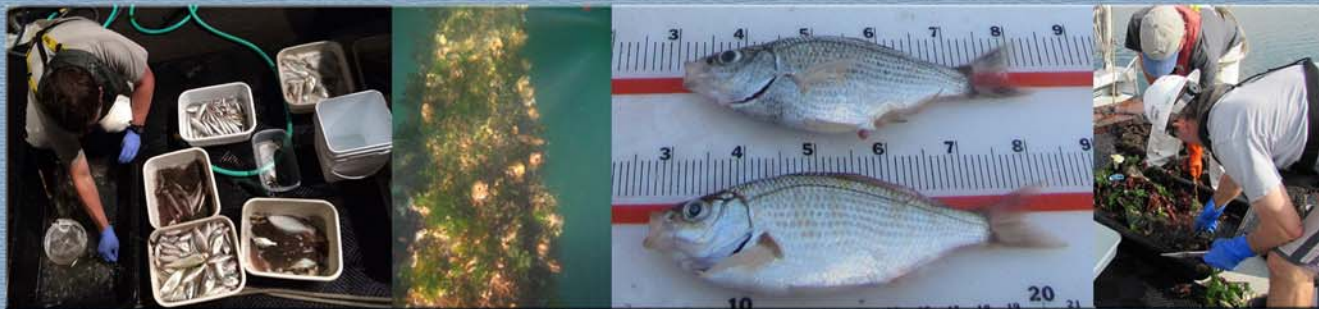


The Port of
LONG BEACH

FINAL REPORT

Harbor Toxics TMDL Special Study

Food Web Sampling



Submitted to:

Port of Los Angeles
Environmental Management Division
425 South Palos Verdes Street
San Pedro, California 90731

and

Port of Long Beach
Environmental Planning
4801 Airport Plaza Drive
Long Beach, California 90815

Submitted by:

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February 2016

Port of Los Angeles
Agreement Number: 13-3141
ADP Number 970203-532 W
Project Directive Number: 18
AFW Project Number 1315102718

Port of Long Beach
Contract Number: HD-8101
Job Task 1413
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amec
foster
wheeler

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
µg/g	micrograms per gram (parts per million)
µg/kg	micrograms per kilogram (parts per billion)
Amec Foster Wheeler	Amec Foster Wheeler Environment & Infrastructure, Inc.
Bight '13	Southern California Bight 2013 Regional Monitoring
BSB	barred sand bass
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
CH	California halibut
cm	centimeter
C/N	Carbon/Nitrogen
COC	chain of custody
CS	Consolidated Slip
DDT	dichlorodiphenyltrichloroethane
DDX	breakdown derivatives of DDT
EA-IRMS	Elemental analysis-isotope ratio mass spectrometry
ft	feet
g	gram
GC/MS	low-resolution gas chromatography/High-resolution mass spectrometry
GPS	global positioning system
Harbor Toxics TMDL	Total Maximum Daily Load for Toxic Pollutants in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters
HPLC	high-performance liquid chromatography
HRGC/HRMS	high-resolution gas chromatography/high-resolution mass spectrometry
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LF	California lizardfish
MDL	method detection limit
mg	milligram(s)
MLLW	mean lower low water
mm	millimeter(s)
MS	matrix spike

ACRONYMS AND ABBREVIATIONS (Cont.)

MSD	matrix spike duplicate
ng/g	nanograms per gram (parts per billion)
NOAA	National Oceanic and Atmospheric Administration
NQ	There is a lack of QC for this analyte
OEHHA	Office of Environmental Health Hazard Assessment
OPR	ongoing precision and recovery
PCB	polychlorinated biphenyl
Physis	Physis Environmental Laboratory
POLA	Port of Los Angeles
POLB	Port of Long Beach
Ports	Ports of Long Beach and Los Angeles
PQAPP	Programmatic Quality Assurance Project Plan
QA	quality assurance
QC	quality control
RPD	relative percent difference
R/V	research vessel
RWQCB	Los Angeles Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SCCWRP	Southern California Coastal Water Research Project
SCMI	Southern California Marine Institute
SD	standard deviation
SIM	selected ion monitoring
SM	Standard Method
SQO	sediment quality objective
SRM	standard reference material
SS	shiner surfperch
SWAMP	Surface Water Ambient Monitoring Program
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
UC	University of California
USEPA	United States Environmental Protection Agency

ACRONYMS AND ABBREVIATIONS (Cont.)

Vista	Vista Analytical Laboratory
WC	white croaker
WGS84	World Geodetic System 1984
Work Plan	Food Web Sampling Work Plan, Greater Los Angeles and Long Beach Harbor Waters (Anchor QEA)
WRAP	Water Resources Action Plan
WS	white surfperch

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1.0 INTRODUCTION

The Water Quality Control Plan for the Los Angeles Region has incorporated a Total Maximum Daily Load (TMDL) for Toxic Pollutants in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Harbor Toxics TMDL) (Los Angeles Regional Water Quality Control Board [RWQCB] 2011). This TMDL includes numeric targets for total polychlorinated biphenyls (PCBs) and dichlorodiphenyltrichloroethanes (DDTs) in both sediments and fish tissues. Because of the size and complexity of the Los Angeles/Long Beach Harbors, the widespread distribution of legacy pollutants within the region, and the potential ecological and financial costs associated with sediment remediation, the need for a technically sound and logistically feasible management strategy for attaining these targets became apparent. To better understand how compliance with Harbor Toxics TMDL targets may be achieved, the Ports of Long Beach and Los Angeles (Ports) are developing a site-specific bioaccumulation model to estimate contaminant transfer between sediments and the aquatic food web under various scenarios. The modeling effort complies with the Tier II Sediment Quality Objective (SQO) methodology for indirect effects under development by the State of California (State Water Resources Control Board [SWRCB] 2010). The ultimate objective of the site-specific bioaccumulation model is to develop a scientifically defensible link between fish contaminant concentrations and contaminant sources, and to provide the Ports with a tool to identify effective remediation options.

The Ports bioaccumulation model will also support and link to the existing Water Resources Action Plan (WRAP) Model that has been developed to better understand the chemical fate and sediment transport mechanisms affecting PCB and DDT concentrations in the Ports. As part of these efforts, a site-specific conceptual model was also developed to highlight contaminant transfer relationships and help identify priority data gaps. Primary data gaps identified in the WRAP Model included a need for enhanced spatial coverage of current PCB and DDT concentrations in the sediments and multiple trophic levels in the food web, as well as foraging behavior patterns and residence time (site fidelity) of local fish species. Additional information on the food web structure and dietary sources of representative species and their prey items in the Ports was also identified as required to enhance the site-specific accuracy of the bioaccumulation model.

The food web model takes into consideration the simultaneous exposure of biota to both water column and sediment sources of PCBs and DDTs. The conceptual site model for bioaccumulation (Anchor QEA 2014a) identifies representative species of interest in the Ports' food web. Specifically, the bioaccumulation model includes a bottom-feeding predator (white croaker [*Genyonemus lineatus*]), an apex predator sport fish (California halibut [*Paralichthys californicus*]), and a prey fish (shiner surfperch [*Cymatogaster aggregata*]). Invertebrates have also been chosen to represent water column and sediment deposit feeding guilds. Bivalves are filter-feeding organisms that attain food items from the water column and mussels (*Mytilus galloprovincialis*) are the primary target organism, while polychaete worms are representative deposit feeders (Figure 1-1). Additional groups of organisms may also be included as part of future model development.

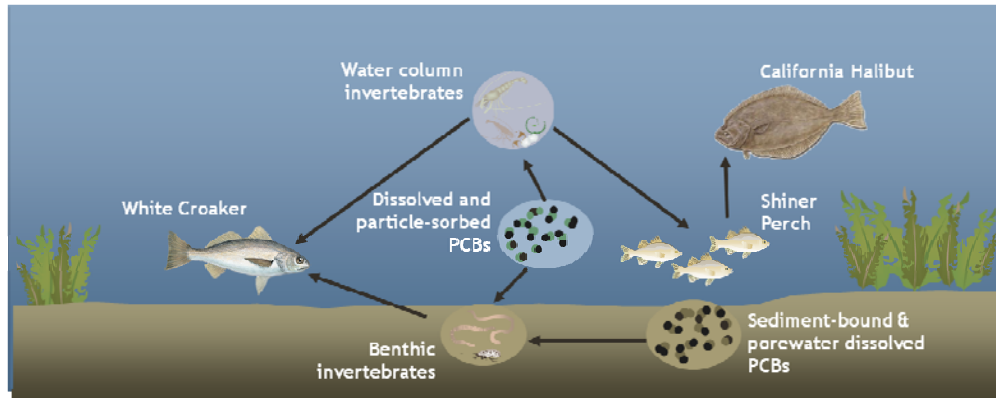


Figure 1-1. Conceptual Site Model For Bioaccumulation

This project was developed and implemented to address data gaps related to the food web tissue chemistry, specifically targeting PCB and DDT concentrations in both resident fish species and bivalves in the waters of the Ports. In addition, otoliths and mesodermal scales were analyzed to evaluate the age structure of captured fish, and stable isotopes in tissues were analyzed to assess fish site fidelity and likelihood of the consumption of local food sources. Methodologies and results for these activities are included in this report.

Bioaccumulation of PCBs and DDTs in sediments, associated polychaete worms, and the water column at similar locations was performed by Environ as a separate stand-alone study. This study was performed during the same time period and is reported under separate cover.

1.1 Project Location and Description

Fish and bivalve tissue sampling locations were selected from areas where critical data gaps in spatial and temporal trends were identified. Sampling locations were also selected to represent a wide range of sediment PCB and DDT concentrations on the basis of existing data (Anchor QEA 2014a). Target fish were collected from five sampling locations, including Consolidated Slip, Fish Harbor, Los Angeles Inner Harbor, Los Angeles Outer Harbor, and Long Beach Inner Harbor (Figure 1-2). Station locations, coordinates, and the number of trawls performed at each site are summarized in Table 1-1. Bivalves were collected at four stations in proximity to the fish collections at Consolidated Slip, Los Angeles Outer Harbor, and Long Beach Inner Harbor (Figure 1-2). Fish and mussel collections in the Los Angeles Inner Harbor were spatially distinct, however, with fish collected in the enclosed bay east of Pier 300, and mussels collected at the intersection of Pier One and the East Channel at the southern end of the Borax terminal.

**Table 1-1.
 Food Web Study Sampling Locations**

Sample ID	Organism Collected	Port	Sample Coordinates WGS87 ^c		Number of Trawls
			Latitude	Longitude	
CS-03 (Consolidated Slip)	Fish	POLA	33.77488	-118.24622	5
FH-08 (Fish Harbor)	Fish	POLA	33.73098	-118.26553	8
IA-07 (LA Inner Harbor)	Fish	POLA	33.73992	-118.24718	4
OA-06 (LA Outer Harbor)	Fish	POLA	33.71470	-118.25425	13
IB-05 (LB Inner Harbor)	Fish	POLB	33.75297	-118.22915	14 ^a
CS-03 (Consolidated Slip)	Oysters	POLA	33.77512	-118.24678	^b
IA-02 (LA Inner Harbor)	Mussels	POLA	33.75405	-118.26782	^b
OA-01 (LA Outer Harbor)	Mussels	POLA	33.71392	-118.27362	^b
IB-04 (LB Inner Harbor)	Mussels	POLB	33.75556	-118.22428	^b

Notes:

LA = Los Angeles; LB = Long Beach; POLA = Port of Los Angeles; POLB = Port of Long Beach; WGS84 = World Geodetic System 1984

a. Trawls 1, 2, and 9 resulted in no recorded catch due to a trawl snag/failure.

b. Bivalves were collected by hand and did not require the use of a trawl.

c. Latitude/longitude listed is the "Net Over" location for each site's first trawl.

1.2 Target Species

1.2.1 Fish


The food web sampling program targeted representative primary indicator fish species for chemical analysis, including white croaker (WC), California halibut (CH), shiner surfperch (SS). In the event that these target species were unattainable at the sampling locations, the following secondary species were identified as acceptable alternatives for tissue analyses: white surfperch (WS) (*Phanerodon furcatus*), topsmelt (*Atherinops affinis*), Northern anchovy (*Engraulis mordax*), California lizardfish (LF), (*Synodus lucioceps*), and barred sand bass (BSB) (*Paralabrax nebulifer*).

White croaker and California halibut were selected as target species because individuals are abundant within the waters of the Ports and are frequently caught and consumed by local anglers. In addition, both species have previously been found to contain elevated concentrations of PCBs and DDTs in their tissues. For white croaker, tissue contaminant concentrations exceed fish consumption advisory levels, and as a result, the Office of Environmental Health Hazard Assessment (OEHHA) recommends that white croaker caught from in waters between Ventura and San Mateo Point not be consumed (OEHHA 2009). OEHHA also recommends reduced servings of California halibut due to documented PCB and DDT concentrations in their tissues. Shiner surfperch was selected because it is a representative prey species consumed by both white croaker and California halibut, is abundant within the harbors, and was also identified by OEHHA (2009) as a species that should have reduced consumption in the region due to elevated PCB and DDT concentrations.

1.2.2 Bivalves

Bivalves derive most of their food from the water column and represent a lower trophic level in the food chain than fish. Mussels were the primary target organism because they are abundant in the Ports (Science Applications International Corporation [SAIC] 2010), are a species used for region-wide monitoring of bioaccumulative compounds (National Oceanic and Atmospheric Administration [NOAA] Status and Trends Mussel Watch Program), and are consumed by the representative predator species. Where mussels were not present, the Pacific oyster, *Crassostrea gigas*, was collected in their place.



amec foster wheeler  Project Vicinity
Approximate Fish Trawl Areas & Bivalve Collection Sites
Food Web Sampling – Greater Los Angeles and Long Beach Harbor Waters
October 2014

0 1,000 Meters 

Figure 1-2. Overview of Sampling Locations in the Ports of Los Angeles and Long Beach

Notes: CS-03 = Consolidated Slip 03; FH-08 = Fish Harbor 08; IA-07 = LA Inner Harbor 07; IB-05 = Long Beach Inner Harbor 05; OA-06 = LA Outer Harbor 06

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2.0 SAMPLE COLLECTION PROCEDURES

2.1 Sample Collection

Field collection efforts for both fish and bivalves occurred over several days in the fall of 2014. Fish trawls in both ports were conducted from October 10 through October 14, 2014. Bivalves were collected during low tides on October 22, 2014, in the Port of Los Angeles (POLA) and on October 27, 2014, in the Port of Long Beach (POLB). A complete catch summary is provided in Appendix A. Field photo logs showing all individuals captured for chemical analysis are provided in Appendix B. Summary tables and Photo logs of additional bycatch species are provided in Appendix C. Field data sheet logs are provided in Appendix D. Representative photographs taken during the sampling efforts are provided in Figure 2-1.



Figure 2-1. Field Collection Photographs

Notes: Clockwise from top left: Collecting mussels from pier pilings in the POLB inner harbor; collecting oysters at the Consolidated Slip; tractor tire “bycatch” in the Consolidated Slip; sorting catch by species on the deck of the Research Vessel (R/V) Early Bird II; weighing and measuring target species; and counting and sorting the catch.

2.2 Fish Collection and *In Situ* Processing

Fish were collected aboard the Research Vessel (R/V) Early Bird II using a semi-balloon, otter trawl with a 7.6-meter head-rope following methods in the *Southern California Bight 2013 Regional Marine Monitoring Survey (Bight '13) Field Operations Manual* (Bight Coastal Ecology Commission 2013). Multiple trawls were performed in the same general target areas until sufficient target species were captured.

Trawls were generally 10 minutes in duration, at a speed of 3 to 5 knots. Trawl locations were recorded both manually at multiple time points throughout each trawl using a hand-held GPS, and continuously using a GPS-enabled tablet computer using software developed for the regional Bight monitoring program by SCCWRP. The deployment location for the first trawl (net over) at each site is presented in Table 1-1. Areas highlighting the full extent of the trawl locations are shown in Figures 4-1 through 4-5. A database of positions recorded using the tablet is available as an electronically delivered database (EDD).

Once the catch was onboard the vessel, fish were sorted by species, and primary and secondary target species were kept for processing, while all other individuals were counted, identified, photographed, and then returned to the harbor. A goal of the program was to capture a minimum of 10 individuals of each target species at each sampling location. If the weight of an individual fish was less than 60 grams (g), multiple individuals of the same species were captured and composited to meet the minimum target tissue mass for chemical analysis. While availability ultimately determined the size of individuals kept for analyses, larger individuals, including legal-sized halibut, were targeted where possible to better represent size classes that may be caught and retained for human consumption. Regulations for California halibut require retained fish to be at least 22 inches or 559 millimeters (mm) total length (California Department of Fish and Game [CDFG] 2012); however, legal-size halibut were not abundant in the harbor and therefore collection of juvenile halibut was deemed acceptable for this program following concurrence and permission from the CDFG. There is currently no legal size limit for white croaker; however, a recommended minimum total length of 160 mm was used as a guide based on a minimum size criterion used for an ocean fish contaminant survey performed from 2002 to 2004 in southern California (NOAA 2007). Collection of adult shiner surfperch (i.e., second year age-class with a target length of 88 mm [Odenweller 1975]) was targeted for this species. In the event that primary target species were not caught in sufficient quantities to fulfill weight and quantity targets, secondary species were retained for analyses. Any additional target species collected after achieving goals for the numbers and mass, as well as non-target species, were returned to the harbor as soon as possible to maximize their chance of survival. For bycatch data and field photo logs of bycatch, see Appendix C.

Processing and tissue preservation were performed in accordance with the *Field Operations Manual* and *Bioaccumulation Workplan* published for the Bight '13 Regional Marine Monitoring Survey (SCCWRP, 2013). Fish were processed in the field according to the following steps:

1. After each trawl net was brought onboard, the entire catch was emptied into a large sorting tub filled with site water. A first pass to sort out target and non-target species was conducted, with non-target species quickly counted, identified, photographed, and then returned to the harbor as soon as possible.
2. After the trawl catch was sorted, target species were sized, and then retained in separate tubs with site water until desired numbers and biomass of each target species were achieved at each sampling location.

3. Processing began once the desired number and biomass for each target species were reached at each sampling location. Fish were individually recorded on field data sheets, measured (total length in mm), and weighed (wet weight in grams using calibrated spring scales). Next, using forceps, 10 mesodermal scales were carefully removed from behind the origin of the left pectoral fin below the lateral line, and scale samples were placed in small envelopes and marked with the sampling location information and physical details of the fish they were taken from. Scales were removed from all retained fish in the field in accordance with well-established methods (Chilton and Stocker 1987; Prentice and Dean 1991; Hoxmeier et al. 2001).
4. Fish were then photographed with associated identification information, rinsed with site water, and wrapped in heavy-duty aluminum foil that were pre-rinsed with acetone.
5. Each foil wrapped fish was placed in a ziplock bag with a waterproof tag listing collection and sample identification information. The outside of the ziplock bag was also labeled clearly with the same information.
6. Samples were then stored in an onboard chest freezer on the R/V Early Bird II. Periodically during the field effort, fish were transferred from the field freezer into ice chests with wet ice for transport to the Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) office in San Diego, where samples were then stored in a project-dedicated chest freezer until transfer to the analytical laboratories.
7. Following a review of the total catch, a summary of specific samples for chemical analysis was prepared. Samples selected for analysis were shipped frozen in ice chests with wet ice to Vista Analytical Laboratory (Vista) for initial processing and high-resolution analysis of PCBs.
8. At Vista, fish were resorted as directed by Amec Foster Wheeler and Anchor QEA for optimum replicate groupings. Preparation of select skin-off filets and offal samples, and homogenization of the fish tissue was also performed at Vista prior to chemical analysis. Subsampled aliquots of fish tissue were then sent to three subcontractor laboratories (Eurofins Calscience and Physis Environmental Laboratory ([Physis]), and the Southern California Marine Institute (SCMI) for additional specialty analyses as described in Section 3.0.
9. Transfer of all samples from each location was carefully documented on chain of custody (COC) forms (see Appendix J).

2.3 Bivalve Collection and *In Situ* Processing

The recommended mussel collection methods were as consistent as possible with those used by the ongoing State Mussel Watch Program (SWRCB 2011). Because of their known abundance in the harbor, mussels were targeted for collection (SAIC 2010); however, at sites where mussels were absent, Pacific oysters were collected as a secondary target species.

Bivalves were hand-collected from piers or quay walls at low tide by snorkeling or wading. Field personnel wore Nitrile gloves while collecting and handling the organisms.

Mussels between 5 and 8 centimeters (cm) in size were collected within a 400-meter radius of each sampling location. There was no specified target size for oysters, although an attempt was made to collect specimens of relatively similar size. Five spatially distinct replicate locations were sampled at each site. Each replicate was composed of approximately 32 to 70 mussels, or 12 oysters. Each bivalve was measured (total shell length) and measurements recorded into field logs. The GPS coordinates of the midpoint of each station were presented in Table 1-1. Details of the total individuals sampled per composite and the size range collected are included in Table 4-3 in Section 4. All bivalves were collected at a depth of approximately +1.0 feet (ft) above mean lower low water (MLLW) per the NOAA Status and Trends State Mussel Watch Program methodology. Temperature, salinity, and other relevant observations were also recorded at each site (see Appendix D). Bivalve shells were scrubbed and rinsed free of debris using site water, wrapped in acetone rinsed sterilized aluminum foil, and placed in labeled plastic bags. Bivalves were then placed in a cooler with wet ice and transported to the Amec Foster Wheeler office in San Diego on the day of collection for storage in a chest freezer prior to final sorting and distribution to Vista and other analytical laboratories.

3.0 SAMPLE ANALYSES

Composite tissue samples were prepared by Vista. Vista then performed high-resolution analysis of PCBs and percent lipids on a subsample of each composite, and sent out additional subsamples of tissue to: (1) Eurofins Calscience for low-resolution analysis of PCBs and DDTs; (2) Physis for stable isotope preparation with subsequent analysis by University of California (UC) Davis; and (3) SCMI for analysis of fish otoliths for age determination.

Skin-off fillets were prepared for homogenization (and compositing where appropriate) at Vista (n=10 replicates per fish species per site). The offal (fish tissue remaining after removal of the skin-off fillet, including the head) was also saved for additional chemistry and/or otolith analyses, depending on the species. For California halibut and white croaker, nine offal samples per sampling location were sent to SCMI for extraction and analysis of the sagittal otoliths to determine approximate age and growth rates of each fish. One California halibut and white croaker offal per sampling location were also homogenized and analyzed for the analytes described in Section 3.1 and listed in Table 3-1. As mentioned previously, at some sites, California lizardfish were also analyzed in the same manner where insufficient California halibut were captured. For all shiner surfperch and white surfperch retained for analysis, the 10 replicates composed of varying numbers of fish, depending on their size, to meet the desired 60-g mass for analysis. Given their smaller size, these fish species were homogenized whole for chemical analysis without preparing filets. California halibut and white croaker scales were archived as a backup for otolith analyses. Shiner surfperch and white surfperch scales were analyzed for age and growth rate because otoliths were not removed from this species due to their small size. A summary of analyses for this study is presented in Table 3-2.

Bivalves were shucked at Vista and the extracted tissue was homogenized in the composite groups they were collected in and analyzed for the parameters described in Section 3.1 and Table 3-1.

Tissue samples were submitted by Vista to Physis to prepare them for analysis of stable isotopes by the Stable Isotope Laboratory at UC Davis. Preparation consisted of drying and weighing a small subsample of homogenized tissue followed by encapsulation in small labeled tin containers as described in Section 3.1.2.

3.1 Laboratory Analytical Methods

All tissue samples were analyzed for all 209 individual PCB congeners by high-resolution gas chromatography/high-resolution mass spectrometry (HRGC/HRMS) via United States Environmental Protection Agency (USEPA) Method 1668C using a ZB-1 GC column. This method achieved a reporting limit of 0.00005 to 0.025 micrograms per kilogram ($\mu\text{g}/\text{kg}$) during this program, depending on the specific congener and sample. A subset of tissue samples was also analyzed for PCB congeners using a more traditional “lower resolution” method (USEPA Method 8270C) via gas chromatography/high-resolution mass spectrometry (GC/MS) with a reporting limit of 0.2 to 0.8 $\mu\text{g}/\text{kg}$ during this study. Lipids, DDT, and its breakdown derivatives (collectively referred to as DDX), total solids, and stable isotopes of carbon and nitrogen were also analyzed in all tissue samples. Tissue analytes, analytical methods, target reporting limits,

and associated analytical facilities are listed in Table 3-1. All samples were held and analyzed according to the appropriate methods and holding times for each analysis described in the Programmatic Quality Assurance Project Plan (PQAPP, Anchor QEA, 2013).

**Table 3-1.
 Chemistry, Isotope and Age Analytical Methods, Target and Actual Reporting Limits, and
 Associated Analytical Laboratories**

Parameter	Analytical Method	Target Reporting Limits	Actual Reporting Limits	Laboratory
PCB Congeners (ng/g or µg/kg wet weight)				
All 209 PCB congeners – High Resolution	USEPA 1668C	0.001	0.00005 – 0.025	Vista
All 209 PCB congeners – Low Resolution	USEPA 8270C SIM	0.4	0.2-0.8	Eurofins Calscience
DDT and derivatives (ng/g or µg/kg wet weight)				
2,4'-DDD, 2,4'-DDE, 4,4'-DDD and 4,4'-DDE	USEPA 8081A / 8270C / 8270D TQ	4.0	0.2-10	Eurofins Calscience
2,4'-DDT	USEPA 8081A / 8270C / 8270D TQ	6.0	0.2-2.0	
4,4'-DDT and 4,4'-DDMU	USEPA 8081A / 8270C / 8270D TQ	10.0	0.2-2.0	
Conventionals (%)				
Lipids ^a	NOAA 1993a / Gravimetric	0.5	0.5	Vista
Total solids (% wet weight)	SM 2540G / USEPA 160.3	0.1	0.1	Eurofins Calscience
Stable Isotopes				
¹³ C/ ¹² C and ¹⁵ N/ ¹⁴ N	EA-IRMS	N/A	N/A	UC Davis
Other Analyses				
Age	Growth Ring Analysis via Otoliths/Scales	N/A	N/A	SCMI

Notes:

µg/kg = micrograms per kilogram; % = percent; EA-IRMS = Elemental Analysis – Isotope Ratio Mass Spectrometry; N/A = not applicable; ng/g = nanograms per gram; NOAA = National Oceanic and Atmospheric Administration; PCB = polychlorinated biphenyl; SIM = Selected Ion Monitoring; SM = Standard Method; UC = University of California; USEPA = United States Environmental Protection Agency

a. Data are reported uncorrected for lipids or moisture content.

**Table 3-2.
 Summary Table of Age/Growth Analyses, Target Biomass, Tissue Types, and Chemical
 Analyses Performed for Each Target Species**

Target Species	Tissue Used for Age/Growth	Number of Replicates of Fish and/or Composites	Tissue Type for Chemical Analyses	Analyses
Shiner surfpercha	Scales Only	10	Whole Body	PCBs (high resolution, DDX, lipid, total solids, Carbon/Nitrogen (C/N) stable isotopes)
California halibutb	Saggital Otoliths, Scales	9	Skin-off Filet	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes)
	Scales	1	Skin-off Filet	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes, PCBs (low resolution))
			Offal	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes)
White croakerb	Saggital Otoliths, Scales	9	Skin-off Filet	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes)
	Scales	1	Skin-off Filet	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes, PCBs (low resolution))
			Offal	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes)
Bivalves	--	5	Soft Tissue	PCBs (high resolution, DDX, lipid, total solids, C/N stable isotopes)

Notes:

PCB = polychlorinated biphenyl

a. White surfperch replicates were also used to supplement when insufficient shiner surfperch were caught

b. California lizardfish replicates were also used to supplement testing when insufficient California halibut or white croaker were caught.

3.1.1 Fish and Bivalve Tissue Processing and Preparation Methods

All whole fish were received at Vista in foil, sorted, and reconciled with the COC forms. After the foil was carefully unwrapped, each fish was weighed and measured once again. The fish were then rinsed with reagent-grade water to remove loose scales and mucus. Select scales from designated fish were carefully removed, dried, and stored following the same procedure described for collections in the field highlighted in Section 2.2.

Fish were processed according to the project specific requirements prior to homogenization. The heads were removed from selected fish and stored frozen prior to shipment. When directed, the fish were filleted and, as necessary, the offal was segregated and combined as instructed for analysis. The remaining fish were processed whole.

Mussels and oysters were also rinsed with reagent-grade water and then shell length was measured. The bivalves were then shucked and the soft tissue carefully extracted with clean stainless-steel utensils. Tissues were combined and weighed prior to homogenization to ensure a minimum of 60 g of tissue for analysis.

The whole fish, fish offal, fish filet, and bivalve tissues were thoroughly ground to ensure proper homogenization, and transferred to certified-clean amber glass jars. Samples were aliquoted into three portions, one processed and stored at Vista, and the remaining two shipped to outside laboratories (Eurofins Calscience and Physis) for additional processing and analysis.

All grinding parts and components were carefully cleaned prior to homogenization, and between each sample. They were washed with soap and water and rinsed with high-performance liquid chromatography (HPLC) water. They were then rinsed with the following solvents: acetone → toluene → hexane → methylene chloride.

3.1.2 Stable Isotope Analysis Processing and Preparation Methods

As described above, Vista performed the initial processing of the fish samples and a sub aliquot was sent to Physis to prepare and process for stable isotope analysis by the UC Davis Stable Isotope Laboratory. The following preparation methods were provided by Physis for the stable isotope analysis.

The sample aliquots were first dried in an oven at 50-60 degrees Celsius (°C) overnight. Next, the samples were ground and weighed. Thorough grinding and homogenizing of the tissue sample were required to ensure a representative sample. Next, the samples were encapsulated in tin for subsequent analysis (the tin is an important combustion catalyst). The desired sample mass to be weighed and inserted into the tin capsule depends on the amount of carbon and nitrogen in the dried material, with a target weight of ~1 milligram (mg) +/- 0.2 mg for typical tissue samples. Each tin capsule containing dried and ground tissue was weighed and logged into a 96-well clean tray. The tray was then shipped to the UC Davis Stable Isotope Laboratory for ¹³C/¹²C and ¹⁵N/¹⁴N isotope analysis via Elemental Analysis – Isotope Ratio Mass Spectrometry (EA-IRMS) (Table 3-1).

3.1.3 Scale and Otolith Processing and Preparation Methods

The primary method to determine fish age is an analysis of the annual rings on the individuals' otoliths, a structure in the saccule or utricle of the inner ear. The fish that were aged by otolith analysis for this program included California halibut, California lizardfish, and white croaker. At SCMI, otoliths were removed from the heads and, using a sectioning saw, were precisely shaved for reading under a microscope.

Mesodermal scale analysis is considered a less precise method for fish age determination. Counting the number of annuli (rings) on a scale provides the fish age and the spacing between the rings is proportional to the growth rate of the fish. However, scales can have a bias to underestimate the age of older fish and can be somewhat unreliable. Furthermore, according to some projects performed at California State University at Long Beach, the scale rings can vary widely on the same fish, and the agreement with the real age of the fish was less than desired. The resolution of the “bands” on scales is also more subjective than analysis of otolith rings. For this project, scales were required by the Work Plan for both shiner surfperch and white surfperch because of their small heads and otoliths. Extracting and reading the pin-head-sized otoliths was not practical for this project. Scales were also collected and read for the small subset of fish that were selected for analysis of both fish fillets and offal, including the head, for chemical analysis. The scientists at SCMI did their best to determine scale age of the fish by reading 3 of the 10 collected scales chosen at random from the scale envelope. The same three scales were read by two scientists independently and both sets of readings are presented in Appendix H. When there was a disparity in scale ring counts between replicates of the same fish, the final scale count was determined by taking the mode (the value that appears most often in the set of data). If the mode shows two scale readings with the same frequency count, the larger of the scale readings is chosen for the age. However, note that after some investigation by SCMI, no established protocol to address this disparity in replicates could be found. For future projects, age determination via the mesodermal scale analysis possibly should be reconsidered in favor of the otolith method.

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4.0 RESULTS

Tissue collection for both targeted fish and bivalves occurred over the course of several field days at five sampling locations throughout Los Angeles and Long Beach Harbors in October 2014. Figures 4-1 through 4-5 show the overall areas trawled at each station, as well as the general location of bivalve collections where performed. The number of trawls performed at each site varied depending on when desired targets were achieved. For both primary and secondary target species of fish, the total number of individuals caught and their total length and weight ranges are summarized in Tables 4-1 and 4-2. The number and average length of individual bivalves in each composite replicate per site are provided in Table 4-3. For full catch summary tables and field photo logs of each replicate (for both fish and bivalves), see Appendices A and B, respectively. Note that to optimize test fish replicate groupings with regard to size and potential age, some fish replicates were regrouped at Vista under the direction of Anchor QEA staff after sampling was complete. The photo logs in Appendix B represent the fish replicates and groupings at the time of sampling on the vessel and are provided for reference only.

Individuals from the primary target species white croaker were collected at all sampling locations. Shiner surfperch were captured at Fish Harbor (Site FH-08), Los Angeles Outer Harbor (Site OA-06), and Long Beach Inner Harbor (Site IB-05). California halibut were caught at all targeted locations exception the Los Angeles Inner Harbor (Site IA-07). Secondary target species, including white surfperch and California lizardfish, were caught and analyzed when necessary biomass of primary species was not attainable at a sampling location. These two secondary target species were utilized in some capacity at each sampling location. Barred sand bass were caught at some stations, but archived only and not included for analysis at this time. California lizardfish were caught at three sampling locations: Consolidated Slip; Los Angeles Outer Harbor; and Long Beach Inner Harbor; white surfperch were caught at all five target sampling locations.

For bivalves, the primary target, mussels, were collected from stations at Los Angeles Inner Harbor, Los Angeles Outer Harbor, and Long Beach Inner Harbor. The secondary target bivalve species, Pacific oysters, were collected and analyzed from Consolidated Slip because of the lack of mussels at this location. Pacific oysters are much larger in size than the mussels; thus, fewer numbers were required to achieve the desired mass for this species (Table 4-3).

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Figure 4-1. Trawl Area for Fish Collected in Consolidated Slip (Trawl ID: CS-03) and Associated Sampling Location for Oysters (Bivalve ID: CS-03)

Notes: 4 trawls were conducted to attain required fish targets for this site.

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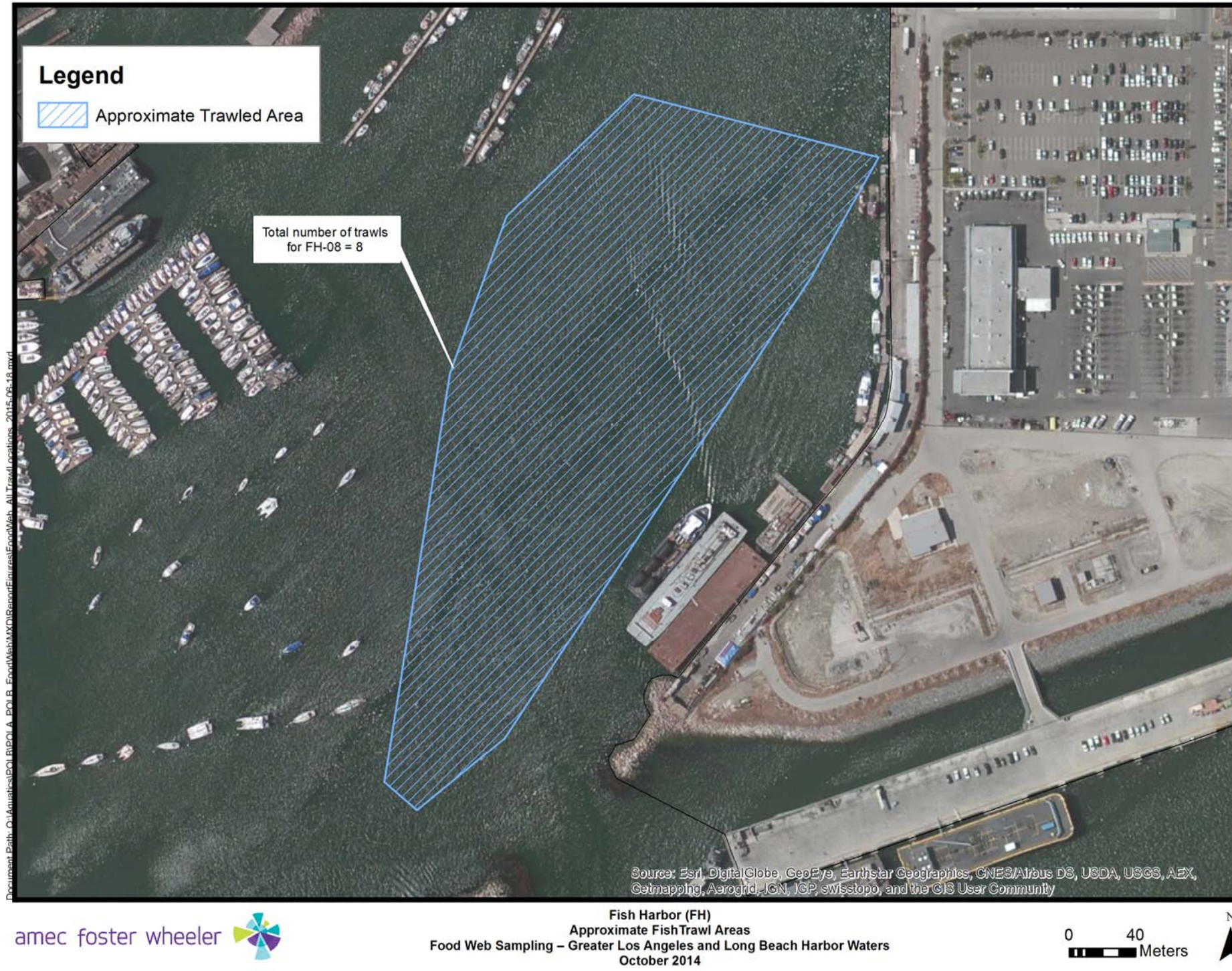


Figure 4-2. Trawl Area for Fish Captured in Fish Harbor (Trawl ID: FH-08)

Notes: 8 trawls were conducted to attain required fish biomass for this site; no bivalve collections occurred in Fish Harbor.

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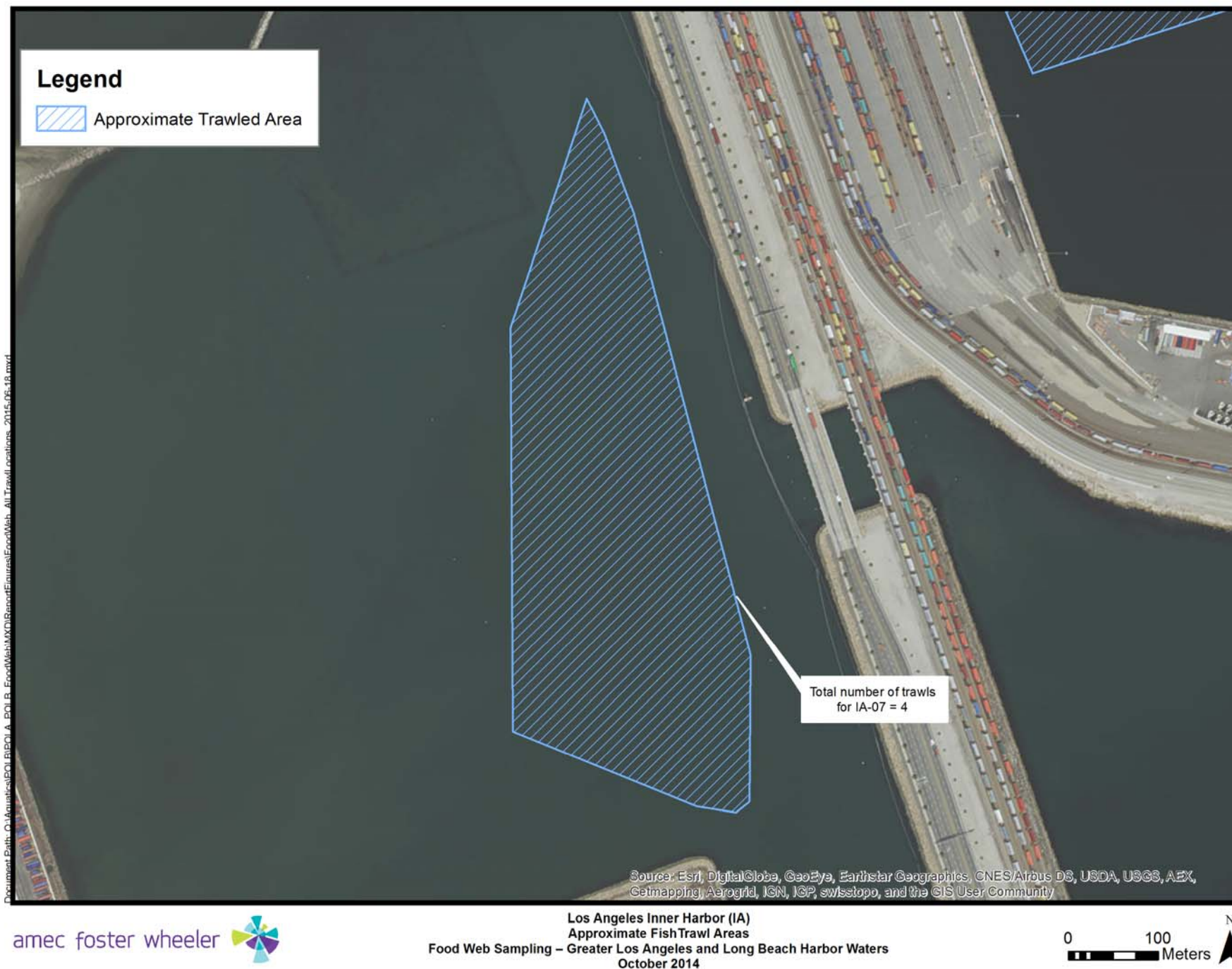


Figure 4-3. Trawl Area for Fish Captured in Los Angeles Inner Harbor (Trawl ID: IA-07)

Notes: 4 trawls were conducted to attain required fish targets for this site. The bivalve sampling location for LA Inner Harbor was located outside this view near the intersection of Pier One and the East Channel at the southern end of the Borax terminal with a Bivalve ID of: IA-02, as shown in Figure 1-2.

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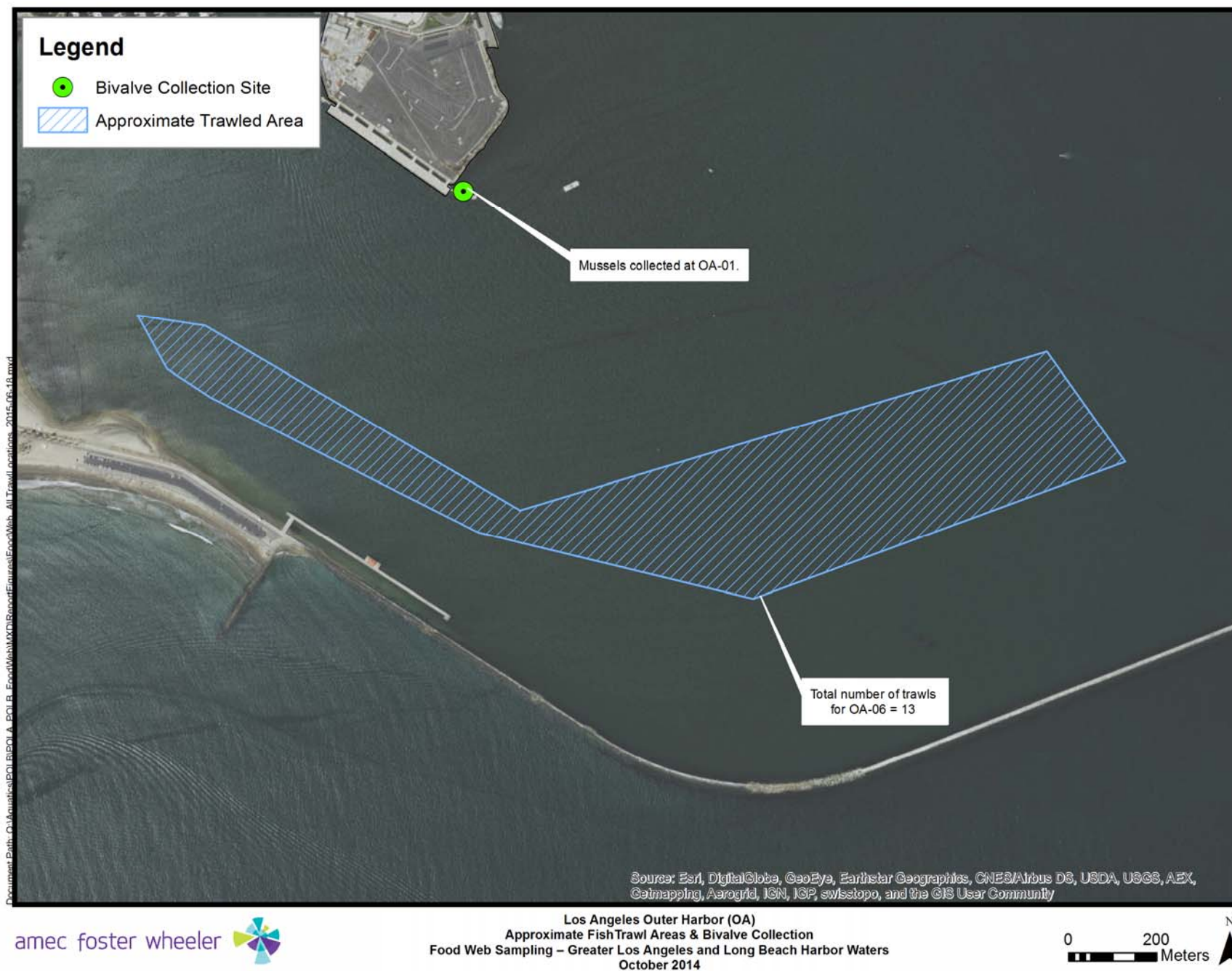


Figure 4-4. Trawl Area for Fish Captured in Los Angeles Outer Harbor (Trawl ID: OA-06) and Associated Sampling Location for Mussel Collections (Bivalve ID: OA-01)

Notes: 13 trawls were conducted to attain required fish targets for this site.

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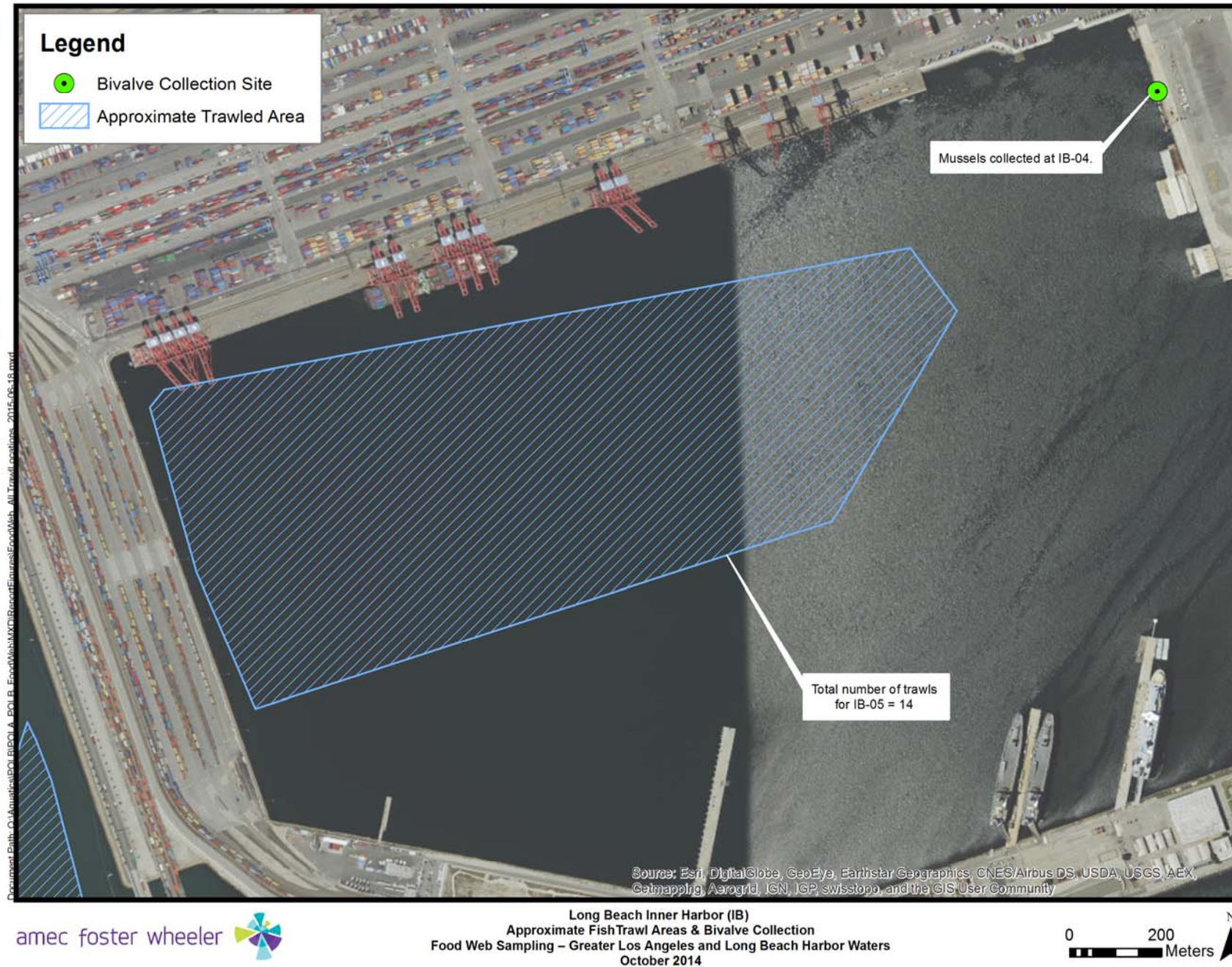


Figure 4-5. Trawl Area for Fish Collection in Long Beach Inner Harbor (Trawl ID: IB-05) and Associated Sampling Location for Mussel Collections (Bivalve ID: IB-04)


Notes: 14 trawls were conducted to attain required fish biomass for this site.

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**Table 4-1.
 Total Fish Catch by Species and Site**

Site Number	Site Identification	Primary Target Species ^a			Secondary Target Species ^a		
		White Croaker	California Halibut	Shiner Surfperch	White Surfperch	California Lizardfish	Barred Sand Bass
CS-03	Consolidated Slip	3 (3) ^b	14 (10)	0	10 (10)	2 (1)	17 (9)
FH-08	Fish Harbor	17 (10)	10 (10)	1 (1)	18 (9)	0	1
IA-07	LA Inner Harbor	15 (10)	0	0	3 (3)	0	0
OA-06	LA Outer Harbor	16 (10)	10 (10)	17 (3)	23 (7)	4 (2)	0
IB-05	LB Inner Harbor	17 (10)	2 (2)	18 (6)	4 (4)	8 (5)	15 (8)
Total for Analysis		65 (40)	36 (32)	36 (10)	55 (30)	14 (8)	0

Notes:

 No fish targeted per the Work Plan scope

Bold values are those submitted for analyses

X (Y) Number of Individuals (Number of Replicates) - Excludes archived fish

a. In some cases a single replicate consists of multiple fish to ensure a minimum of 60 grams of tissue for chemical analysis.

b. Saved for Anchor QEA for a separate compliance monitoring related project.

**Table 4-2.
 Total Length and Weight Ranges of Fish Caught By Site**

Site #	Site ID	Primary Target Species						Secondary Target Species					
		White Croaker		California Halibut		Shiner Surfperch		White Surfperch		California Lizardfish		Barred Sand Bass	
		Total Length (cm) ^a	Weight (g) ^b	Total Length (cm) ^a	Weight (g) ^b	Total Length (cm) ^a	Weight (g) ^b	Total Length (cm) ^a	Weight (g) ^b	Total Length (cm) ^a	Weight (g) ^b	Total Length (cm) ^a	Weight (g) ^b
CS-03	Consolidated Slip	25-27	200-255	13-49	20-1250	--	--	18-23	75-160	20-27	50-110	11-24	14-150
FH-08	Fish Harbor	17-25	96-181	19-41	61-680	12	20	10-22	14-116	--	--	13-21	16-111
IA-07	LA Inner Harbor	16-27	55-250	--	--	--	--	20-26	100-170	--	--	--	--
OA-06	LA Outer Harbor	17-26	51-230	25-39	150-580	8-10	8-14	9-27	8-226	13-29	14-155	--	--
IB-05	LB Inner Harbor	17-26	45-220	30-54	250-1650	9-14	10-37	22-24	105-170	19-30	30-185	13-30	27-300

Notes:

cm = centimeters; g = grams

a. Includes lengths of each individual fish caught, including archives

b. Includes a range of all individual fish caught, including archives.

-- No fish captured or retained

Table 4-3.
Average Length and Number of Individual Bivalves Caught Per Site

Site Number	Site Identification	Composite Number									
		1		2		3		4		5	
		Avg. Length (mm)	No. of Individ.	Avg. Length (mm)	No. of Individ.	Avg. Length (mm)	No. of Individ.	Avg. Length (mm)	No. of Individ.	Avg. Length (mm)	No. of Individ.
CS-03	Consolidated Slip ^a	98	12	101	12	107	12	115	12	113	12
IA-07	LA Inner Harbor	57	50	61	32	62	49	61	50	75	42
OA-01	LA Outer Harbor	55	70	64	60	65	60	62	68	56	60
IB-045	LB Inner Harbor	63	60	61	60	64	60	61	61	65	60

Notes:

a. Pacific oysters (*C. gigas*) were collected at Consolidated Slip. All other bivalves collected in this study were of the Mediterranean mussel (*M. galloprovincialis*).

4.1 Tissue Chemistry Results

Summarized tissue chemistry results are presented in Appendix E for skin-off fish filets for California halibut, white croaker, and lizardfish, and whole body tissue for shiner and white surfperch. A results summary for the select offal samples from California halibut, white croaker, and white surfperch is also provided in Appendix E for reference. Overall, the offal samples contained much greater concentrations of both PCBs and DDTs, along with a greater lipid content, than for associated skin-off filets or whole fish.

Total PCBs using the high resolution methodology (USEPA Method 1668C) are shown in Figures 4-6 through 4-11. A comparison of the high-resolution data with the subset of samples analyzed using the more traditional low-resolution method (USEPA Method 8270C) is provided in Appendix E for reference purposes (n=12 comparisons). The total PCB data were evaluated two ways: (1) all detected PCB congeners summed; and (2) a sum of the reduced PCB congener list following the SQO guidance. The full PCB congener dataset used for each comparison is also provided as backup support in Appendix E. Non-detected congeners were treated as a concentration of zero for the purposes of summation per SQO guidance when at least some congeners are detected. Note that two to three individual congeners were sometimes combined for a single value; however, this approach was inconsistent between the low-resolution and high-resolution methods, potentially introducing additional bias. In summary, no consistent trend was observed between the two methods. Using both summation methods, 5 of the 12 comparisons resulted in total PCB concentrations that were within a factor of 2. The remaining samples had differences between two times and six times, with no consistent pattern between low-resolution and high-resolution methods. Overall concentrations using the low-resolution methods by Eurofins Calscience were greater than those using the low-resolution procedure by Vista, despite the lower detection limits for USEPA Method 1668C.

Tissue chemistry results varied across species and sampling locations. At Consolidated Slip, white surfperch had greater PCB and DDT concentrations compared with California halibut and California lizardfish, as well as the highest concentration of measured total percent lipids (Figure 4-6).

At Fish Harbor, of the four species tested, shiner surfperch had the highest concentrations of total PCBs while California halibut had the lowest. This pattern matched that observed for percent lipids in each of the species tested. When interpreting results, note that only a single shiner surfperch was caught and tested for this sampling location. Total percent lipids and total PCBs were measured for the shiner surfperch, but there was insufficient tissue mass for DDT analysis. Total DDT concentrations were similar for all species tested from Fish Harbor (Figure 4-7).

At Los Angeles Inner Harbor, only white croaker tissue was analyzed. Tissue concentrations for total PCBs and total DDTs were lower for white croaker collected at this site when compared with other sampling locations (Figure 4-8).

At Los Angeles Outer Harbor, all three primary and two secondary species (white surfperch and California lizardfish) were caught and analyzed. The highest concentrations of total PCBs were recorded in white surfperch, although at lower levels than observed at all other stations that had fish analyzed. Total DDT concentrations were greatest in white surfperch, followed by shiner surfperch and white croaker. Total percent lipids were highest for white surfperch followed by white croaker and shiner surfperch (Figure 4-9).

At Long Beach Inner Harbor, all three primary and two secondary species (white surfperch and California lizardfish) were caught and analyzed. White surfperch had the highest measured concentrations of total PCBs, followed by shiner surfperch and white croaker. California halibut and California lizardfish had the lowest concentrations of total PCBs. This pattern was also observed for total percent lipids in each of the test species. Total DDT concentrations were highest in California lizardfish, followed by white croaker (Figure 4-10).

Across all sites, white and shiner surfperch had the highest measured concentrations of total PCBs, followed by white croaker. While highest total DDT concentrations did not appear to follow a species-specific pattern, California halibut tissue consistently had the lowest concentration of this compound. Across sites and species, total PCBs and total percent lipids exhibited distinct positive relationships, while total DDTs exhibited a weaker relationship to total percent lipids. California halibut and California lizardfish had the lowest measured total PCBs and total DDTs at all sites, except for California lizardfish at Long Beach Inner Harbor, which had the highest concentration of total DDTs at that sampling location.

Among all bivalve samples, Pacific oysters at Consolidated Slip were found to have the highest concentrations of both total PCBs and total DDTs. Total percent lipids were relatively similar across sites, with slightly higher concentrations in mussels at Long Beach Inner Harbor (Figure 4-11).

Total PCB congeners were defined by the congener list in the State of California Sediment Quality Assessment Technical Support Manual (Southern California Coastal Water Research Project [SCCWRP] 2014). According to this manual, total DDT “represents the sum of p,p'-DDT and o,p'-DDT (4,4'-DDT and 2,4'-DDT).” It is noteworthy that the other pesticide derivatives tested in this study included 4,4'-DDE, and 2,4'-DDE, 4,4'-DDD, 2,4'-DDD and 4,4'-DDMU. The results for those pesticide portions are presented with the total DDTs in the chemistry summary tables in Appendix E. The compounds making up each group were based on those used in the NOAA Status and Trends program.

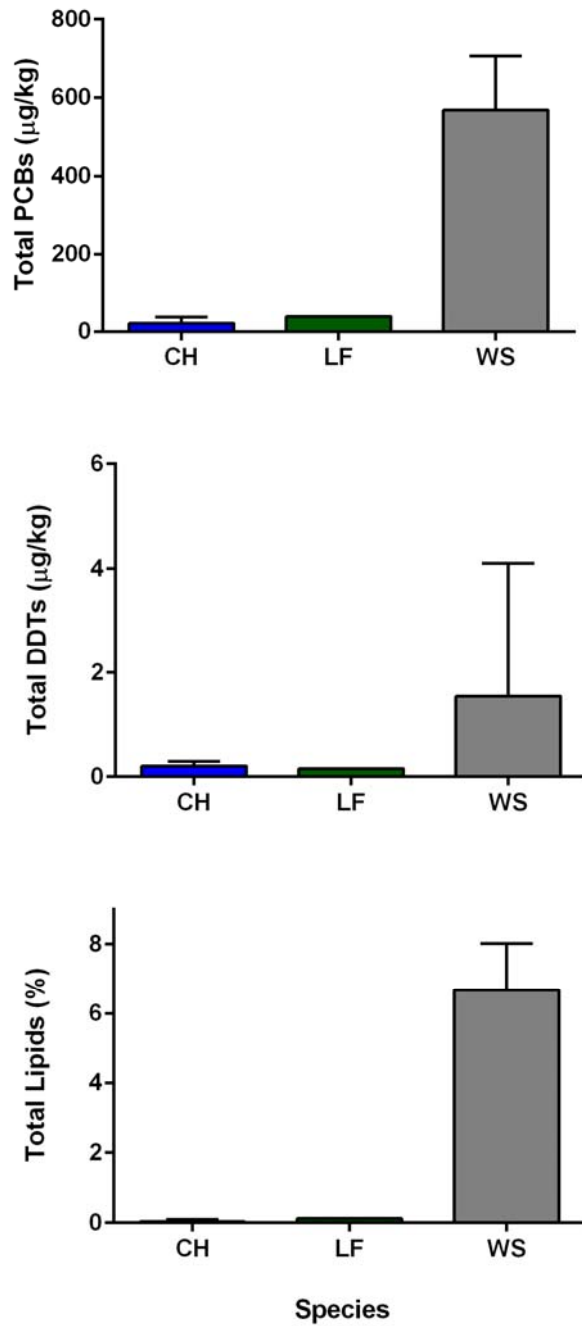


Figure 4-6. Total PCBs (SQO Congeners List), Total DDTs, and Total Percent Lipids Measured in Target Fish Species Collected from Consolidated Slip (Site CS-03)

Notes: Mean values + 1 standard deviation (SD) displayed
CH = California halibut, LF = California lizardfish, WS = white surfperch

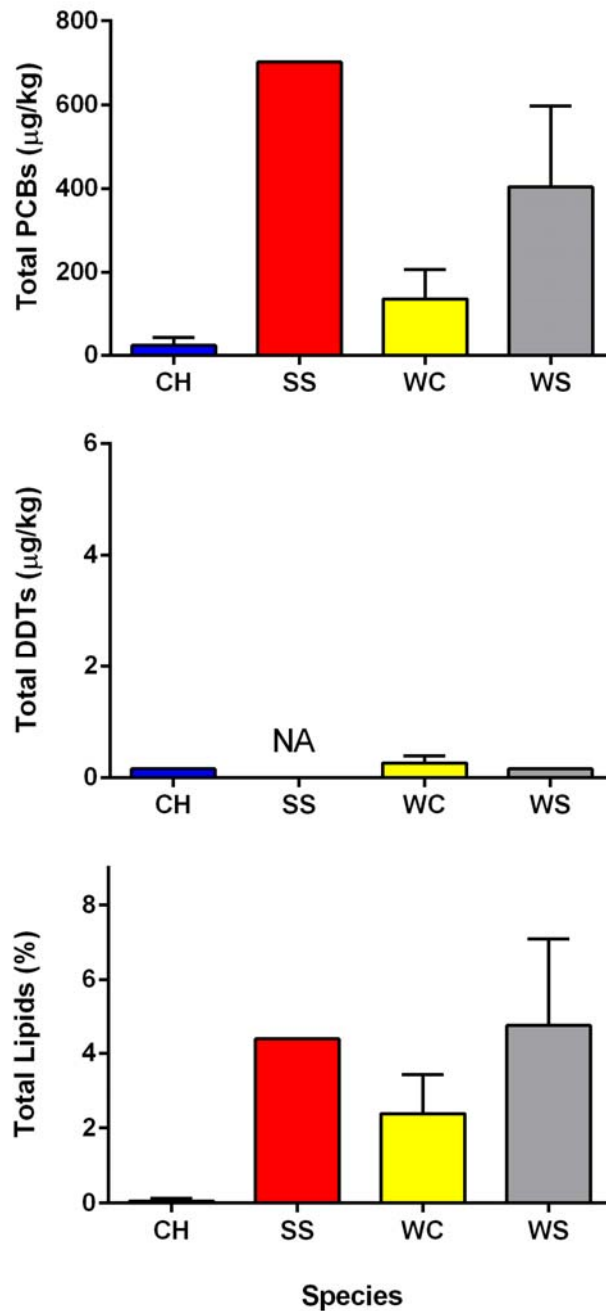


Figure 4-7. Total PCBs (SQO Congeners List), Total DDTs, and Total Percent Lipids Measured in Target Fish Species Collected from Fish Harbor (Site FH-08)

Notes: Mean values + 1 SD displayed
 CH = California halibut, SS = shiner surfperch, WC = white croaker, WS = white surfperch
 NA = not available due to limited available tissue mass

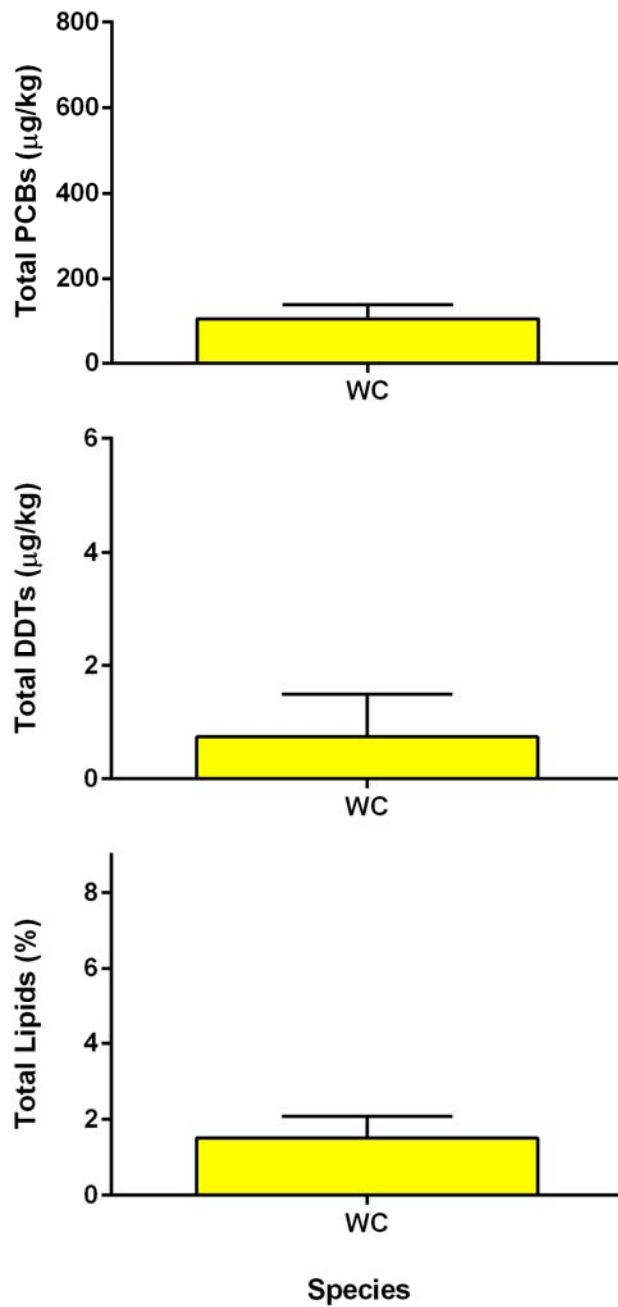


Figure 4-8. Total PCBs (SQO Congeners List), Total DDTs, and Total Percent Lipids Measured in Target Fish Species Collected from Los Angeles Inner Harbor (Site IA-7)

Notes: Mean values + 1 SD displayed
Note: Only white croaker (WC) was captured and analyzed at this location

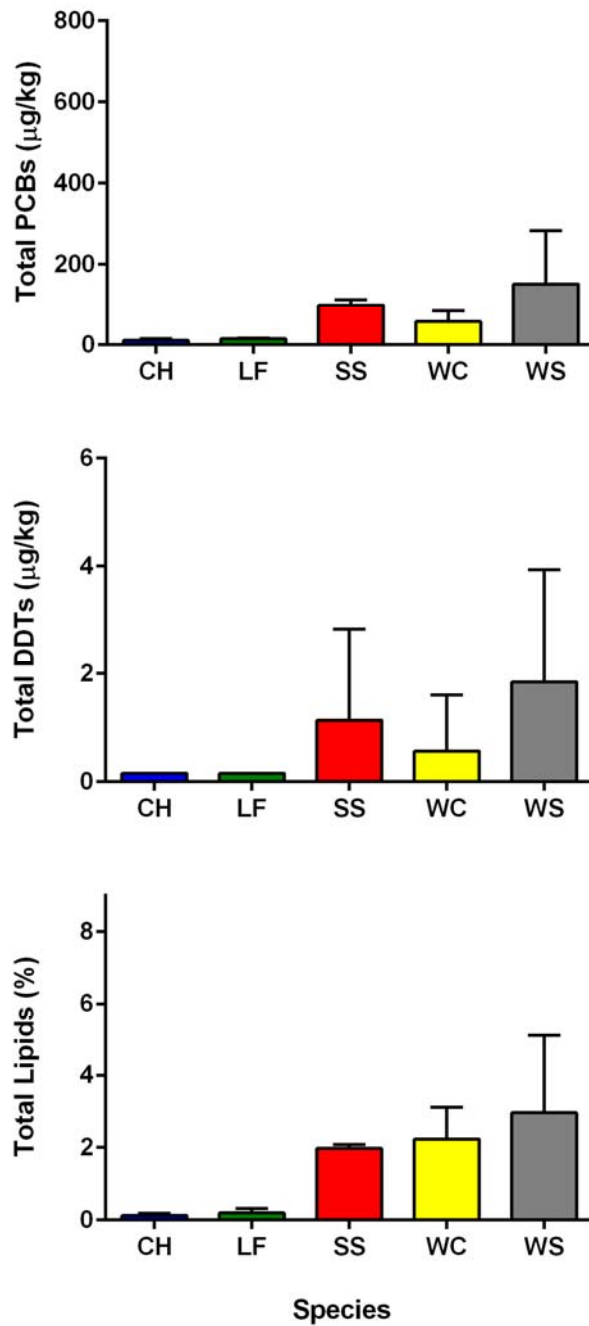


Figure 4-9. Total PCBs (SQO Congeners List), Total DDTs, and Total Percent Lipids Measured in Target Fish Species Collected from Los Angeles Outer Harbor (Site OA-6)

Notes: Mean values + 1 SD displayed
 CH = California halibut, LF = California lizardfish, SS = shiner surfperch, WC = white croaker, WS = white surfperch

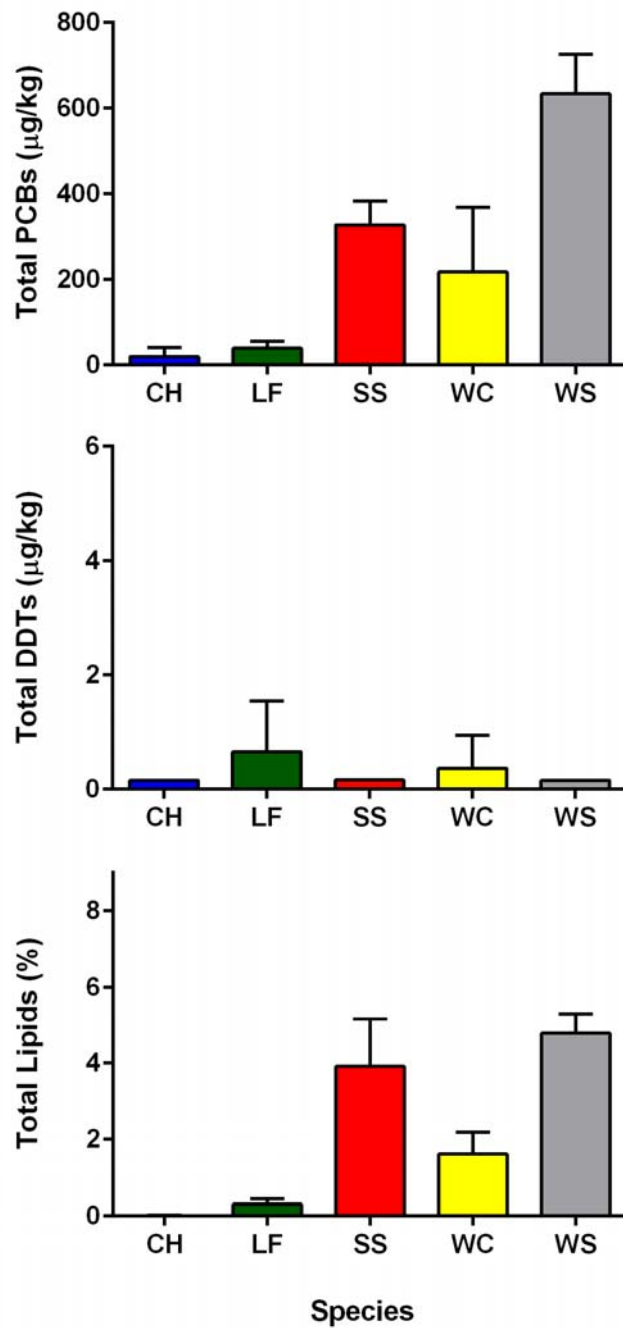
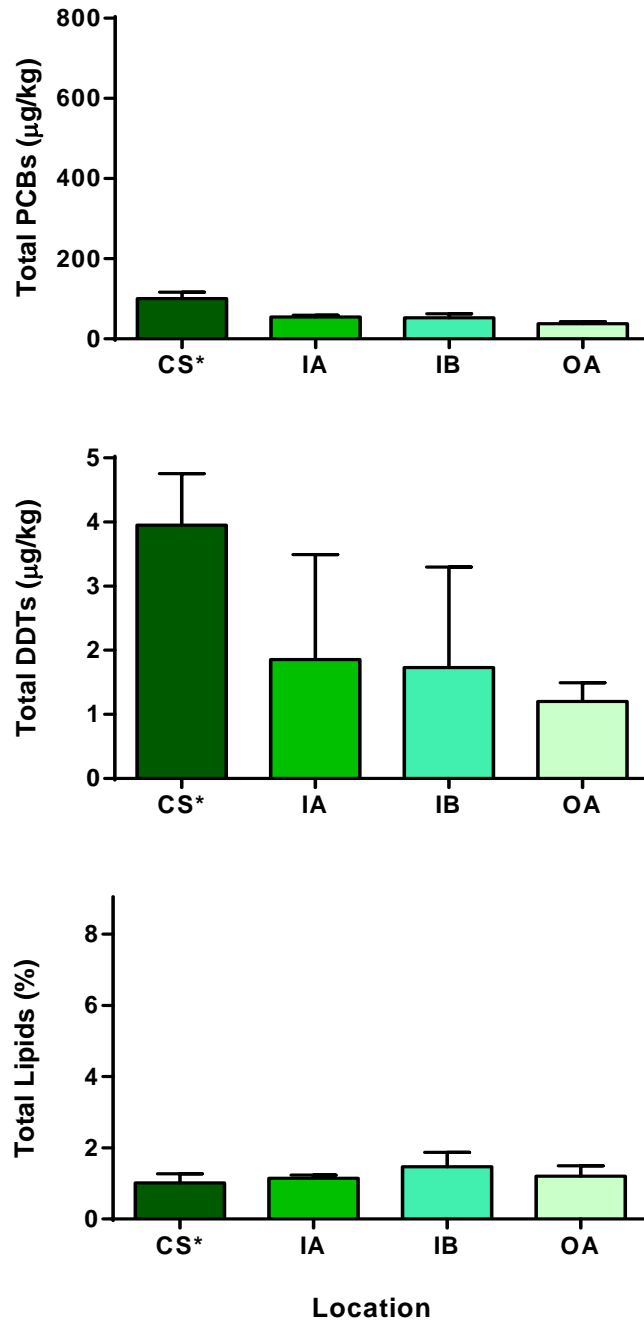


Figure 4-10. Total PCBs (SQO Congeners List), Total DDTs, and Total Percent Lipids Measured in Target Fish Species Collected from Long Beach Inner Harbor (Site IB-05)

Notes: Mean values + 1 SD displayed
 CH = California halibut, LF = California lizardfish, SS = shiner surfperch, WC = white croaker, WS = white surfperch



*Pacific oysters were collected at this site in lieu of mussels

Figure 4-11. Total PCBs (SQO Congener List), Total DDTs, and Total Percent Lipids Measured in Bivalve Species Collected Across All Stations

Notes: Mean values + 1 SD displayed

4.2 Isotope Analysis

The carbon and nitrogen isotopic data for fish are tightly clustered with the exception of those from Consolidated Slip. The tight clustering of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values indicates that the fish are either mobile throughout the harbor or that the carbon and nitrogen sources to prey are homogeneous (well mixed) within the inner and outer harbor with the exception of Consolidated Slip.

The isotopic results are accurate and precise as determined by UC Davis' blind analysis of reference material from another laboratory. Lipid content has a variable affect on carbon isotopic compositions (but not nitrogen) of fish and clams. A possible recommendation would be either lipid-free samples be used for all isotope analyses or that carbon isotope values that have been corrected for variable lipid content be used to infer diet. The difference between lipid-corrected and non lipid-corrected $\delta^{13}\text{C}$ values was -1.1 permil but ranged from 0 to -3.4 permil for oysters and mussels the average difference was -1.3 permil (range -0.6 to -2.0 permil).

Full laboratory results for all isotope analyses are included in Appendix G. A third-party quality assurance and quality control (QA/QC) check of the isotope data was performed by Dr. Brian Popp of the University of Hawaii. This full report is included in the Amec Foster Wheeler data validation report in Appendix I.

4.3 Scale and Otolith Aging

Otoliths and scales for target species were read and analyzed by SCMI scientists. Tables 4-4 and 4-5 summarize the approximate ages of individuals based on the readings. After providing draft results from this scale and otolith effort to Anchor QEA for their use in their model, an abbreviated list of samples was produced by Anchor QEA to have SCMI perform a second re-reading of scales and otoliths to confirm the age of the fish. Of the revisited scales and otoliths, all remained the same with the following exceptions: one fish scale ring count did increase and one otolith ring count increased. The specific fish samples that had a revised reading were IB-SC-SS-06-05-2014-1012 (going from scale readings of 0,0,0 to 0,1,1) and OA-FF-WC-03-06-20141011 (going from an otolith reading of 5 rings to 7 rings). These two revisions did not change the listed overall summary ranges in Table 4-4 and 4-5. The full report of age analyses, including the list of fish that were read a second time by SCMI, is provided in Appendix H.

**Table 4-4.
 Summary Ranges of Fish Age from Otolith Analysis**

Site Number	Sampling Location	Primary Target Species			Secondary Target Species		
		White Croaker	California Halibut	Shiner Surfperch	White Surfperch	California Lizardfish	Barred Sand Bass
CS-03	Consolidated Slip	NA	1-4	NA	NA	3	NA
FH-08	Fish Harbor	4-10	3-6	NA	NA	NA	NA
IA-07	LA Inner Harbor	3-9	NA	NA	NA	NA	NA
OA-06	LA Outer Harbor	4-7	2-4	NA	NA	1-4	NA
IB-05	LB Inner Harbor	5-11	3	NA	NA	2-3	NA

Notes:
 NA = No fish otoliths were read for this species at this site.

**Table 4-5.
 Summary Ranges of Fish Age from Scale Analysis**

Site Number	Sampling Location	Primary Target Species			Secondary Target Species		
		White Croaker	California Halibut	Shiner Surfperch	White Surfperch	California Lizardfish	Barred Sand Bass
CS-03	Consolidated Slip	NA	0	NA	0-5	NA	NA
FH-08	Fish Harbor	2	0	1	0-1	NA	NA
IA-07	LA Inner Harbor	2	NA	NA	NA	NA	NA
OA-06	LA Outer Harbor	2	0	0	0-1	NA	NA
IB-05	LB Inner Harbor	2	0	0-3	0-4	NA	NA

Notes:
 NA = No fish scales were read for this species at this site. A scale reading of "0" indicates an uncertain age less than 1 year

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5.0 DATA QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

5.1 Field Activities

Fishing trawls and hand collection of mussels and oysters were conducted in October 2014 in accordance with the *Food Web Sampling Work Plan, Greater Los Angeles and Long Beach Harbor Waters* (Work Plan) (Anchor QEA 2014b) and corresponding *Draft Programmatic Quality Assurance Project Plan, Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxic Total Daily Maximum Load* (PQAPP) (Anchor QEA 2013). All filed activities complied with QA/QC requirements and methodologies in these documents.

5.2 Duplicate QA/QC Samples

Duplicate QA/QC samples were composed of split tissue samples following homogenization at Vista. Following Surface Water Ambient Monitoring Program (SWAMP) guidance, duplicate samples were to be tested at a minimum frequency of 5 percent relative to the total number of project samples, as stated in Table 5 of the PQAPP. Additional sample volume was collected in the field for a number of target species in an attempt to ensure that the laboratories had sufficient sample volume to run the program-required analytical QA/QC samples for analysis, as specified in Section 4.2 of the PQAPP.

A total of six duplicate samples were analyzed for PCBs using the high-resolution methodology at Vista (USEPA Method 1668C), not including Standard Reference Material (SRM) duplicates. Two of the six samples had between 82 and 86 percent of the detected congeners exceeding the 25 Relative Percent Difference (RPD) criteria. Among the other four duplicate pairs of samples, between 6 and 10 percent of the individual congeners exceeded the 25 percent RPD criteria. The cause of this variability is unknown, but could include factors such as sample heterogeneity due to incomplete homogenization, batch QC replicates run separately from original samples, analytical imprecision, and the low-level concentrations of detections. Because specific bias cannot be attributed to this variability, no validation qualifier was applied to these data. However, end data users should be aware of the observed variability depending on data use (e.g., inputs for modeling studies and reproducibility of results relative to the work plan design in future field studies).

Eurofins-Calscience inadvertently excluded testing of duplicate homogenate samples for low-resolution DDTs and PCBs during their original batch of tests because of a sample log-in error. The error was identified during the initial data review. As a result, the laboratory was requested to inventory available tissue mass for subsequent duplicate testing. Based on available mass, the laboratory was able to run additional homogenates for a total of eight replicate samples pairs for DDT. DDT was recommended for duplicate analysis because of the significant number of detected DDT congeners. Duplicate precision for DDT varied significantly as reflected by elevated RPD values; a total of 32 analytical duplicate congener pairs exceeded the 25 percent RPD guideline. As with high-resolution PCBs, a specific bias was not identified contributing to this variability, and thus no validation qualifier was applied to these data.

No homogenization duplicates were performed for Method 8270c low-resolution standard detection level PCB congeners and organochlorine pesticides-DDTs because of the lack of available tissue mass remaining following the other analyses. For this reason, the entire data set for these methods was given a validation qualifier of NQ which is defined as “There is a lack of QC for this analyte” (see original laboratory reports and lab qualifications in Appendix F). The laboratories met the duplicate frequency requirement for all other methods.

5.3 Tissue Chemistry and Physical Analyses

Analytical QA/QC for tissue chemistry and lipid results were evaluated in accordance with the PQAPP. QA/QC was maintained during the analytical portion of this study by using laboratory control duplicates, ongoing precision and recovery (OPR) surrogate recoveries, method blanks, SRM, and matrix spike and matrix spike duplicates (MS/MSDs) as specified in the Work Plan.

The QA/QC process for physical analysis of the scales and otoliths involved two scientists reading the same three fish scales, with results compared when all readings were complete.

5.3.1 Data Quality Objectives

Data quality objectives for specific analytes were derived from SWAMP guidance (SWRCB 2008) and were compliant with Table 8 in the Work Plan.

5.3.2 Measurement Quality Objectives

Measurement quality objectives were compliant with analytical methods and target reporting limits listed in Table 8 of the PQAPP.

5.3.3 Tissue Chemistry QA/QC Summary

Amec Foster Wheeler reviewed the chemistry data for total lipids, total solids, PCB congeners, and organochlorine pesticides-DDTs, and Brian Popp of University of Hawaii reviewed the isotope analysis data. The full validation report for these reviews is provided in Appendix I. The validation report stipulates that although all of the reported data were considered complete and acceptable for reporting purposes, end data users should be cautious of the observed variability, especially with certain data uses (e.g., inputs for modeling studies, and reproducibility relative to future field studies).

Overall, the validation report found that Vista, Eurofins-Calscience, and UC Davis followed the specified analytical methods and all requested sample analyses were completed, except for several duplicate homogenates because of low tissue mass (as discussed in the Field QA/QC Section above). All non-detected data were reported using the requested method detection limits. Accuracy was acceptable, as demonstrated by the laboratory control sample/laboratory control sample duplicate (LCS/LCSD), OPR, MS/MSD, and surrogate recovery values with a few exceptions that were noted in the Data Validation Report. SRM recoveries for a select set of 30 PCB congeners (analyzed by Vista) were generally lower in most of the samples than the laboratory-specified certified mass fractions. Precision was acceptable, as demonstrated by surrogate recoveries that were within the specified recovery limits for both low-resolution

organochlorine pesticides-DDTs and PCBs, as well as high-resolution PCB congeners. The majority of laboratory sample RPD values for both high-resolution congeners and DDTs were outside the project-specified RPD limit, indicating higher variability that was potentially related to sample heterogeneity (despite thorough homogenization), batch QC replicates that were run separately from the original sample, analytical imprecision, and/or low level concentrations of detections. Because specific bias cannot be attributed to this variability, no data were rejected and completeness goals were met with the aforementioned caveats.

Additional QA/QC information for chemistry analyses is included within the individual laboratory testing reports provided in Appendix F.

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6.0 REFERENCES

- Anchor QEA. 2013. Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics total Maximum Daily Load. April 2013.
- Anchor QEA, 2014a. *Draft Data Gaps Analysis for Bioaccumulation Model Development, Greater Los Angeles and Long Beach Harbor Waters*. In support of *Final Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants Total Maximum Daily Load*. Prepared for Port of Long Beach and Port of Los Angeles. May 2014.
- Anchor QEA, 2014b. *Food Web Sampling Work Plan, Greater Los Angeles and Long Beach Harbor Waters* (Work Plan). Prepared for Port of Long Beach and Port of Los Angeles. October 2014.
- CDFG (California Department of Fish and Game), 2012. 2012-2013 California Ocean Sport Fishing Regulations Section 28.15, California Code of Regulations.
- Chilton, D.E. and M. Stocker, 1987. A Comparison of Otolith and Scale Methods for Aging Pacific Herring. *North American Journal of Fisheries Management* 7:202–206.
- Hoxmeier, R.J.H., D.D. Aday, and D.H. Wahl, 2001. Factors Influencing Precision of Age Estimation from Scales and Otoliths of Bluegills in Illinois Reservoirs. *North American Journal of Fisheries Management* 21:374–380.
- NOAA (National Oceanic and Atmospheric Administration), 2007. *2002 – 2004 Southern California Coastal Marine Fish Contaminants Survey*. Prepared by Industrial Economics, Inc., on behalf of the National Resource Trustees. June 2007.
- Odenweller, D.B., 1975. The life history of the shiner surfperch *Cyamatogaster aggregata* in Anaheim Bay, California. The Marine resources of Anaheim Bay. Available from: <http://content.cdlib.org/view?docId=kt6n39n885;NAAN=13030&doc.view=frames&chunk.id=d0e4240&toc.id=0&brand=calisphere>.
- OEHHA (Office of Environmental Health Hazard Assessment), 2009. *Health Advisory and Safe Eating Guidelines for Fish from Coastal Areas of Southern California: Ventura Harbor to San Mateo Point*. June 2009.
- Prentice, J.A. and W.J. Dean, Jr., 1991. Use of known-age red drums to validate scale and otolith ages and to estimate growth in fresh water. *North American Journal of Fisheries Management* 11:424–428.
- RWQCB (Los Angeles Regional Water Quality Control Board), 2011. *Final Basin Plan Amendment*. Attachment A to Resolution No. R11-008. Amendment to the *Water Quality Control Plan – Los Angeles Region to Incorporate the Total Maximum Daily Load for*

Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters. Adopted by the RWQCB on May 5, 2011.

SAIC (Science Applications International Corporation), 2010. *Final 2008 Biological Surveys of Los Angeles and Long Beach Harbors.*

SCCWRP (Southern California Coastal Water Research Project), 2014. *Sediment Quality Assessment Technical Support Manual*). Technical Report 777, January 2014.

SCCWRP (Southern California Coastal Water Research Project), 2013. *Southern California Bight 2013 Regional Marine Monitoring Survey (Bight '13) Field Operations Manual.* 2013.

SCCWRP (Southern California Coastal Water Research Project), 2013. *Southern California Bight 2013 Regional Marine Monitoring Survey (Bight '13) Bioaccumulation Work plan.* 2013.

SWRCB (State Water Resources Control Board), 2008. Surface Water Ambient Monitoring Program Quality Assurance Program Plan. Final Technical Report Version 1. September 2008.

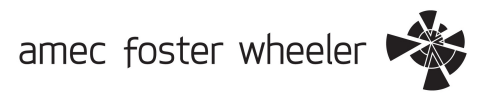
SWRCB, 2010. Phase II Sediment Quality Objectives for Enclosed Bays and Estuaries of California. Staff CEQA Scoping Informational Document. April 21, 2010.

SWRCB, 2011. *Northern and Central California Regional Mussel Survey Draft Sampling Report 2009 – 2010.* Appendix A: SOP for Mussel Collection. Prepared by SWRCB, Stormwater Section Ocean Unit.

APPENDIX A

CATCH SUMMARY TABLES

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - Fish Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
Fish Harbor - 08	Ca. Halibut	Primary	Test	1	1	1	41	35	680	0	680	NA			FH-FF-CH-01-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	2	1	2	34	29	350	14	336	NA			FH-FF-CH-02-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	3	1	3	35	30	410	14	396	NA			FH-FF-CH-03-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	4	1	4	34	30	405	14	391	NA			FH-FF-CH-04-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	5	1	5	32	28	340	14	326	NA			FH-FF-CH-05-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	6	1	6	31	27	305	14	291	NA			FH-FF-CH-06-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	7	1	7	33	29	325	14	311	NA	*		FH-FF/OF-CH-07-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	8	1	8	29	25	230	14	216	NA			FH-FF-CH-08-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	9	1	9	28	24	195	14	181	NA			FH-FF-CH-09-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Test	10	1	10	26	22	190	14	176	NA			FH-FF-CH-10-08-20141013	Include
Fish Harbor - 08	Ca. Halibut	Primary	Archive	10	1	A-6	23	20	135	14	121	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	A-1	1	A-1	23	20	115	14	101	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	A-2	1	A-2	19	17	75	14	61	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	A-3	1	A-3	23	20	130	14	116	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	A-4	1	A-4	22	20	105	14	91	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	A-5	1	A-5	23	20	115	14	101	NA			FH-WO-CH-Archive-08-20141013	Exclude
Fish Harbor - 08	Ca. Halibut	Primary	Archive	-	5	Archive	-	-	-	-	-	-			FH-WO-CH-Archive-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	1	1	1	18	14	74	0	74	NA	*		FH-FF/OF-WS-01-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	2	2	2	13, 14	10, 11	27,35	0	27, 35	62			FH-WO-WS-02-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	3	3	3	13, 11, 10	10, 9, 8	27, 18, 13	0	27, 18, 13	58			FH-WO-WS-03-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	4	3	4	14, 10, 11	10, 8, 8	27, 14, 17	0	27, 14, 17	58			FH-WO-WS-04-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	5	3	5	12, 12, 12	10, 9, 9	22, 21, 21	0	22, 21, 21	64			FH-WO-WS-05-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	6	3	6	13, 12, 11	10, 10, 8	25, 24, 17	0	25, 24, 17	66			FH-WO-WS-06-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	7	1	7	20	16	115	14	101	NA			FH-WO-WS-07-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	8	1	8	22	17	115	14	101	NA			FH-WO-WS-08-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Test	10	1	10	22	17	125	14	111	NA			FH-WO-WS-10-08-20141013	Include
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-1	1	A-1	21	16	109	0	109	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-2	1	A-2	20	16	118	14	104	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-3	1	A-3	20	16	101	14	87	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-4	1	A-4	20	15	91	14	77	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-5	1	A-5	19	15	101	14	87	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-6	1	A-6	19	15	88	14	74	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	A-7	1	A-7	18	14	82	14	68	NA			FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Test	9	1	Archive	22	17	130	14	116	NA		Archive this sample - substitute with archive Shiner surfperch A-8 below	FH-WO-WS-Archive-08-20141014	Exclude
Fish Harbor - 08	White Surf Perch	Secondary	Archive	-	X	Archive	-	-	-	-	-	-			FH-WO-WS-Archive-08-20141014	Include
Fish Harbor - 08	Shiner Surf Perch	Primary	Archive	A-8	1	9	12	9	20	0	20	NA		Analyze this sample only for lipid and PCBs	FH-WO-SS-09-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	10	2	1	19	16	110	14	96	192			FH-FF-WC-01-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	A-3	2	2	19	16	110	14	96	192				
Fish Harbor - 08	White Croaker	Primary	Test	5	2	2	20	17	120	14	106	212			FH-FF-WC-02-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	8	2	3	20	17	120	14	106	212				
Fish Harbor - 08	White Croaker	Primary	Test	7	2	3	21	19	150	14	136	242			FH-FF-WC-03-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	7	2	3	21	18	120	14	106	242				
Fish Harbor - 08	White Croaker	Primary	Test	9	2	4	22	18	140	14	126	252			FH-FF-WC-04-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	9	2	4	21	18	140	14	126	252				
Fish Harbor - 08	White Croaker	Primary	Test	6	2	5	21	18	125	14	111	247			FH-FF-WC-05-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	10	2	5	21	18	150	14	136	247				
Fish Harbor - 08	White Croaker	Primary	Test	8	2	6	22	19	155	14	141	292			FH-FF-WC-06-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	6	2	6	22	19	165	14	151	292				
Fish Harbor - 08	White Croaker	Primary	Test	5	2	7	23	20	170	14	156	312			FH-FF-WC-07-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	4	2	7	22	19	170	14	156	312				
Fish Harbor - 08	White Croaker	Primary	Test	3	1	8	23	20	185	14	171	NA			FH-FF-WC-08-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	1	1	9	25	21	187	14	173	NA			FH-FF-WC-09-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Test	2	1	10	24	21	195	14	181	NA	*		FH-FF/OF-WC-10-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Archive	-	4	Archive	-	-	-	-	-	-			FH-WO-WC-Archive-08-20141013	Include
Fish Harbor - 08	White Croaker	Primary	Archive	1	1	Archive	17	14	85	14	71	NA				Exclude

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - Fish Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
Fish Harbor - 08	White Croaker	Primary	Archive	3	1	Archive	18	16	90	14	76	NA			FH-WO-WC-Archive-08-20141013	Exclude
Fish Harbor - 08	White Croaker	Primary	Archive	4	1	Archive	18	16	90	14	76	NA				Exclude
Fish Harbor - 08	White Croaker	Primary	Archive	A-2	1	Archive	22	18	140	14	126	NA			FH-WO-WC-Archive-08-20141013	Exclude
Fish Harbor - 08	White Croaker	Primary	Archive	A-4	1	Archive	20	17	110	14	96	NA			FH-WO-WC-Archive-08-20141013	Exclude
Fish Harbor - 08	White Croaker	Primary	Archive	A-5	1	Archive	19	16	110	14	96	NA			FH-WO-WC-Archive-08-20141013	Exclude
Fish Harbor - 08	White Croaker	Primary	Archive	A-1	1	Archive	21	18	120	14	106	NA			FH-WO-WC-Archive-08-20141013	Exclude
Fish Harbor - 08	Barred Sand Bass	Secondary	Archive	A-1 - A-10	10	Archive	21, 17, 17, 15, 16, 13, 17, 16, 14, 16	18, 14, 14, 13, 13, 11, 14, 13, 12, 13	125, 60, 70, 40, 70, 30, 60, 80, 50, 60	14	111, 46, 56, 26, 56, 16, 46, 66, 36, 46	505		Not at Vista Analytical Labs		Exclude

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LA Outer Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)- (grams)	Weight (Tare)- (grams)	Weight (Net)- (grams)	Weight (net)- MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	1	1	1	34	29	405	0	405	NA			OA-FF-CH-01-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	2	1	2	38	32	580	0	580	NA			OA-FF-CH-02-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	3	1	3	36	30	435	0	435	NA			OA-FF-CH-03-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	4	1	4	39	33	570	0	570	NA			OA-FF-CH-04-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	5	1	5	36	33	480	0	480	NA			OA-FF-CH-05-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	6	1	6	31	27	340	0	340	NA	*		OA-FF/OF-CH-06-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	7	1	7	32	27	330	0	330	NA			OA-FF-CH-07-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	8	1	8	30	26	250	0	250	NA			OA-FF-CH-08-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	9	1	9	37	33	546	0	546	NA			OA-FF-CH-09-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Test	10	1	10	36	29	450	0	450	NA			OA-FF-CH-10-06-20141011	Include
LA Outer Harbor - 06	Ca. Halibut	Primary	Archive	A-1 - A-5	5	Archive	27, 28, 28, 27, 25	24, 24, 24, 23, 22	230, 205, 230, 150, 260	0	230, 205, 230, 150, 260	1075			OA-WO-CH-Archive-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	-	4	1	10,11, 11, 12	7, 8, 8, 9	12, 10, 17, 26	0	12, 10, 17, 26	65		Composite originally miss ID'ed as 5 shiner surfperch	OA-WO-WS-01-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	2	4	2	11, 11, 10, 10	9, 9, 8, 8	16, 15, 15, 13	0	16, 15, 15, 13	59			OA-WO-WS-02-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	3	4	3	12, 11, 10, 11	9, 8, 8, 9	22, 15, 12, 14	0	22, 15, 12, 14	63			OA-WO-WS-03-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	4	5	4	12, 9, 10, 10, 11	9, 7, 8, 8, 9	20, 9, 13, 15, 19	0	20, 9, 13, 15, 19	76			OA-WO-WS-04-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	5	4	5	11, 11, 11, 10	9, 9, 9, 8	24, 16, 15, 12	0	24, 16, 15, 12	67			OA-WO-WS-05-06-20141011	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	6	1	6	20	15	87	14	73	NA			OA-WO-WS-06-06-20141013	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Test	7	1	7	23	18	155	14	141	NA	*		OA-FF/OF-WS-07-06-20141013	Include
LA Outer Harbor - 06	White Surf Perch	Secondary	Archive	8	1	A-3	27	22	240	14	226	NA			OA-WO-WS-Archive-06-20141013	Exclude
LA Outer Harbor - 06	White Surf Perch	Secondary	Archive	A-1	2	A-1	9, 10	7, 8	9, 10	0	9, 10	19			OA-WO-WS-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Surf Perch	Secondary	Archive	A-2	1	A-2	9	7	8	0	8	NA			OA-WO-WS-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Surf Perch	Secondary	Archive	1	1	A-4	25	19	170	0	170	NA			OA-WO-WS-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Surf Perch	Secondary	Archive	-	-	Archive	-	-	-	-	-	-			OA-WO-WS-Archive-06-20141011	Include
LA Outer Harbor - 06	Shiner Surf Perch	Primary	Test	A-3	6	8	8, 9, 9, 8, 10, 10	7, 7, 7, 7, 8, 8	9, 10, 9, 9, 14, 13	0	9, 10, 9, 9, 14, 13	64			OA-WO-SS-08-06-20141013	Include
LA Outer Harbor - 06	Shiner Surf Perch	Primary	Test	A-4	4	9	10, 10, 9, 9	8, 8, 8, 7	14, 14, 10, 9	0	14, 14, 10, 9	47			OA-WO-SS-09-06-20141011	Include
LA Outer Harbor - 06	Shiner Surf Perch	Primary	Test	10	7	10	8, 9, 9, 9, 10, 9, 9	6, 7, 7, 7, 8, 7, 7	8, 10, 10, 10, 11, 11, 11	0	8, 10, 10, 10, 11, 11, 11	71			OA-WO-SS-10-06-20141011	Include
LA Outer Harbor - 06	Shiner Surf Perch	Primary	Archive	-	1	Archive	9	7	8	0	8			Composite originally miss ID'ed as 5 shiner surfperch	OA-WO-SS-Archive-06-20141013	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	1	1	1	26	23	230	0	230	NA			OA-FF-WC-01-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	2	1	2	25	21	195	0	195	NA	*		OA-FF/OF-WC-02-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	3	1	3	26	22	205	0	205	NA			OA-FF-WC-03-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	4	1	4	23	20	160	0	160	NA			OA-FF-WC-04-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	5	1	5	23	21	175	0	175	NA			OA-FF-WC-05-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	8	1	6	19	16	85	0	85	255			OA-FF-WC-06-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	5	1		19	16	85	0	85					
LA Outer Harbor - 06	White Croaker	Primary	Test	10	1		19	16	85	0	85					

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LA Outer Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
LA Outer Harbor - 06	White Croaker	Primary	Test	9	1	7	19	16	90	0	90	185			OA-FF-WC-07-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	8	1		19	16	95	0	95					
LA Outer Harbor - 06	White Croaker	Primary	Test	6	1	8	21	18	120	0	120	240			OA-FF-WC-08-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	6	1		21	18	120	0	120					
LA Outer Harbor - 06	White Croaker	Primary	Test	7	1	9	19	16	81	0	81	163			OA-FF-WC-09-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	7	1		19	16	82	0	82					
LA Outer Harbor - 06	White Croaker	Primary	Test	9	1	10	19	16	80	0	80	160			OA-FF-WC-10-06-20141011	Include
LA Outer Harbor - 06	White Croaker	Primary	Test	10	1		19	16	80	0	80					
LA Outer Harbor - 06	White Croaker	Primary	Archive	7	1	A-1	17	15	51	0	51	NA			OA-WO-WC-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Croaker	Primary	Archive	8	1	A-2	19	16	80	0	80	NA			OA-WO-WC-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Croaker	Primary	Archive	9	1	A-3	19	16	80	0	80	NA			OA-WO-WC-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Croaker	Primary	Archive	10	1	A-4	22	19	135	0	135	NA			OA-WO-WC-Archive-06-20141011	Exclude
LA Outer Harbor - 06	White Croaker	Primary	Archive	-	-	Archive	-	-	-	-	-	-			OA-WO-WC-Archive-06-20141011	Include
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Test	3	1	1	25	23	115	0	115	230		Substituting 1 composite sample for one initial target halibut sample for IB-05	OA-FF-LF-01-06-20141011	Include
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Test	5	1		26	23	115	0	115					
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Test	5	1	27	24	140	0	140						
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Test	1	1	2	29	26	155	0	155	295			OA-FF-LF-02-06-20141011	Include
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	9	1	Archive	19	14	30	0	30	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	8	1	Archive	19	17	36	0	36	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	8	1	Archive	19	17	38	0	38	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	9	1	Archive	19	17	42	0	42	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	10	1	Archive	19	17	44	0	44	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	10	1	Archive	20	18	50	0	50	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	7	1	Archive	21	19	55	0	55	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	6	1	Archive	20	18	65	0	65	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	10	1	Archive	23	21	75	0	75	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	6	1	Archive	14	13	78	0	78	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	2	1	Archive	25	23	90	0	90	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	2	1	Archive	25	23	95	0	95	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	4	1	Archive	22	20	95	0	95	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	3	1	Archive	25	22	105	0	105	NA			OA-WO-LF-Archive03-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	4	1	Archive	25	23	100	0	100	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	6	1	Archive	25	23	110	0	110	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	7	1	Archive	26	24	110	0	110	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	8	1	Archive	26	24	110	0	110	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	9	1	Archive	26	24	110	0	110	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	7	1	Archive	13	12	14	0	14	NA			OA-WO-LF-Archive-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	1	1	Archive	17	15	30	0	30	NA			OA-WO-LF-Archive01-06-20141011	Exclude
LA Outer Harbor - 06	Ca. Lizardfish	Secondary	Archive	-	X	Archive	-	-	-	-	-	-			OA-WO-LF-Archive-06-20141011	Include

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LB Inner Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
LB Inner Harbor - 05	Ca. Halibut	Primary	Test	1	1	1	54	47	1650	0	1650	NA	*		LB-OF/FF-CH-01-05-20141012	Include
LB Inner Harbor - 05	Ca. Halibut	Primary	Test	2	1	2	30	25	250	0	250	NA			LB-FF-CH-02-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	5	1	1	9	7	10	0	10	66			LB-WO-SS-01-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	3	1		9	7	11	0	11					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	3	1		10	8	11	0	11					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	5	1		9	8	11	0	11					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	5	1		9	8	11	0	11					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	5	1		10	8	12	0	12					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	3	1	2	10	8	12	0	12	67			LB-WO-SS-02-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	6	1		10	8	13	0	13					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	3	1		10	8	14	0	14					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	5	1		13	11	28	0	28					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	2	1	3	13	11	30	0	30	61			LB-WO-SS-03-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	1	1		14	11	31	0	31					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	4	1	4	13	11	31	0	31	63			LB-WO-SS-04-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	1	1		14	11	32	0	32					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	6	1	5	14	12	32	0	32	65			LB-WO-SS-05-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	2	1		14	11	33	0	33					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	6	1	6	14	12	33	0	33	70			LB-WO-SS-06-05-20141012	Include
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Test	4	1		14	12	37	0	37					
LB Inner Harbor - 05	Shiner Surf Perch	Primary	Archive	3	1	Archive	9	8	12	0	12	67			LB-WO-SS-Archive-05-20141012	Include
LB Inner Harbor - 05	White Surf Perch	Secondary	Test	A-3	1	7	ND	ND	125	20	105	NA			LB-WO-WS-07-05-20141012	Include
LB Inner Harbor - 05	White Surf Perch	Secondary	Test	A-2	1	8	ND	ND	135	20	115	NA			LB-WO-WS-08-05-20141012	Include
LB Inner Harbor - 05	White Surf Perch	Secondary	Test	A-5	1	9	ND	ND	135	20	115	NA			LB-WO-WS-09-05-20141012	Include
LB Inner Harbor - 05	White Surf Perch	Secondary	Test	2	1	10	22	18	140	20	120	NA	*		LB-FF/OF-WS-10-05-20141012	Include
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	A-4	1	A-1	ND	ND	145	20	125	NA			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	4	1	A-2	22	18	150	20	130	NA			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	A-1	1	A-3	ND	ND	150	20	130	745			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	1	1	A-4	23	19	165	20	145	NA			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	A-1	1	A-5	ND	ND	175	20	155	NA			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	3	1	A-6	24	19	190	20	170	NA			LB-WO-WS-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Surf Perch	Secondary	Archive	-	-	Archive	-	-	-	-	-	-			LB-WO-WS-Archive-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	9	2	1	20	17	95	20	75	165			LB-FF-WC-01-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	10			20	18	110	20	90					
LB Inner Harbor - 05	White Croaker	Primary	Test	9	2	2	20	18	115	20	95	195			LB-FF-WC-02-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	8			21	18	120	20	100					
LB Inner Harbor - 05	White Croaker	Primary	Test	7	2	3	21	19	125	20	105	215			LB-FF-WC-03-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	7			21	19	130	20	110					
LB Inner Harbor - 05	White Croaker	Primary	Test	A-5	2	4	22	20	135	20	115	235		*may be A-4 if unable to tell apart	LB-FF-WC-04-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	9			22	20	140	20	120					
LB Inner Harbor - 05	White Croaker	Primary	Test	A-4	2	5	22	20	140	20	120	245		*may be A-5 if unable to tell	LB-FF-WC-05-05-20141012	Include

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LB Inner Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include on COC?
LB Inner Harbor - 05	White Croaker	Primary	Test	10			22	20	145	20	125			apart		
LB Inner Harbor - 05	White Croaker	Primary	Test	8	2	6	24	21	155	20	135	290			LB-FF-WC-06-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	4			23	21	175	20	155					
LB Inner Harbor - 05	White Croaker	Primary	Test	3	2	7	23	21	180	20	160	320			LB-FF-WC-07-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	1			24	21	180	20	160					
LB Inner Harbor - 05	White Croaker	Primary	Test	5	1	8	24	21	190	20	170	NA			LB-FF-WC-08-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	2	1	9	25	22	190	20	170	NA			LB-FF-WC-09-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Test	6	1	10	26	23	240	20	220	NA	*		LB-FF/OFF-WC-10-05-20141012	Include
LB Inner Harbor - 05	White Croaker	Primary	Archive	A-1	1	A-1	17	14	65	20	45	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	A-2	1	A-2	18	16	75	20	55	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	A-3	1	A-3	20	17	90	20	70	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	4	1	A-4	18	15	75	20	55	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	10	1	A-5	17	15	80	20	60	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	7	1	A-6	18	16	85	20	65	NA			LB-WO-WC-Archive-05-20141012	Exclude
LB Inner Harbor - 05	White Croaker	Primary	Archive	-	-	Archive	-	-	-	-	-	-			LB-WO-WC-Archive-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-5	2	1	25	22	110	20	90	185			LB-FF-LF-01-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-3			26	23	115	20	95					
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-4	2	2	25	22	120	20	100	205			LB-FF-LF-02-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-9			24	22	125	20	105					
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-1	2	3	26	23	130	20	110	220			LB-FF-LF-03-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-7			26	23	130	20	110					
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-6	1	4	29	26	180	20	160	NA			LB-FF-LF-04-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Test	A-2	1	5	30	26	205	20	185	NA			LB-FF-LF-05-05-20141012	Include
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Archive	A-8	1	A-8	22	20	85	20	65	NA			LB-WO-LF-Archive-05-20141012	Exclude
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Archive	A-10	1	A-10	19	17	50	20	30	NA			LB-WO-LF-Archive-05-20141012	Exclude
LB Inner Harbor - 05	Ca. Lizardfish	Secondary	Archive	-	-	Archive	-	-	-	-	-	-			LB-WO-LF-Archive-05-20141012	Include
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	3	3	A-3	16, 17, 17	13, 14, 14	56, 62, 60	0	56, 62, 60	178		Not at Vista Analytical Lab		Exclude
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	4	3	A-4	16, 16, 16	13, 13, 13	50, 55, 55	0	50, 55, 55	160				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	5	1	A-5	30	25	300	0	300	NA				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	6	1	A-6	26	22	200	0	200	NA				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	7	2	A-7	24, 17	19, 14	155, 60	0	155, 60	215				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	8	3	A-8	16, 15, 18	13, 13, 15	58, 50, 85	0	58, 50, 85	193				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	9	3	A-9	13, 18, 19	10, 15, 15	27, 75, 95	0	27, 75, 95	197				
LB Inner Harbor - 05	Barred Sand Bass	Secondary	Archive	10	3	A-10	19, 16, 17	15, 13, 14	84, 48, 58	0	84, 48, 58	190				

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LA Inner Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include in COC?
LA Inner Harbor - 07	White Surf Perch	Secondary	Archive	1	1	A-1	26	20	170	0	170	NA			IA-WO-WS-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Surf Perch	Secondary	Archive	2	1	A-2	20	16	100	0	100	NA			IA-WO-WS-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Surf Perch	Secondary	Archive	3	1	A-3	21	18	130	0	130	NA			IA-WO-WS-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Surf Perch	Secondary	Archive	-	-	Archive	-	-	-	-	-	-			IA-WO-WS-Archive-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	7	1	1	18	15	80	0	80	165			IA-FF-WC-01-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	2	1	2	19	16	85	0	85	220			IA-FF-WC-02-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	9	1	3	20	17	110	0	110	230			IA-FF-WC-03-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	5	1	4	21	18	110	0	110	260			IA-FF-WC-04-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	8	1	5	20	18	110	0	110	280			IA-FF-WC-05-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	8	1	6	21	19	120	0	120	NA			IA-FF-WC-06-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	9	1	7	22	20	140	0	140	NA			IA-FF-WC-07-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	4	1	8	22	19	140	0	140	NA			IA-FF-WC-08-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	2	1	9	23	20	160	0	160	NA			IA-FF-WC-09-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	7	1	10	23	20	170	0	170	NA	*		IA-FF/OF-WC-09-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	10	1	10	23	20	170	0	170	NA			IA-FF-WC-10-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	10	1	8	17	15	61	0	170	NA			IA-FF-WC-08-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	3	1	9	25	22	195	0	195	NA			IA-FF/OF-WC-09-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Test	1	1	10	27	23	250	0	250	NA			IA-FF-WC-10-07-20141011	Include
LA Inner Harbor - 07	White Croaker	Primary	Archive	5	1	A-1	16	14	55	0	55	NA			IA-WO-WC-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Croaker	Primary	Archive	6	1	A-2	18	15	65	0	65	NA			IA-WO-WC-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Croaker	Primary	Archive	6	1	A-3	18	15	66	0	66	NA			IA-WO-WC-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Croaker	Primary	Archive	6	1	A-4	18	15	66	0	66	NA			IA-WO-WC-Archive-07-20141011	Exclude
LA Inner Harbor - 07	White Croaker	Primary	Archive	-	-	Archive	-	-	-	-	-	-			IA-WO-WC-Archive-07-20141011	Include

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LA Inner Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include in COC?
Consolidated Slip - 03	Ca. Halibut	Primary	Test	5	1	1	21	17	75	0	75	150			CS-FF-CH-01-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	6	1		20	17	75	0	75					
Consolidated Slip - 03	Ca. Halibut	Primary	Test	2	1	2	22	18	85	0	85	185			CS-FF-CH-02-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	6	1		22	20	100	0	100					
Consolidated Slip - 03	Ca. Halibut	Primary	Test	5	1	3	23	20	120	0	120	255			CS-FF-CH-03-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	2	1		24	20	135	0	135					
Consolidated Slip - 03	Ca. Halibut	Primary	Test	1	1	4	25	21	155	0	155	315			CS-FF-CH-04-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	8	1		26	23	160	0	160					
Consolidated Slip - 03	Ca. Halibut	Primary	Test	1	1	5	28	24	200	0	200	NA			CS-FF-CH-05-04-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	4	1	6	31	27	295	0	295	NA			CS-FF-CH-06-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	8	1	7	32	29	325	0	325	NA			CS-FF-CH-07-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	3	1	8	34	29	365	0	365	NA	*		CS-FF/OF-CH-08-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	9	1	9	49	44	1250	0	1250	NA			CS-FF-CH-09-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Test	10	1	10	43	38	870	0	870	NA			CS-FF-CH-10-03-20141010	Include
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-1	13	12	20	0	20	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-2	13	11	25	0	25	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-3	13	11	25	0	25	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-4	14	12	28	0	28	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-5	14	13	31	0	31	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-6	16	13	34	0	34	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-7	15	13	35	0	35	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-8	16	14	44	0	44	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-9	15	13	48	0	48	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	4	1	A-10	18	15	50	0	50	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-11	18	16	57	0	57	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	6	1	A-12	18	13	60	0	60	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	7	1	A-13	18	16	62	0	62	NA			CS-WO-CH-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Halibut	Primary	Archive	-	-	Archive	-	-	-	-	-	-			CS-WO-CH-Archive-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	A-1	1	1	18.6	14	84	0	84	NA			CS-WO-WS-01-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	2	1	2	22.5	18	140	0	140	NA			CS-WO-WS-02-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	3	1	3	20.5	16	105	0	105	NA			CS-WO-WS-03-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	4	1	4	21	16.5	125	0	125	NA	*		CS-FF/OF-WS-04-03-2014101010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	5	1	5	21	17	115	0	115	NA			CS-WO-WS-05-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	6	1	6	18.2	14.2	90	0	90	NA			CS-WO-WS-06-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	7	1	7	18.2	14.5	90	0	90	NA			CS-WO-WS-07-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	8	1	8	19	15.1	90	0	90	NA			CS-WO-WS-08-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	9	1	9	17.5	13.8	75	0	75	NA			CS-WO-WS-09-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Test	10	1	10	21.5	16.8	125	0	125	NA			CS-WO-WS-10-03-20141010	Include
Consolidated Slip - 03	White Surf Perch	Secondary	Archive	1	1	Archive	25	20	160	0	160	NA			CS-WO-WS-Archive-03-20141010	Include
Consolidated Slip - 03	White Croaker	Primary	Archive	1	1	1	25	22	200	0	200	NA		Delieverd to Anchor QEA		Exclude
Consolidated Slip - 03	White Croaker	Primary	Archive	2	1	2	26	22	225	0	225	NA				
Consolidated Slip - 03	White Croaker	Primary	Archive	3	1	3	27	24	255	0	255	NA				
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Test	4	1		26	23	105	0	105	215		Note: Substituting 1 composite sample for one initial target halibut sample for IB-05	CS-FF-LF-02-03-20141010	Include
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Test	5	1	2	26.6	23	110	0	110					
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Archive	1	1	A-1	20.3	17.5	50	0	50	NA			CS-WO-LF-Archive-03-20141010	Exclude

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix A - LA Inner Harbor Fish Catch Summary

Site	Species	Primary or Secondary?	Test or Archive?	AMEC Replicate Number	N=	New composite #	Total Length (cm)	Standard Length (cm)	Weight (Gross)-(grams)	Weight (Tare)-(grams)	Weight (Net)-(grams)	Weight (net)-MULTIPLE (grams)	Skin-Off Fillets + Offal	Notes	ID	Include in COC?
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Archive	2	1	A-2	23	20.3	67	0	67	NA			CS-WO-LF-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Archive	3	1	A-3	23	20	64	0	64	NA			CS-WO-LF-Archive-03-20141010	Exclude
Consolidated Slip - 03	Ca. Lizardfish	Secondary	Archive	-	-	Archive	-	-	-	-	-	-			CS-WO-LF-Archive-03-20141010	Include
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	1	1	1	23.5	20	150	0	110	NA		Not at Vista Analytical Labs		Exclude
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	2	1	2	18.5, 21.0	15.5, 17.5	70, 110	0	110	180				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	3	1	3	20.2, 17.0	17.2, 14.5	110, 65	0	110	175				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	4	1	4	17.0, 19.2, 13.8	14.2, 16.2, 11.3	66, 89, 33	0	110	188				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	5	1	5	18.0, 18.0	15.2, 15.5	79, 78	0	110	157				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	6	1	6	16.0, 15.0, 15.8, 12.8	13.1, 12.5, 13.0, 10.5	46, 40, 48, 26	0	110	160				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	7	1	7	16.0, 15.0, 17.0	13.5, 12.6, 14.3	51, 41, 68	0	110	160				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	8	1	8	15.5, 15.0, 16.7	13.0, 12.6, 14.0	45, 45, 54	0	110	144				
Consolidated Slip - 03	Barred Sandbass	Secondary	Archive	9	1	9	13.7, 14.3, 13.0, 10.7	11.8, 12.0, 11.5, 8.6	33, 37, 25, 14	0	110	79				

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Appendix A - Bivalve Catch Summary

Site # 1
 Site ID LA Outer Harbor
 Notes mussels, sampled by MB/SH
 Date 12/11/2014

	Replicate 1 n=70	Replicate 2 n=60	Replicate 3 n=60	Replicate 4 n=68	Replicate 5 n=60
	length (mm)	length (mm)	length (mm)	length (mm)	length (mm)
	52	57	70	64	51
	51	59	68	62	55
	53	55	67	62	54
	56	75	72	55	66
	50	60	78	65	54
	52	60	73	53	55
	54	58	75	69	63
	51	56	60	56	57
	53	58	58	56	55
	52	58	68	60	57
	69	60	60	58	57
	68	72	62	62	57
	52	68	58	68	58
	55	68	60	78	50
	52	60	62	68	53
	54	64	60	70	63
	50	61	70	55	53
	62	62	70	62	51
	57	70	65	62	50
	55	58	64	61	51
	52	60	69	66	53
	70	63	71	56	59
	50	62	72	72	56
	50	68	62	55	55
	52	69	61	69	52
	63	70	64	66	58
	52	68	62	67	49
	55	72	64	57	55
	52	73	60	65	54
	50	62	60	72	55
	51	60	65	57	54
	50	62	62	59	59
	51	64	68	60	62
	59	60	67	72	59
	54	65	64	55	55
	58	70	62	55	57
	52	73	59	71	60
	51	60	68	70	51
	52	68	65	66	66
	60	62	58	61	70
	53	62	80	55	56
	50	60	75	59	50
	52	72	61	71	51
	58	70	61	60	55
	50	62	61	61	55
	50	65	61	60	50
	55	70	61	65	53
	51	71	60	68	53
	55	70	60	55	56
	53	66	68	63	63
	53	60	60	60	59
	62	72	78	65	58
	57	63	59	69	56
	59	64	69	64	51
	52	64	68	61	54
	59	72	68	67	55
	53	57	64	65	56
	51	57	59	58	59
	60	62	61	60	53
	50	58	65	58	51
	51			56	
	64			60	
	58			60	
	50			62	
	60			58	
	58			58	
	55			64	
	65			65	
	52				
	59				
Average	55	64	65	62	56
Count	70	60	60	68	60

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Appendix A - Bivalve Catch Summary

Site # 2
 Site ID LA Inner Harbor
 Notes mussels, sampled by MB/SH
 Date 12/11/2014

	Replicate 1 n=50	Replicate 2 n=32	Replicate 3 n=49	Replicate 4 n=50	Replicate 5 n=42
	length (mm)	length (mm)	length (mm)	length (mm)	length (mm)
	65	51	69	75	81
	66	59	70	51	74
	68	50	53	68	75
	71	55	60	53	74
	54	50	79	71	65
	51	50	79	64	71
	68	61	69	79	70
	53	61	54	75	72
	54	51	77	60	75
	51	58	55	52	80
	54	52	78	52	77
	55	68	52	53	75
	58	50	78	54	80
	60	51	62	54	78
	57	56	59	66	73
	55	62	53	73	82
	52	78	52	78	78
	52	78	57	59	68
	56	72	74	54	69
	52	72	68	50	82
	65	50	56	52	75
	51	51	78	66	74
	62	50	57	55	71
	57	50	75	70	75
	73	50	69	59	72
	56	50	55	56	78
	52	73	57	57	78
	71	73	60	60	77
	75	74	75	52	73
	72	73	59	76	72
	66	78	75	52	76
	67	80	51	50	66
	68		50	76	72
	52		78	51	65
	50		54	73	80
	55		50	55	78
	51		69	73	80
	50		50	51	75
	51		55	56	81
	55		53	51	80
	50		56	61	79
	52		52	76	68
	54		60	54	
	56		62	51	
	50		62	71	
	50		51	55	
	51		50	59	
	51		52	67	
	50		61	55	
	51			64	
Average	57	61	62	61	75
Count	50	32	49	50	42

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Appendix A - Bivalve Catch Summary

Site # 3
 Site ID LA Harbor - Consolidated Slip
 Notes oysters, sampled by MB/SH
 Date 12/11/2014
 n=12

	Replicate 1		Replicate 2		Replicate 3		Replicate 4		Replicate 5	
	length (mm)	width (mm)	length (mm)	width (mm)	length (mm)	width (mm)	length (mm)	width (mm)	length (mm)	width (mm)
	120	70	98	66	99	59	125	61	125	61
	83	75	87	65	103	64	120	76	114	58
	104	57	99	60	112	77	114	65	105	63
	115	75	107	78	90	62	115	69	135	75
	94	63	90	76	90	55	121	80	104	73
	95	76	95	78	100	71	116	89	105	88
	70	60	98	70	94	59	100	70	106	61
	104	62	120	67	112	60	141	44	94	47
	110	65	102	64	127	59	98	82	109	72
	91	70	106	55	107	64	126	88	110	69
	97	62	88	55	130	56	109	76	139	85
	89	62	122	80	125	75	97	70	108	65
Average	98	66	101	68	107	63	115	73	113	68
Count	12		12		12		12		12	

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Appendix A - Bivalve Catch Summary

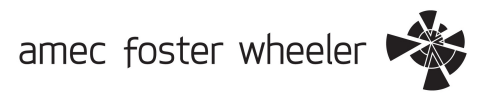
Site # 4
 Site ID Inner Long Beach
 Notes mussels, sampled by MB/SH
 Date 12/11/2014

	Replicate 1 n=60	Replicate 2 n=60	Replicate 3 n=60	Replicate 4 n=61	Replicate 5 n=60
	length (mm)	length (mm)	length (mm)	length (mm)	length (mm)
	60	58	61	62	60
	72	61	71	60	63
	74	63	69	58	69
	63	60	65	59	61
	68	63	58	60	67
	68	65	66	58	67
	69	55	66	59	58
	52	67	75	66	68
	57	57	58	66	68
	63	60	70	67	68
	65	62	57	64	80
	68	59	64	59	67
	67	58	65	69	68
	77	63	66	61	59
	67	59	80	54	60
	67	59	55	60	57
	66	59	59	78	60
	63	55	73	68	67
	58	61	58	70	62
	65	53	65	66	66
	66	62	70	69	71
	67	65	57	59	76
	56	56	56	57	68
	60	69	64	65	64
	57	59	60	58	61
	53	65	64	65	61
	58	60	63	53	60
	62	61	66	71	59
	66	57	64	56	62
	62	54	71	65	64
	58	65	64	58	65
	59	60	65	60	69
	58	59	58	54	67
	69	60	68	63	70
	59	56	62	55	65
	66	70	68	53	65
	59	58	59	60	63
	65	70	70	68	74
	70	56	67	59	67
	57	60	70	58	59
	60	61	64	62	60
	60	67	63	64	62
	60	60	57	64	68
	70	57	62	59	78
	61	60	58	60	60
	55	56	75	67	60
	75	71	63	58	72
	77	56	65	61	70
	69	58	58	59	69
	64	57	66	60	60
	64	65	59	58	62
	55	66	62	60	63
	64	54	62	70	60
	62	64	63	66	61
	61	70	63	55	61
	63	55	62	64	78
	54	60	65	63	57
	67	58	64	57	75
	60	59	64	61	67
	72	59	67	53	69
				58	
Average	63	61	64	61	65
Count	60	60	60	61	60

APPENDIX B

CATCH PHOTO LOGS

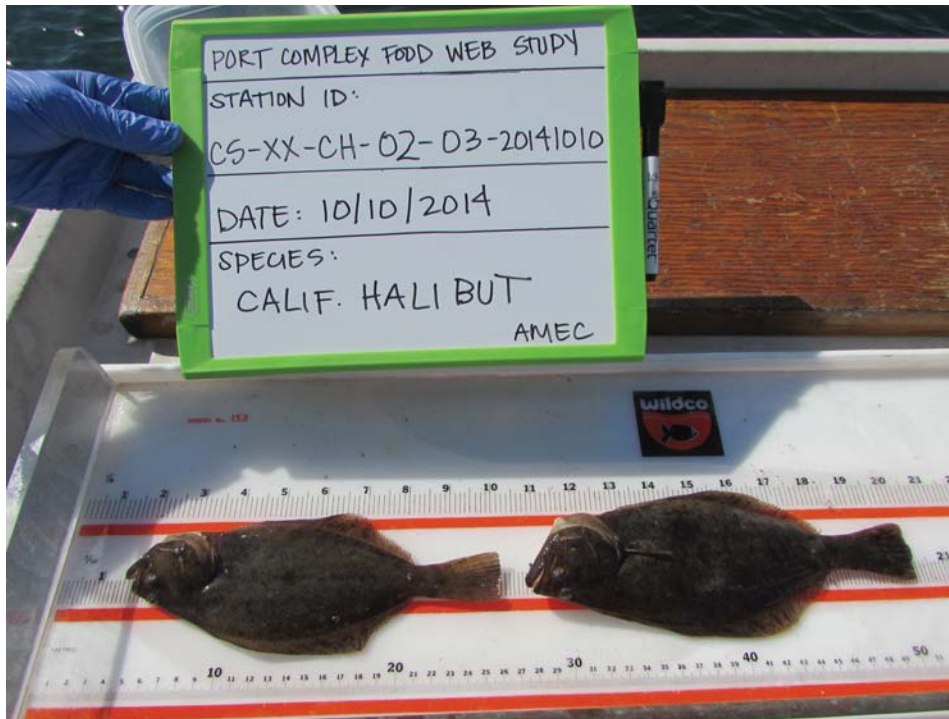
POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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Sample Name: CS-XX-CH-01-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-02-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-03-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-04-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-05-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-06-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-07-03-20141010 (1 of 2)
 Station Location: CS-03
 Common Name: California Halibut
 Scientific Name: *Paralichthys californicus*
 Sample Date: 10/10/2014



Sample Name: CS-XX-CH-07-03-20141010 (2 of 2)
 Station Location: CS-03
 Common Name: California Halibut
 Scientific Name: *Paralichthys californicus*
 Sample Date: 10/10/2014



Sample Name: CS-XX-CH-08-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-09-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-CH-10-03-20141010
Station Location: CS-03
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/10/2014



Sample Name: CS-XX-LF-All-03-20141010

Station Location: CS-03

Common Name: California Lizardfish

Scientific Name: *Synodus lucioceps*

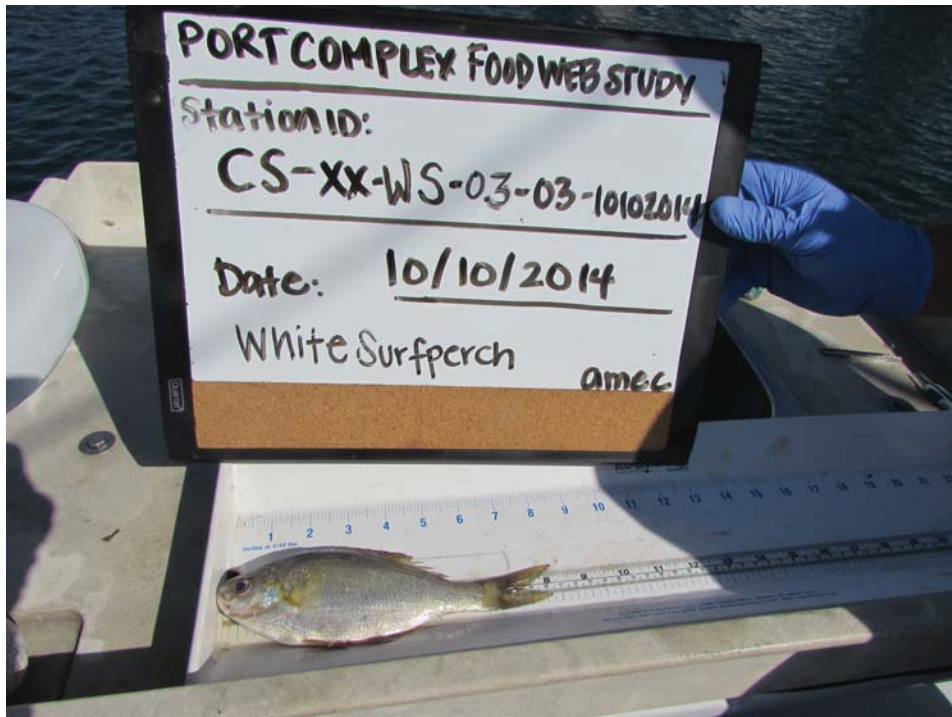
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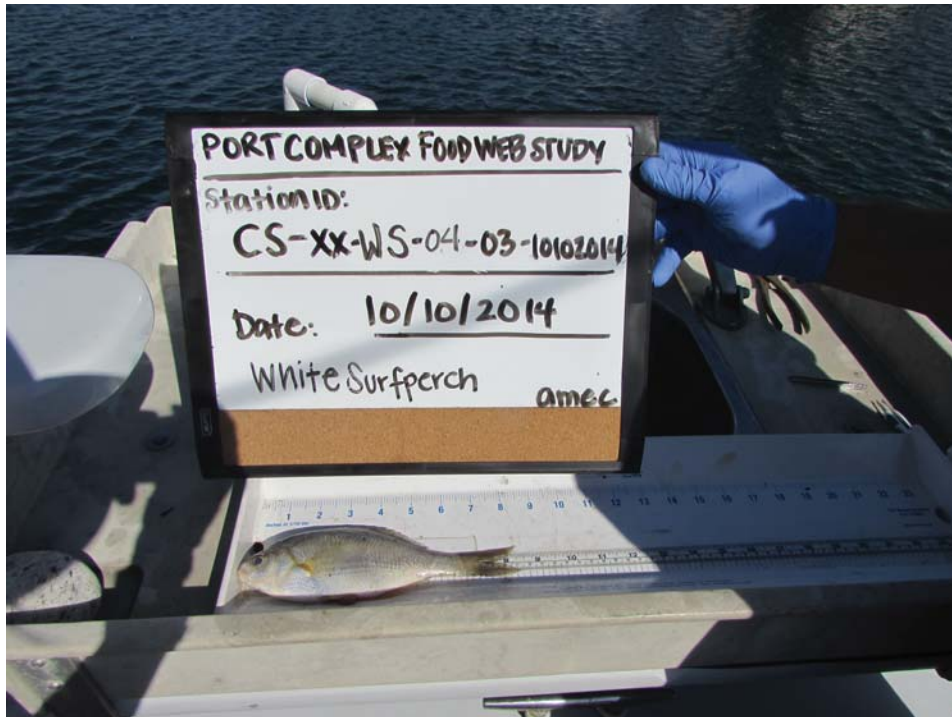
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Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



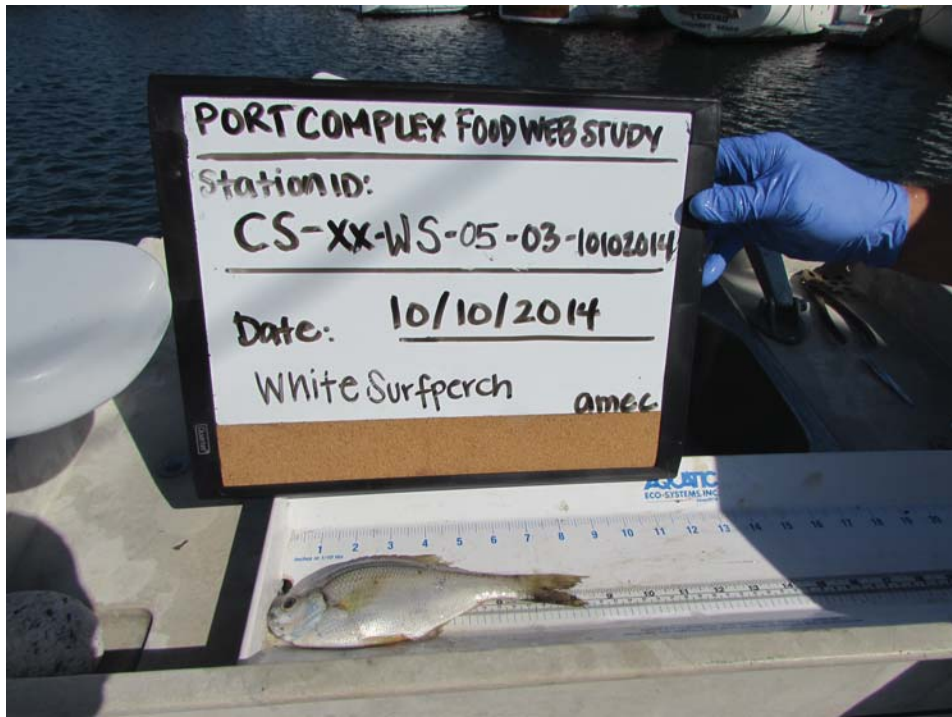
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Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



Sample Name: CS-XX-WS-03-03-20141010
Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



Sample Name: CS-XX-WS-04-03-20141010
Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



Sample Name: CS-XX-WS-05-03-20141010
Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



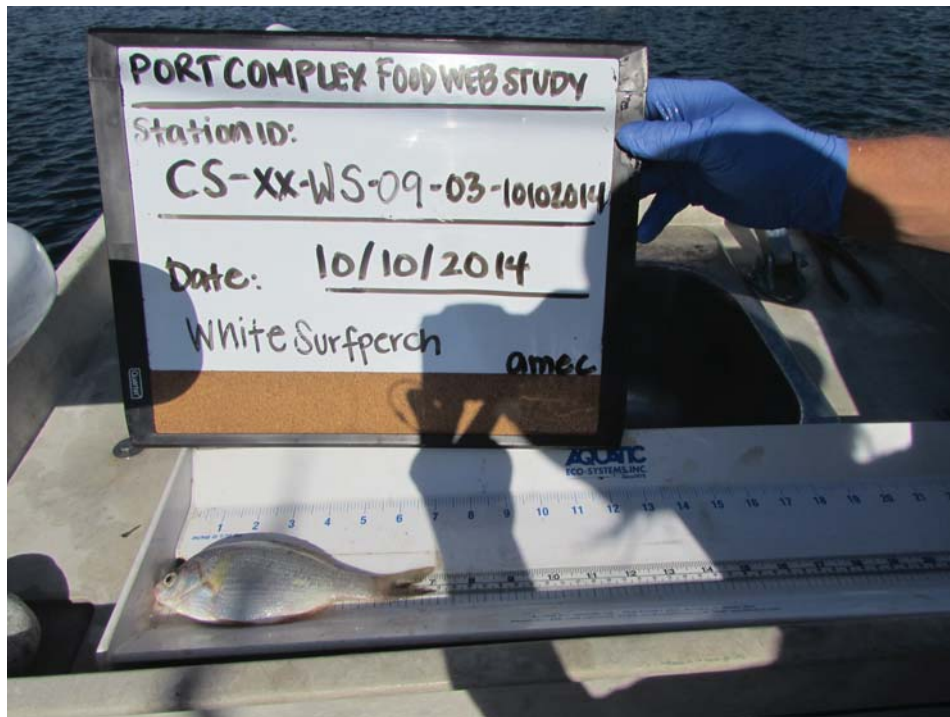
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Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



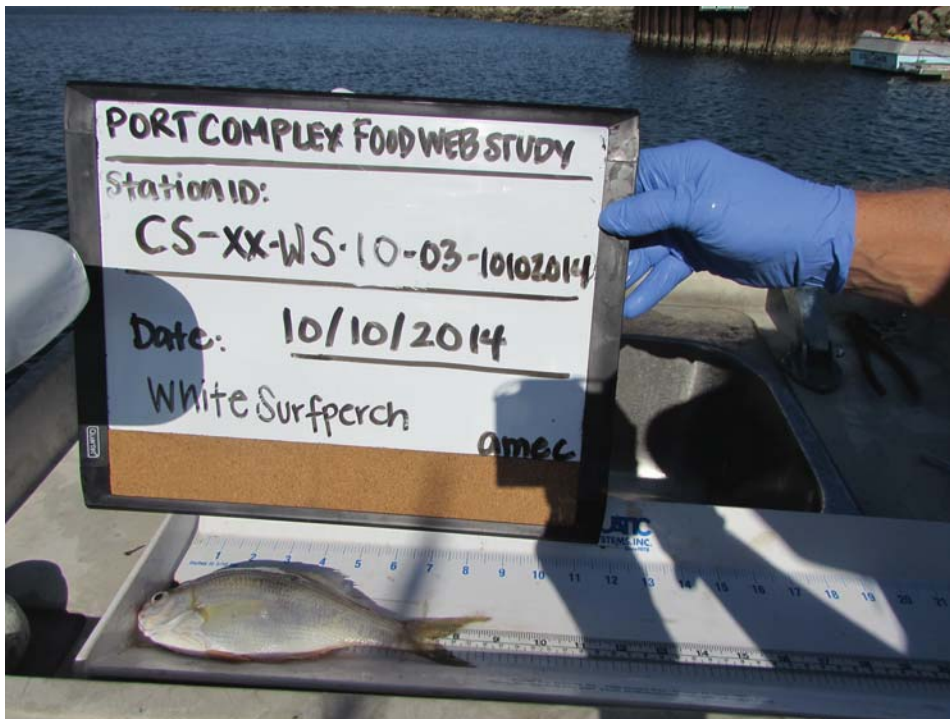
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Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



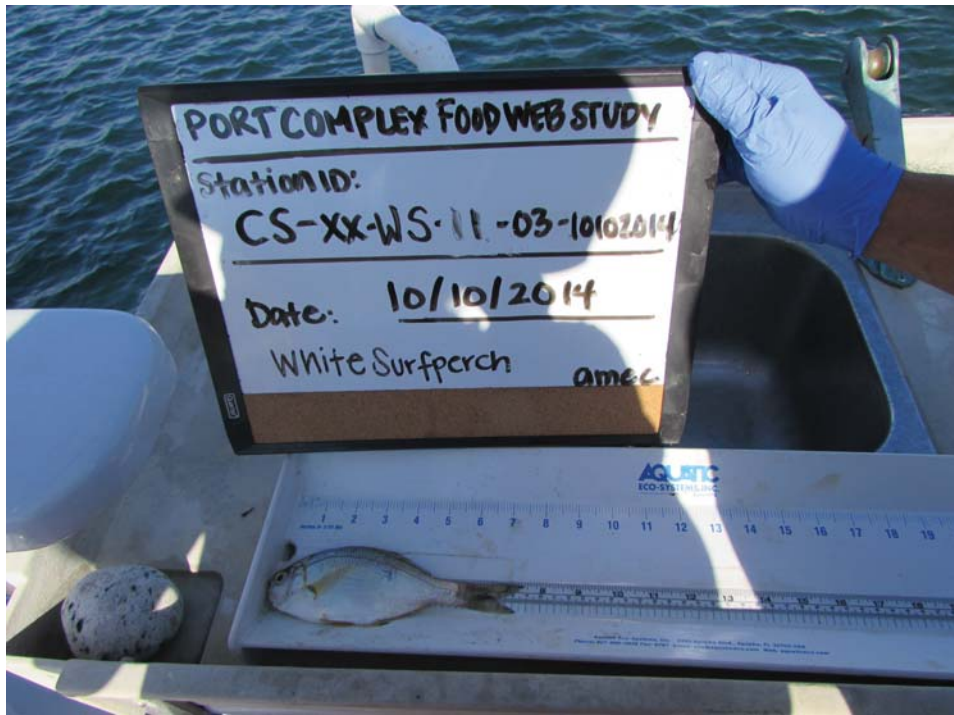
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Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



Sample Name: CS-XX-WS-09-03-20141010
Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



Sample Name: CS-XX-WS-10-03-20141010
Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



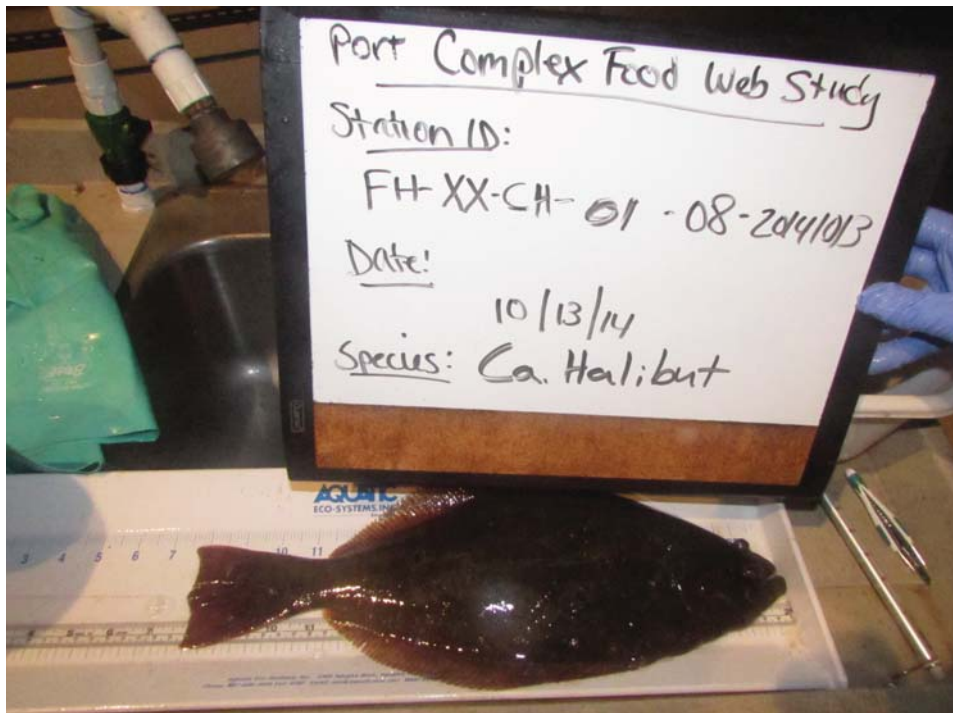
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Station Location: CS-03

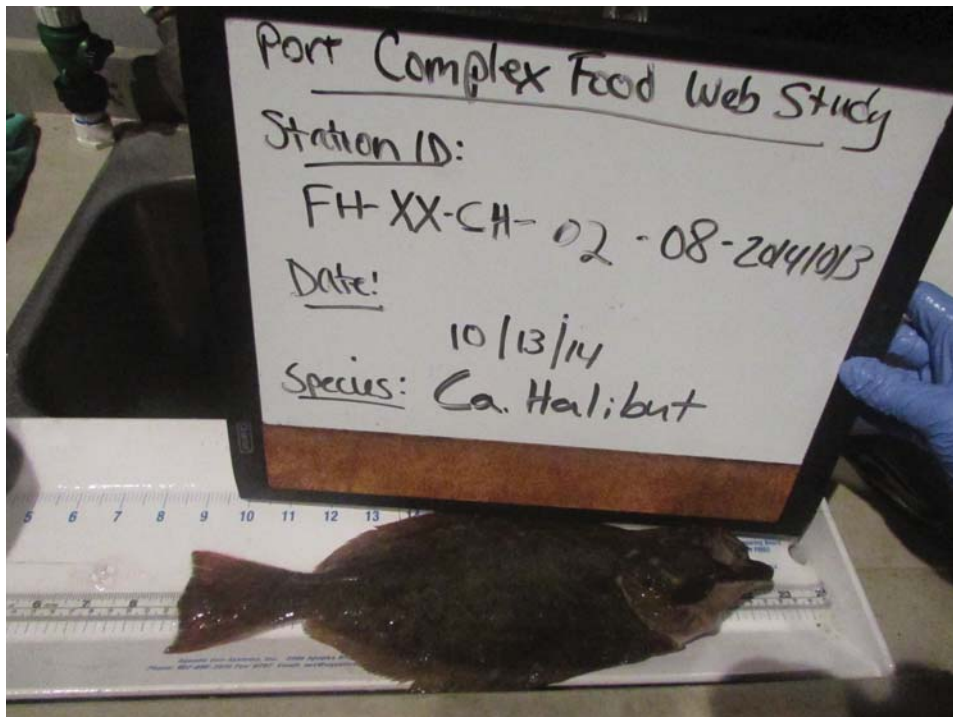
Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

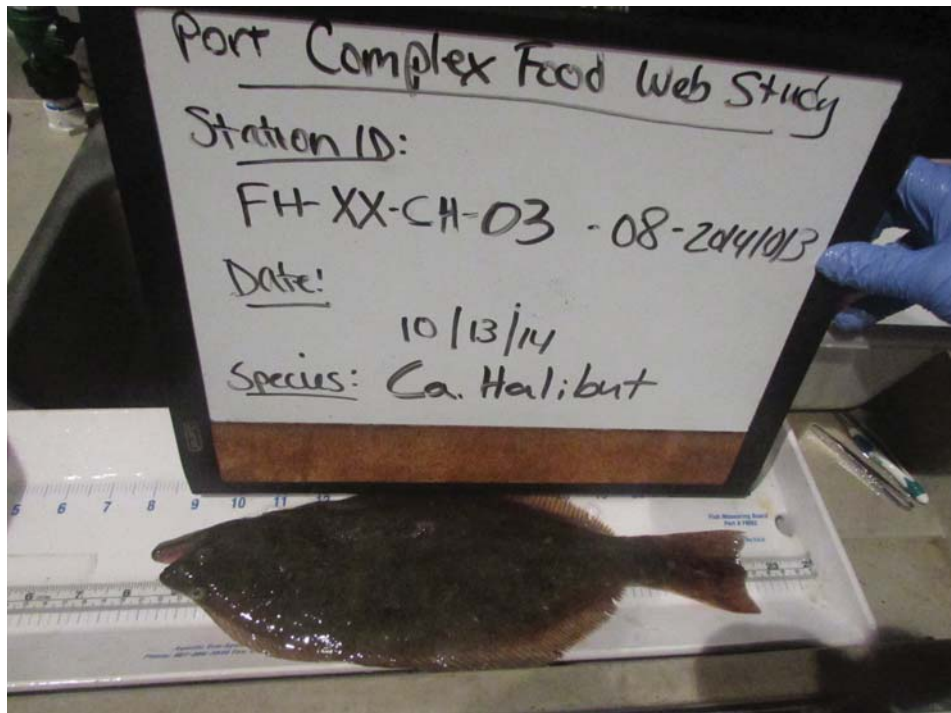
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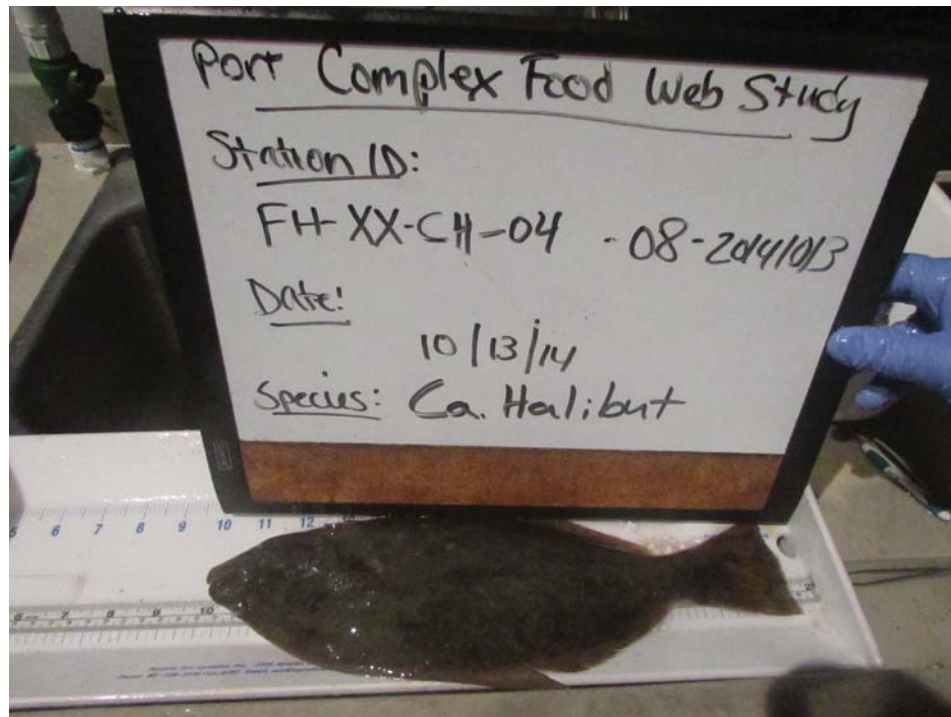
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Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



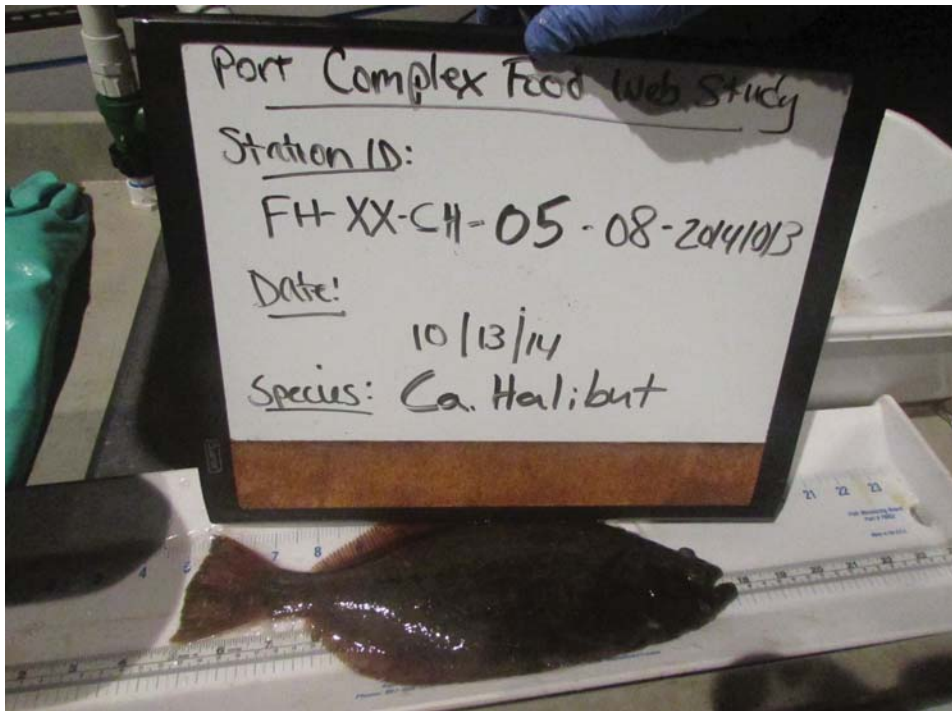
Sample Name: FH-XX-CH-02-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



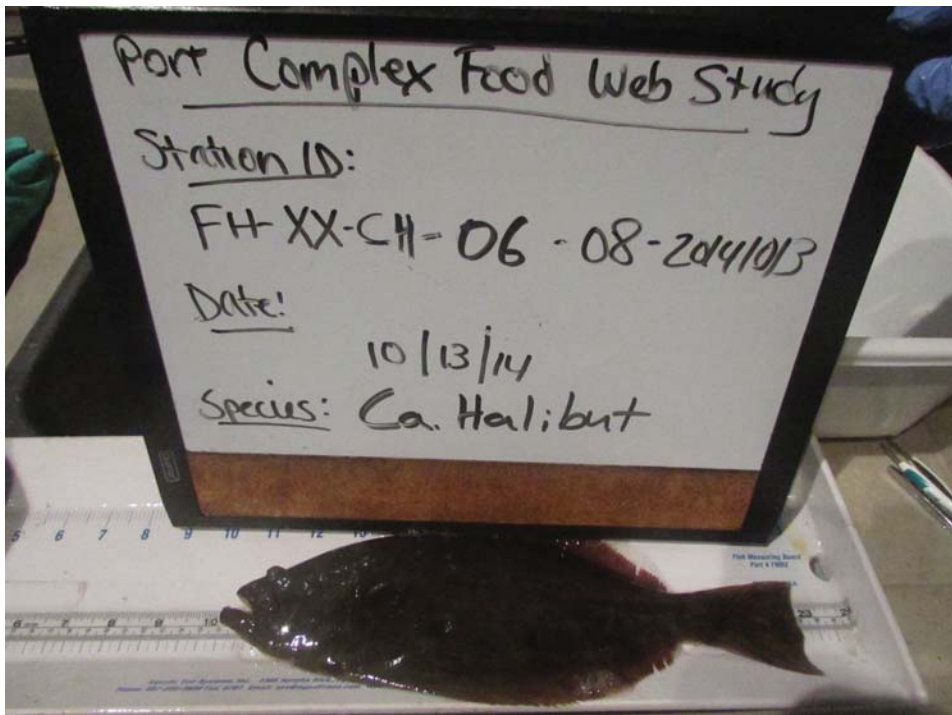
Sample Name: FH-XX-CH-03-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



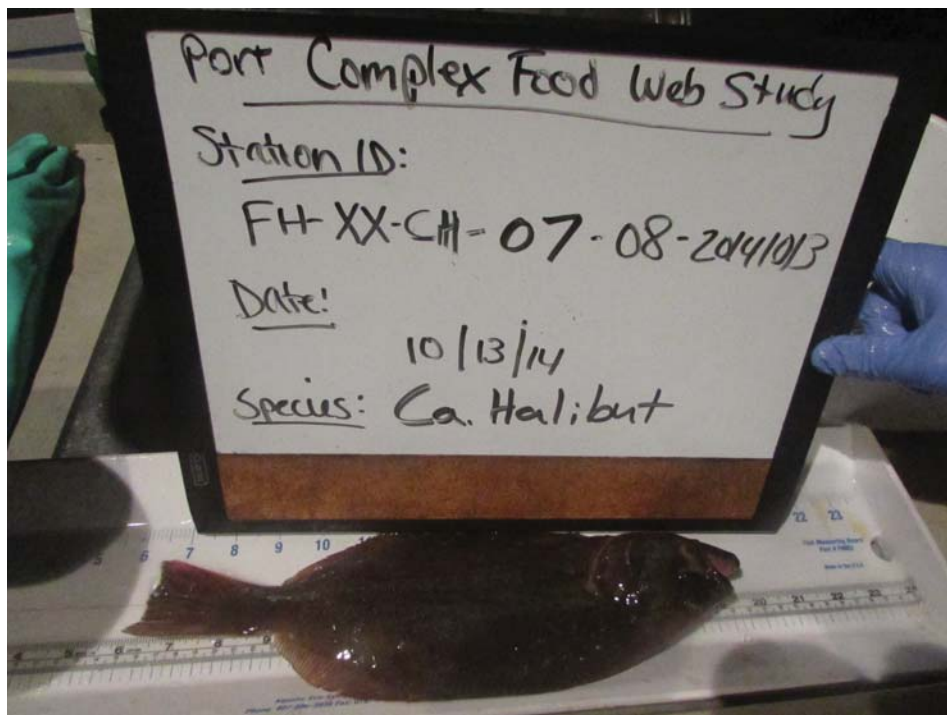
Sample Name: FH-XX-CH-04-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



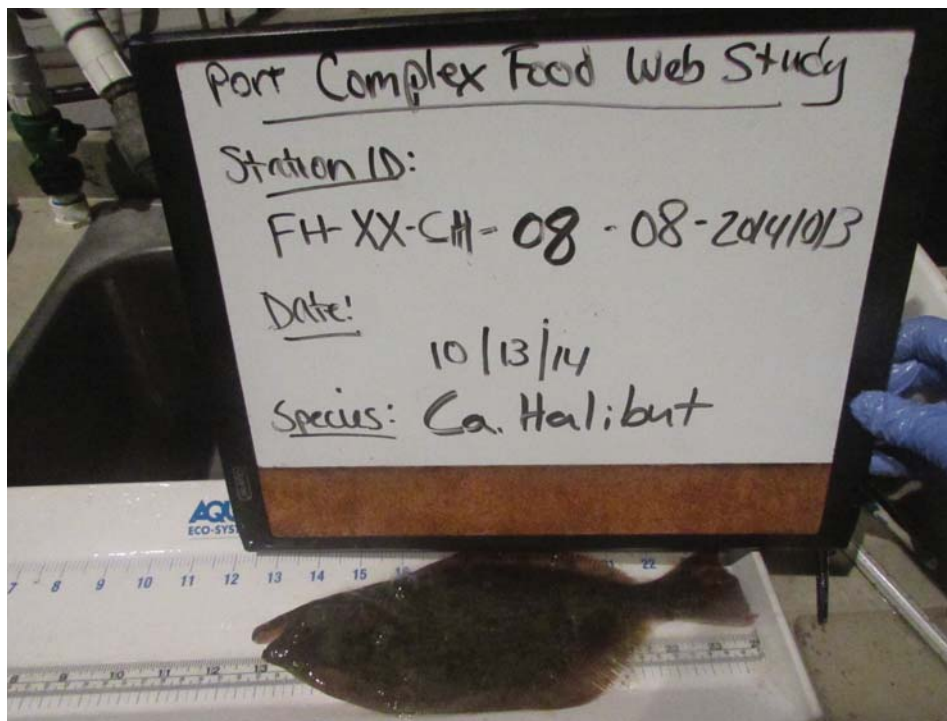
Sample Name: FH-XX-CH-05-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



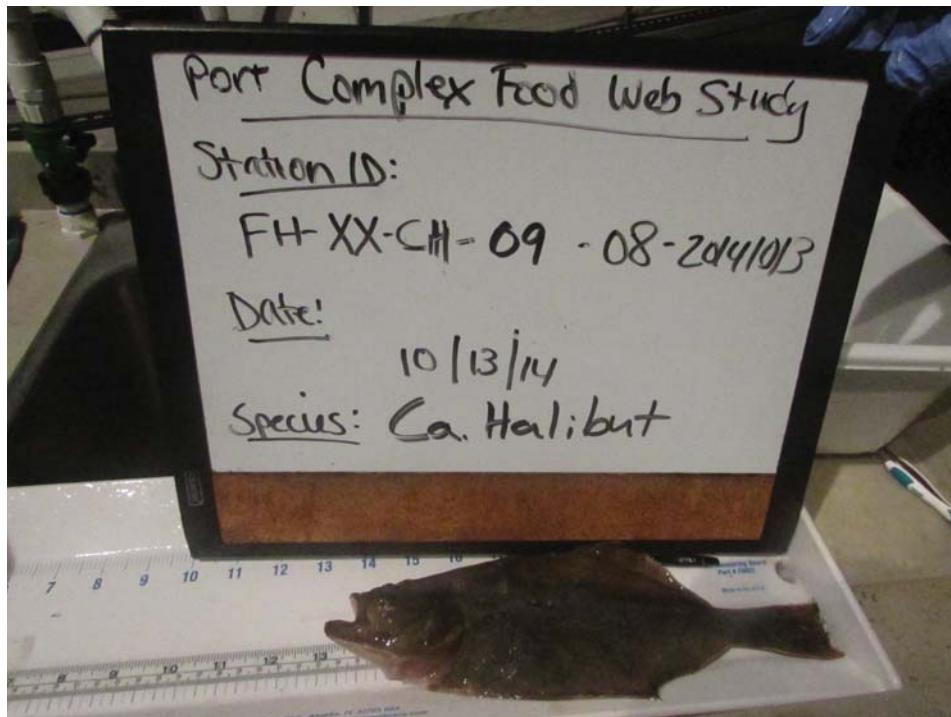
Sample Name: FH-XX-CH-06-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



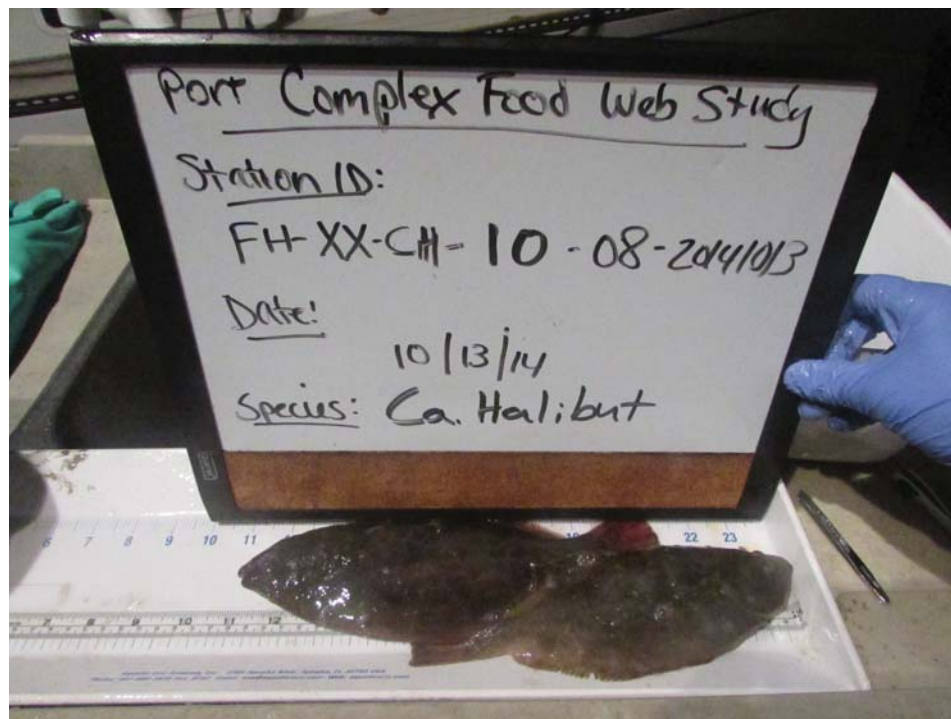
Sample Name: FH-XX-CH-07-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



Sample Name: FH-XX-CH-08-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



Sample Name: FH-XX-CH-09-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



Sample Name: FH-XX-CH-10-08-20141013
Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



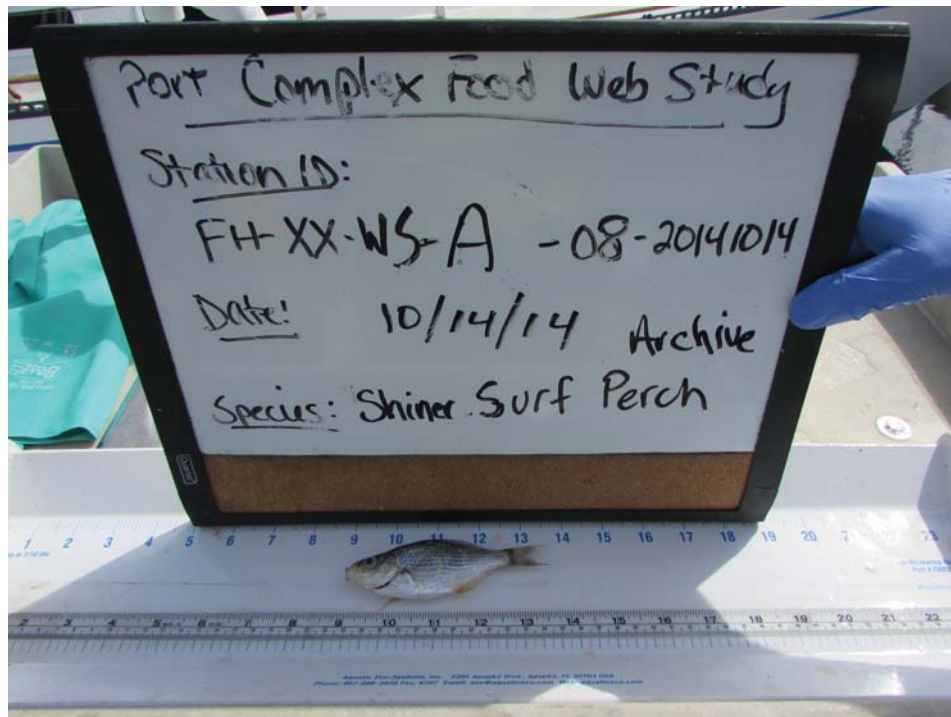
Sample Name: FH-XX-CH-A-08-20141013

Station Location: FH-08

Common Name: California Halibut

Scientific Name: *Paralichthys californicus*

Sample Date: 10/13/2014



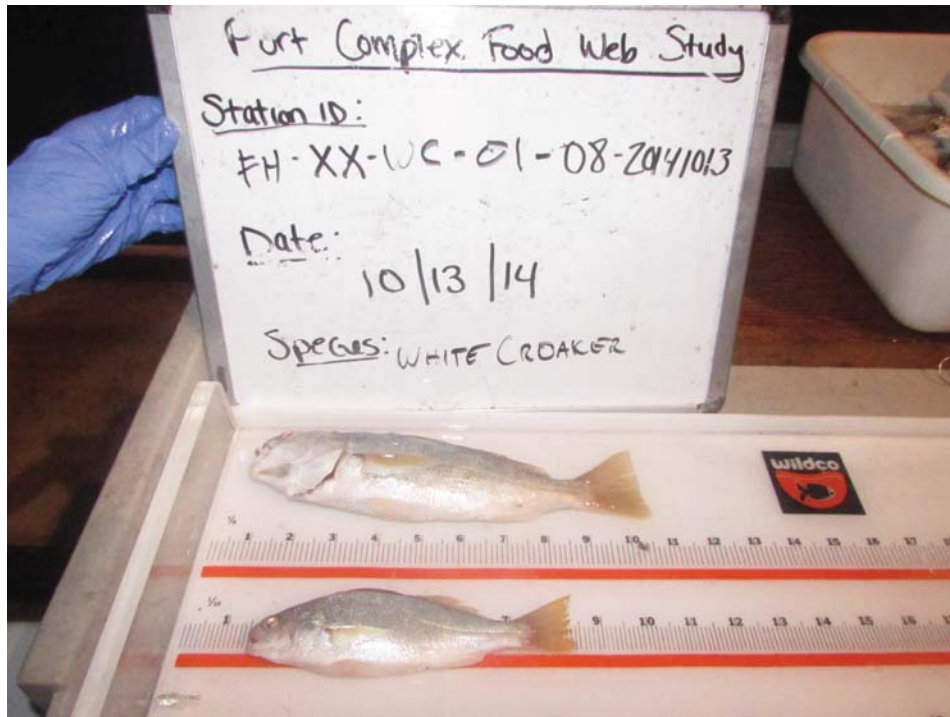
Sample Name: FH-XX-SS-A-08-20141014

Station Location: FH-08

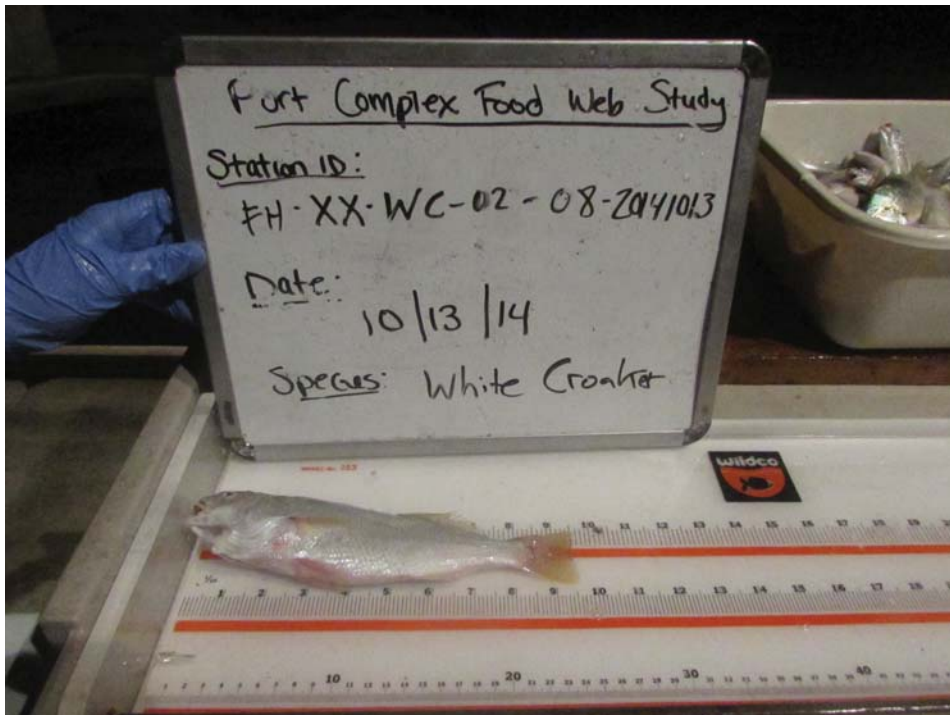
Common Name: Shiner Surfperch

Scientific Name: *Cymatogaster aggregata*

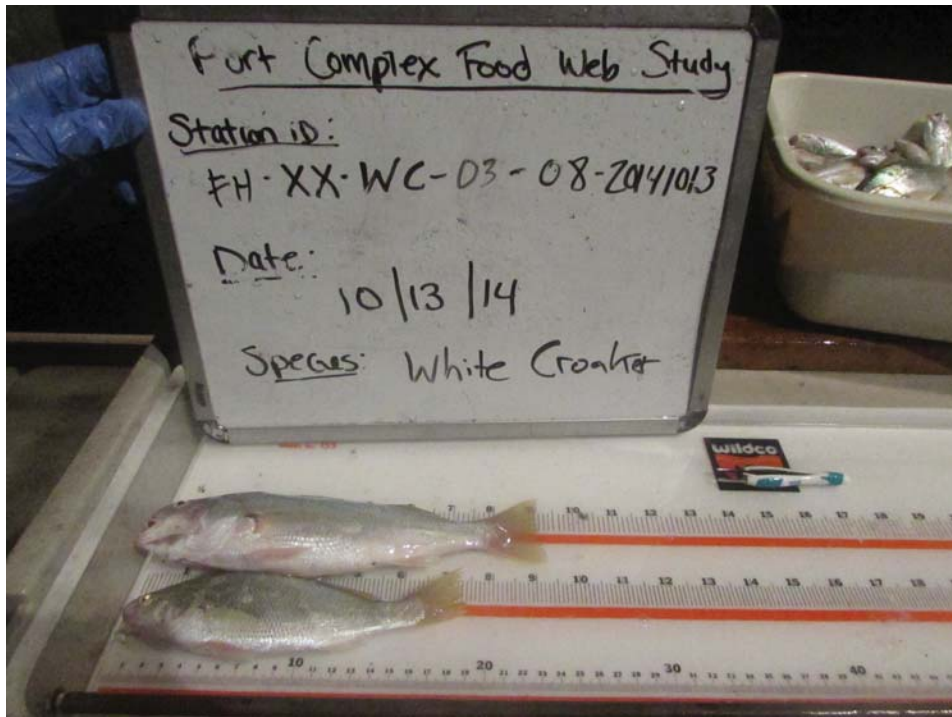
Sample Date: 10/14/2014



Sample Name: FH-XX-WC-01-08-20141013
Station Location: FH-08
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/13/2014



Sample Name: FH-XX-WC-02-08-20141013
Station Location: FH-08
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/13/2014



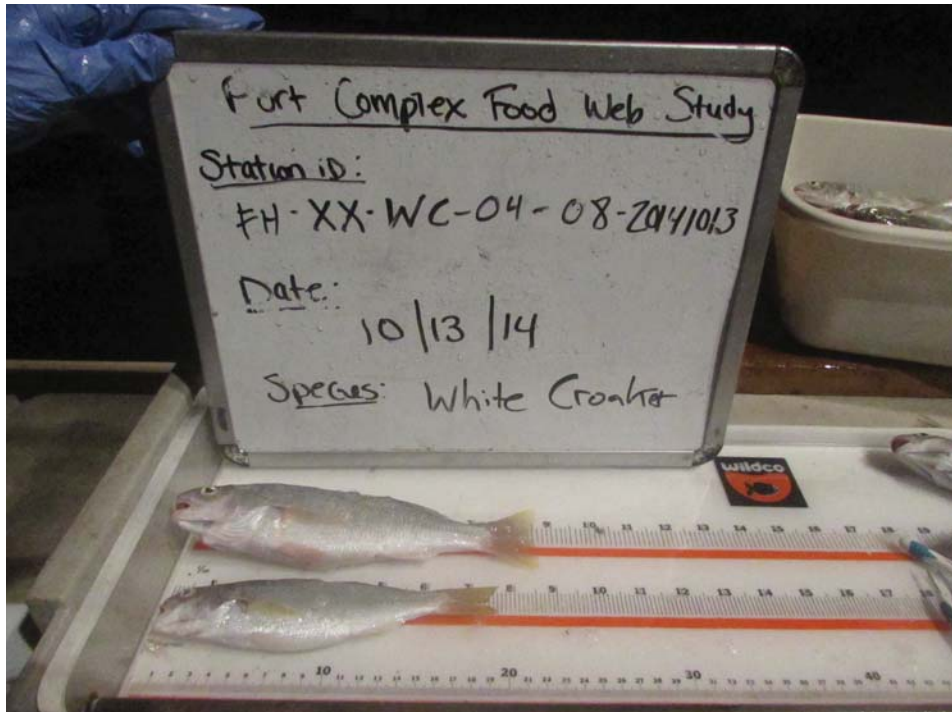
Sample Name: FH-XX-WC-03-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



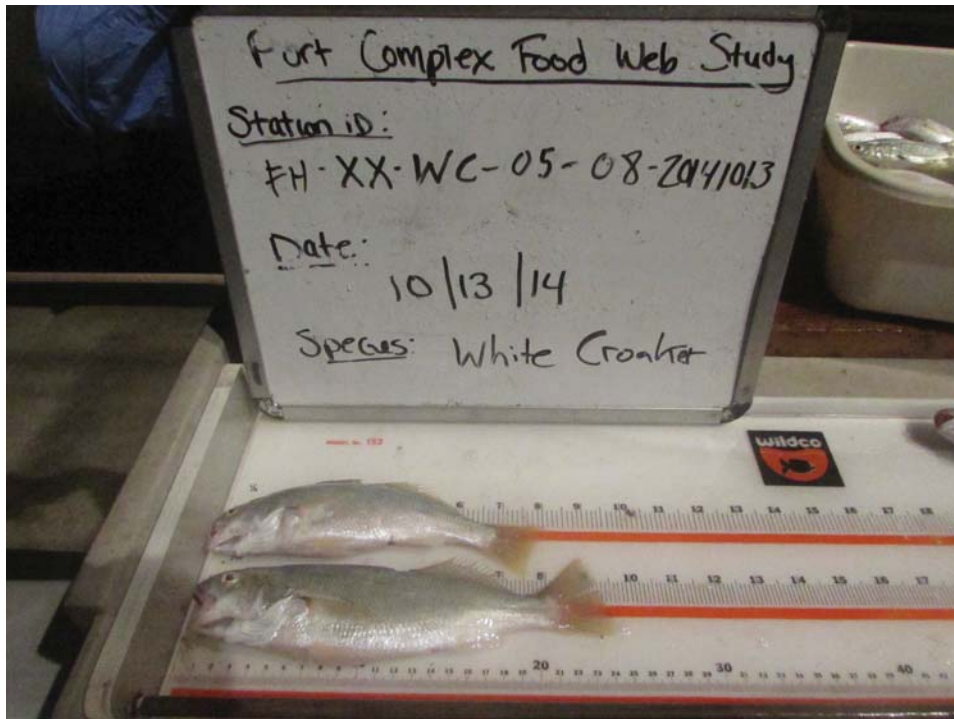
Sample Name: FH-XX-WC-04-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



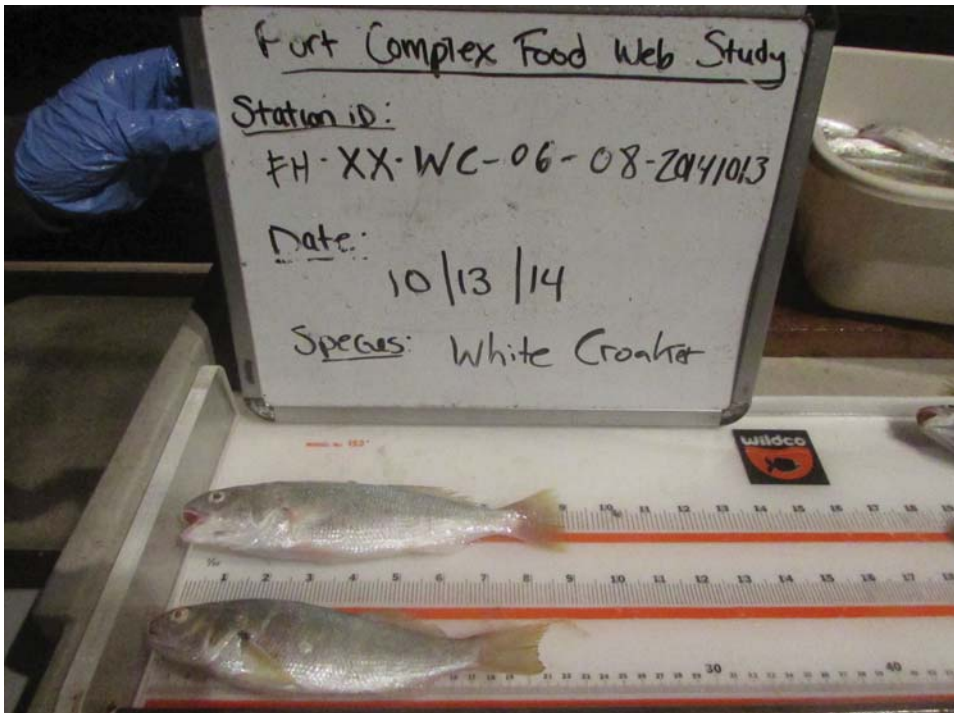
Sample Name: FH-XX-WC-05-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



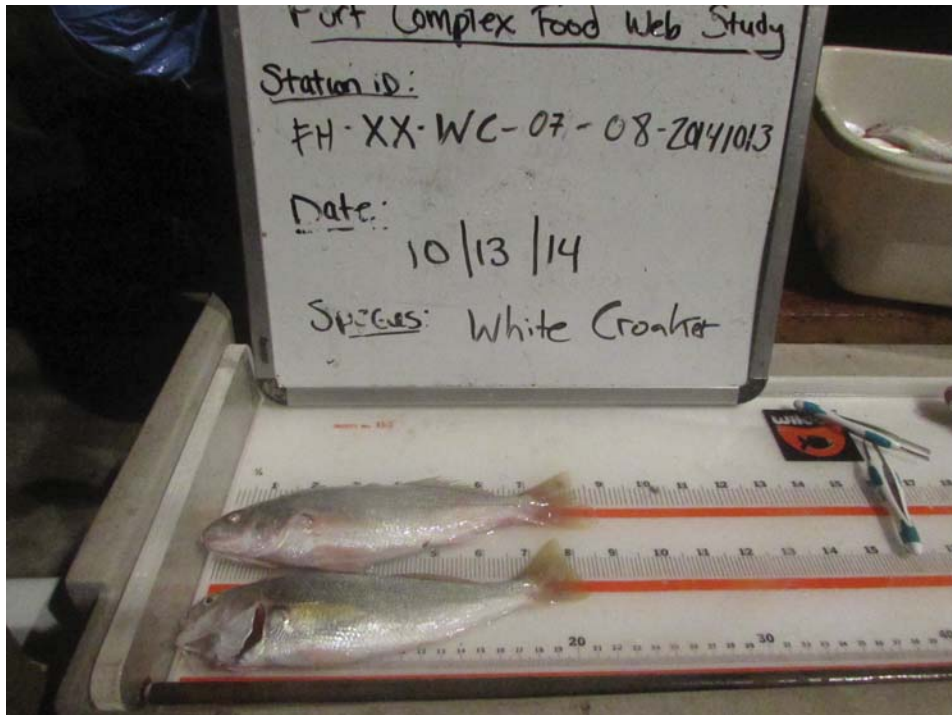
Sample Name: FH-XX-WC-06-08-20141013

Station Location: FH-08

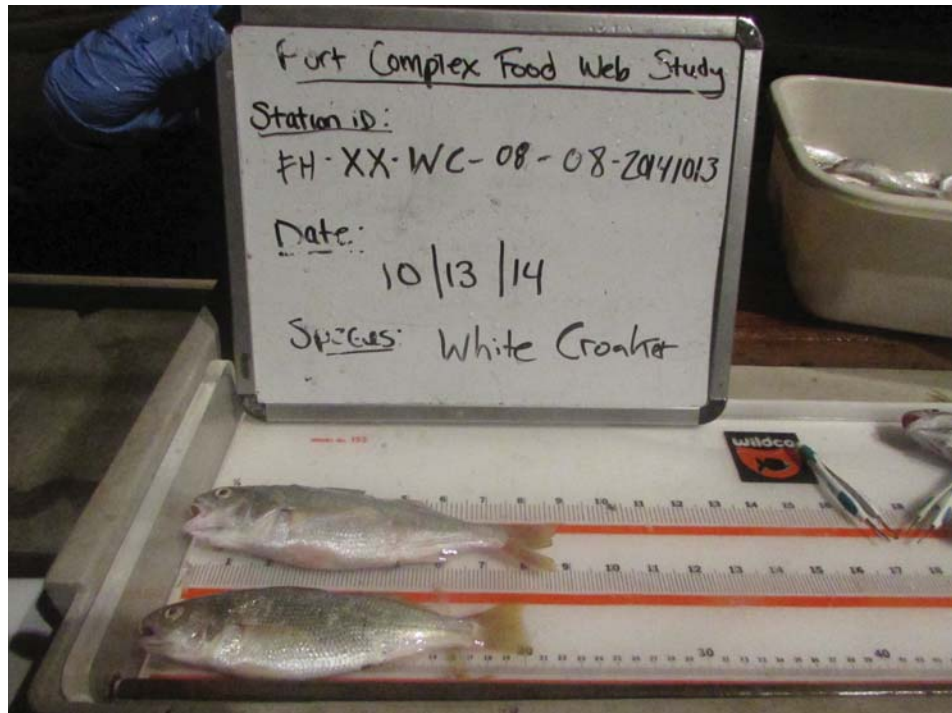
Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

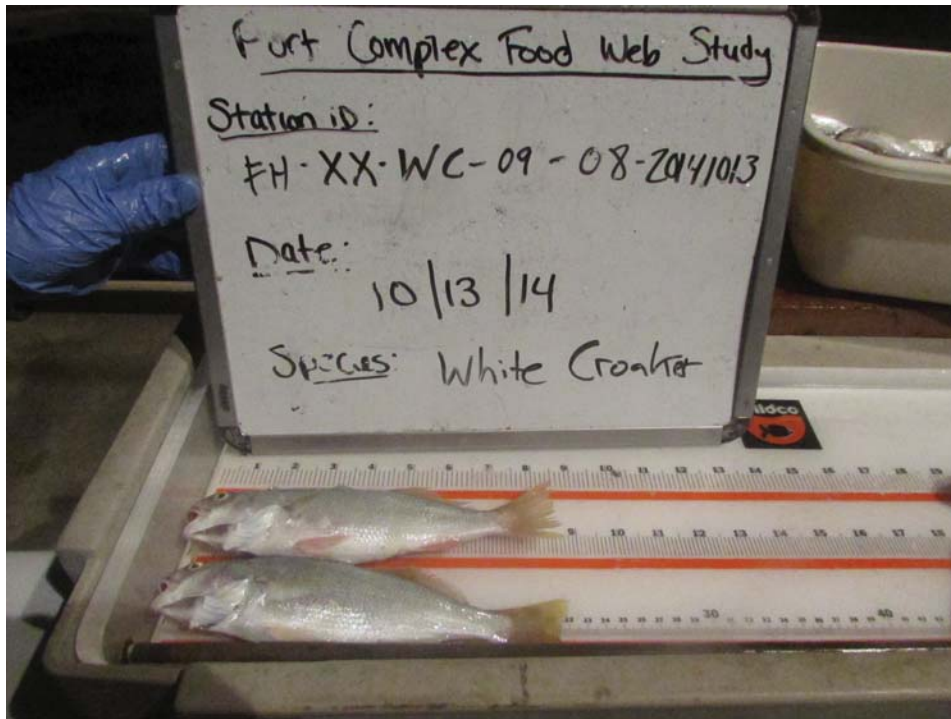
Sample Date: 10/13/2014



Sample Name: FH-XX-WC-07-08-20141013
Station Location: FH-08
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/13/2014



Sample Name: FH-XX-WC-08-08-20141013
Station Location: FH-08
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/13/2014



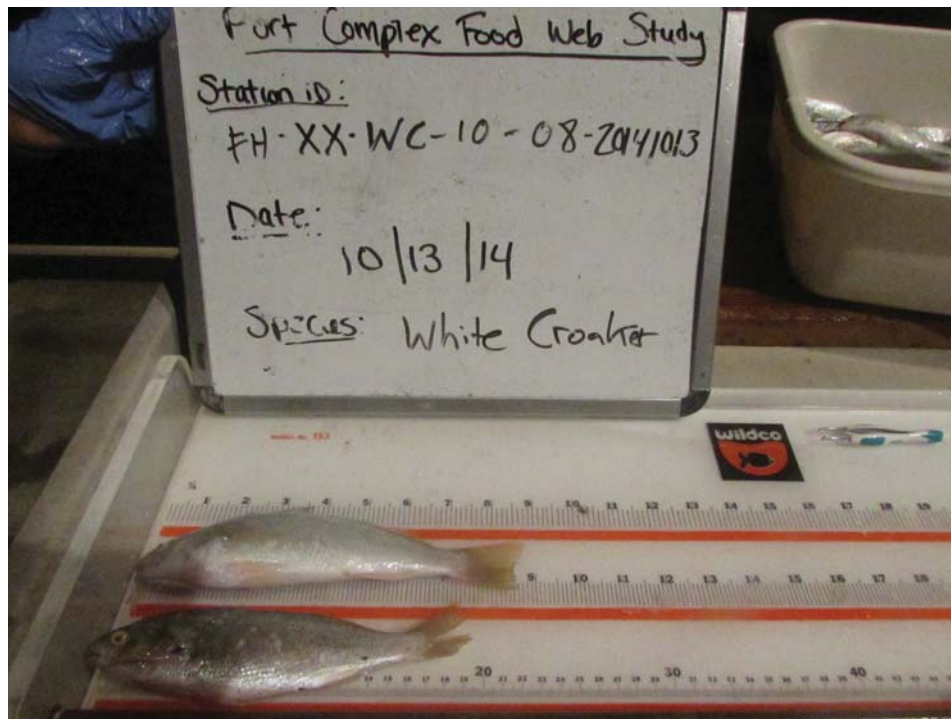
Sample Name: FH-XX-WC-09-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



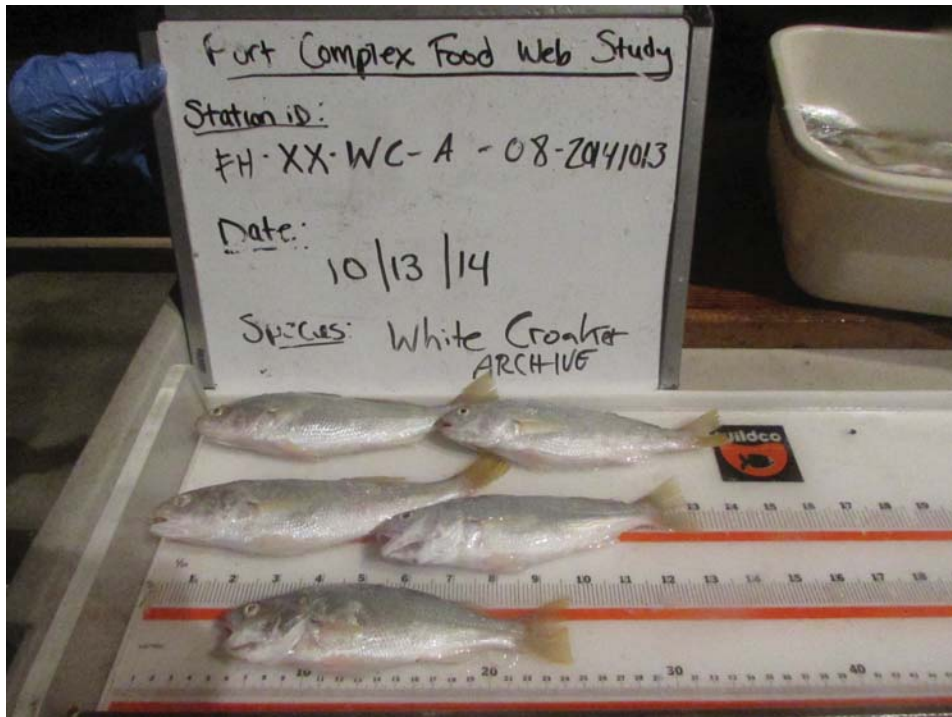
Sample Name: FH-XX-WC-10-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



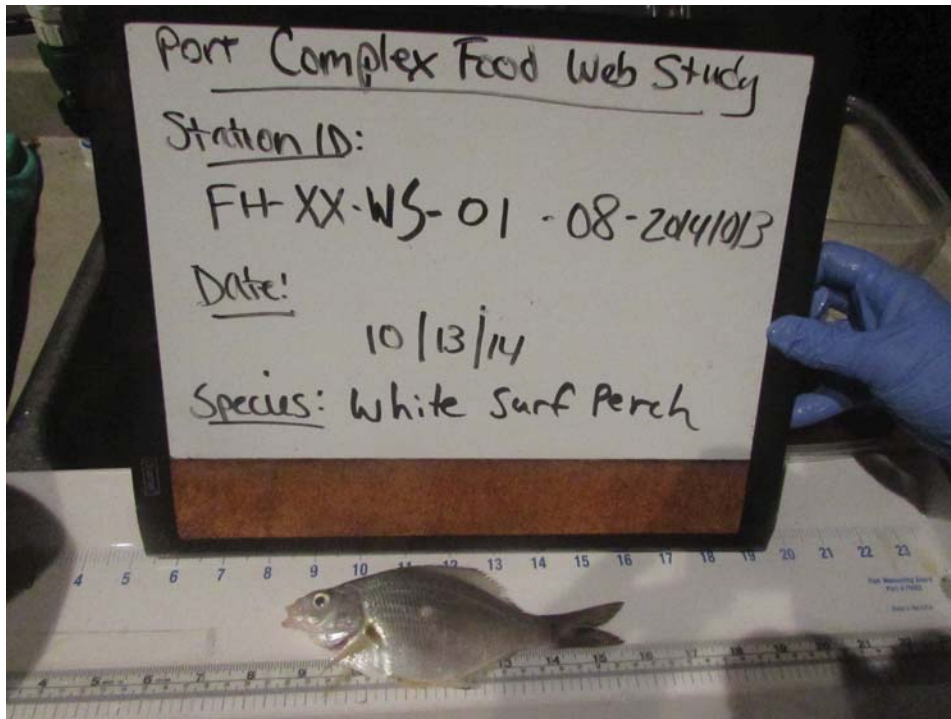
Sample Name: FH-XX-WC-A-08-20141013

Station Location: FH-08

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/13/2014



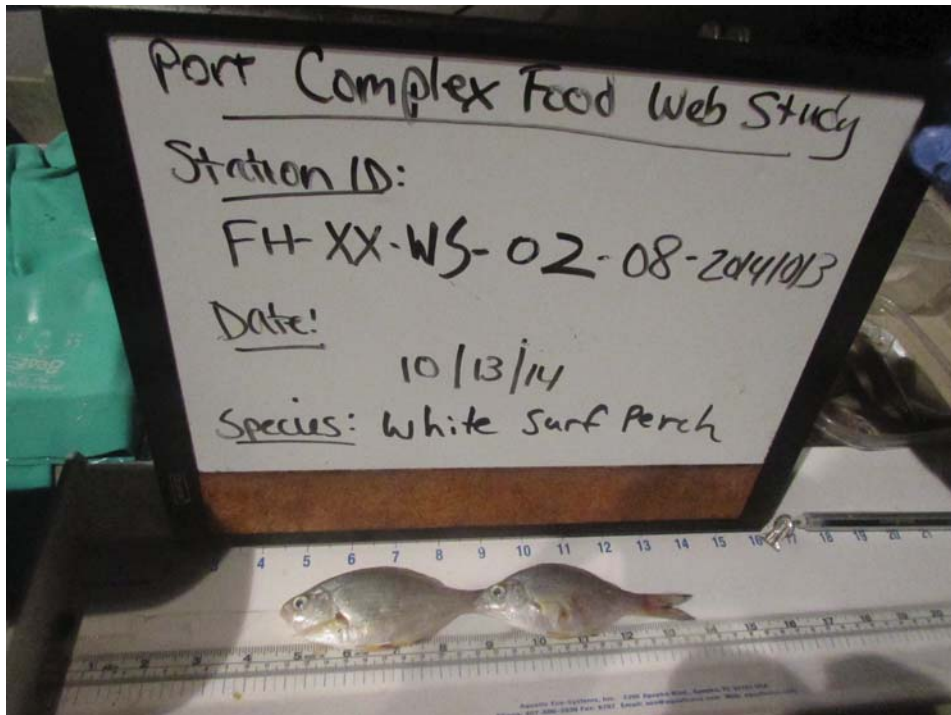
Sample Name: FH-XX-WS-01-08-20141013

Station Location: FH-08

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/13/2014



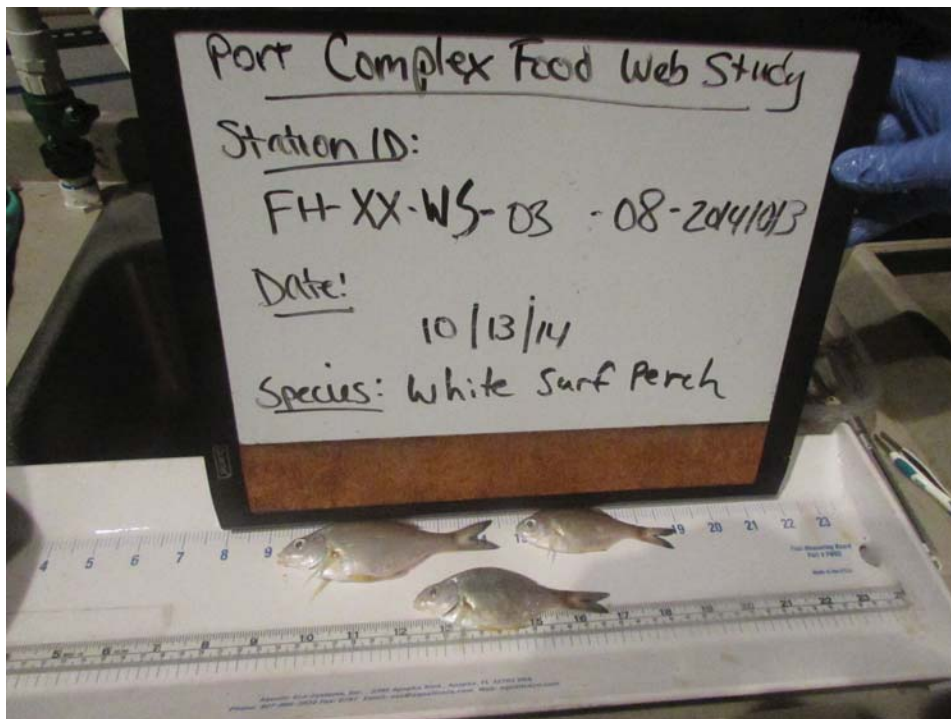
Sample Name: FH-XX-WS-02-08-20141013

Station Location: FH-08

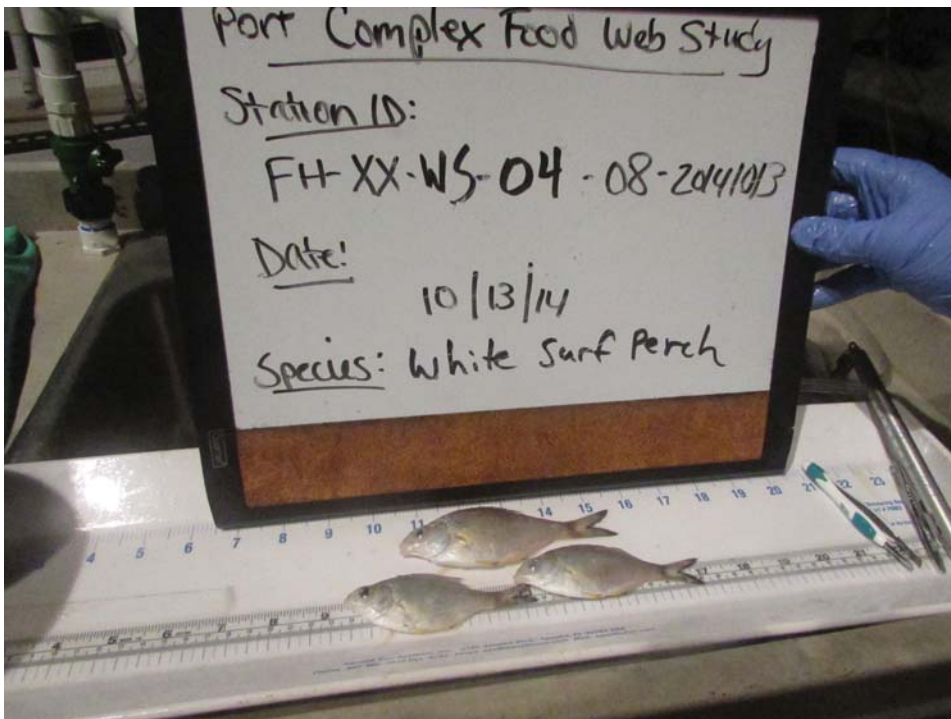
Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

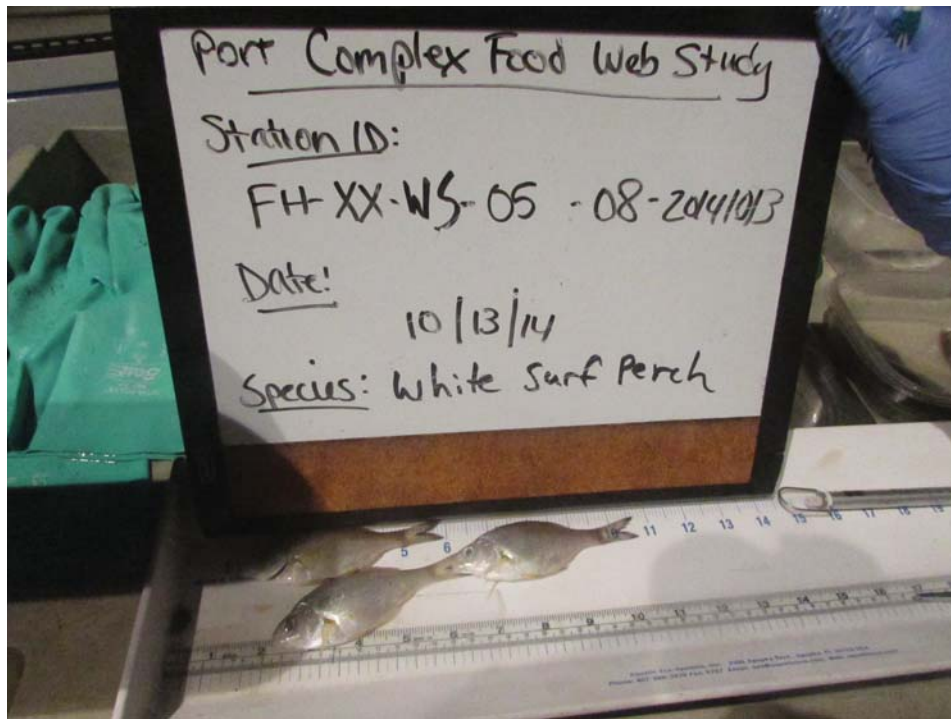
Sample Date: 10/13/2014



Sample Name: FH-XX-WS--03--08--20141013
Station Location: FH-08
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/13/2014



Sample Name: FH-XX-WS--04--08--20141013
Station Location: FH-08
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/13/2014



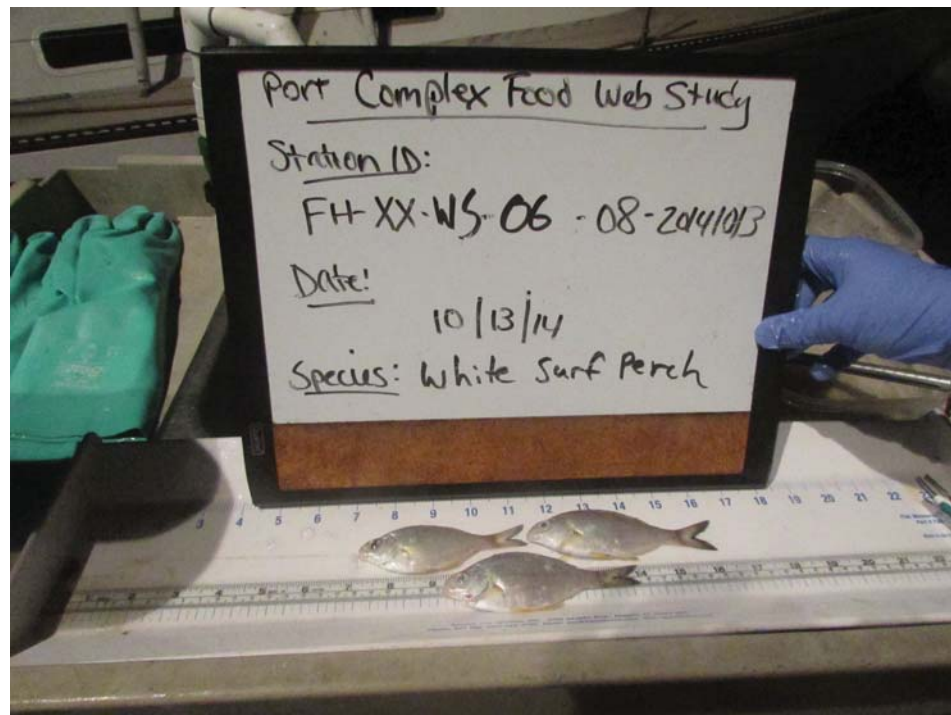
Sample Name: FH-XX-WS-05-08-20141013

Station Location: FH-08

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/13/2014



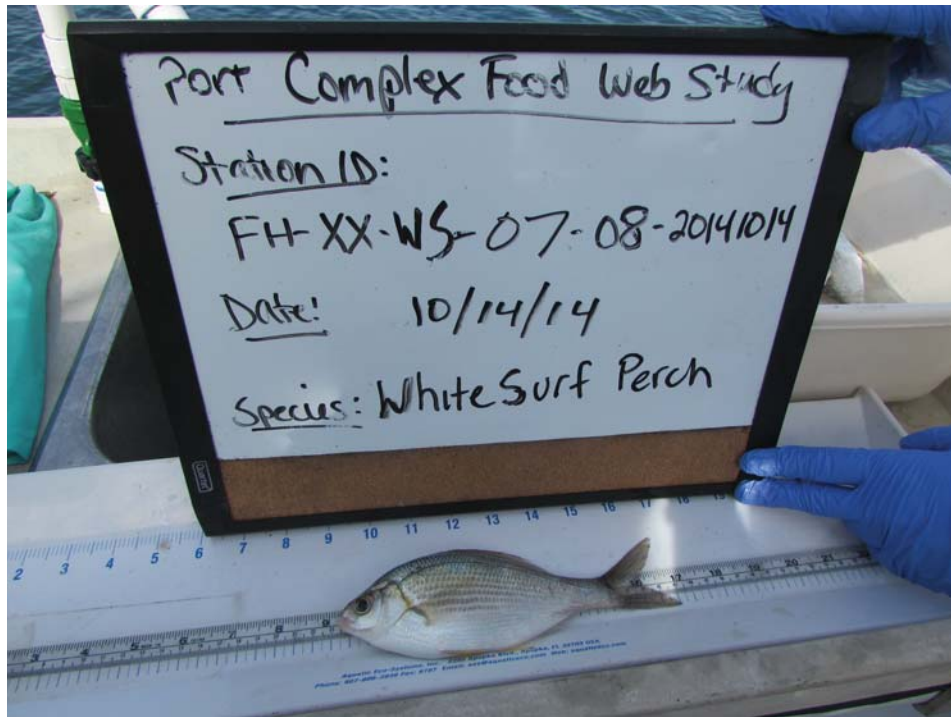
Sample Name: FH-XX-WS-06-08-20141013

Station Location: FH-08

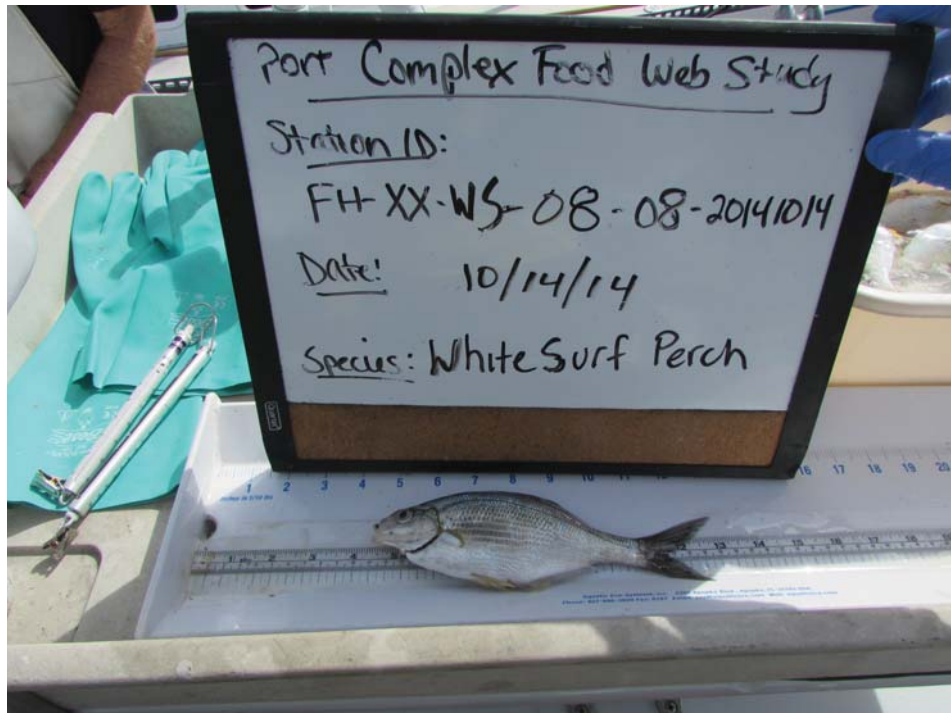
Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

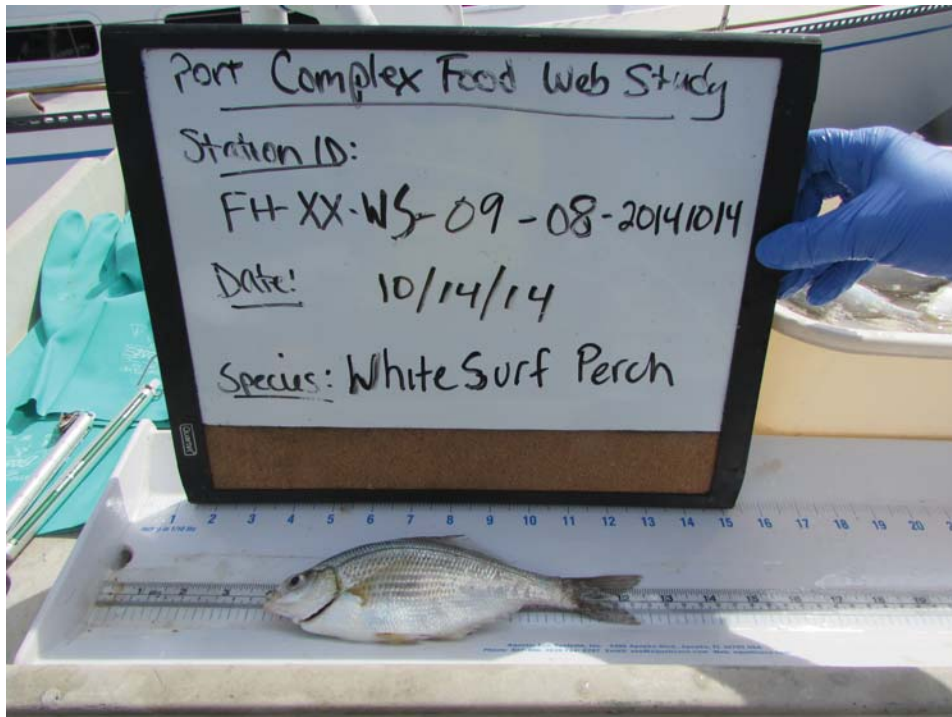
Sample Date: 10/13/2014



Sample Name: FH-XX-WS--07--08--20141014
Station Location: FH-08
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/14/2014



Sample Name: FH-XX-WS--08--08--20141014
Station Location: FH-08
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/14/2014



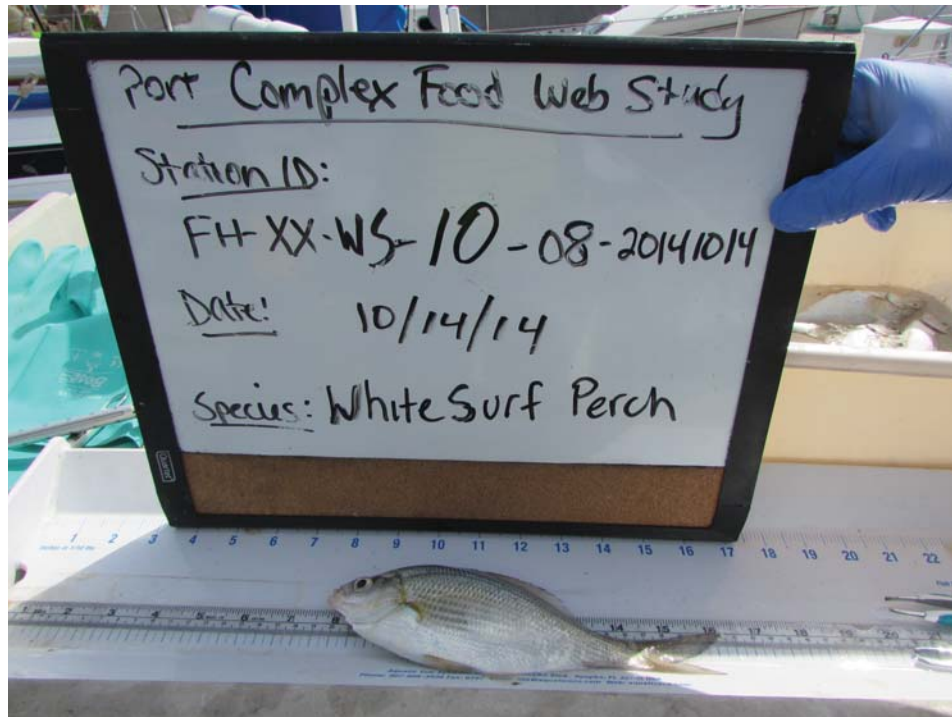
Sample Name: FH-XX-WS--09--08--20141014

Station Location: FH-08

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/14/2014



Sample Name: FH-XX-WS--10--08--20141014

Station Location: FH-08

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/14/2014



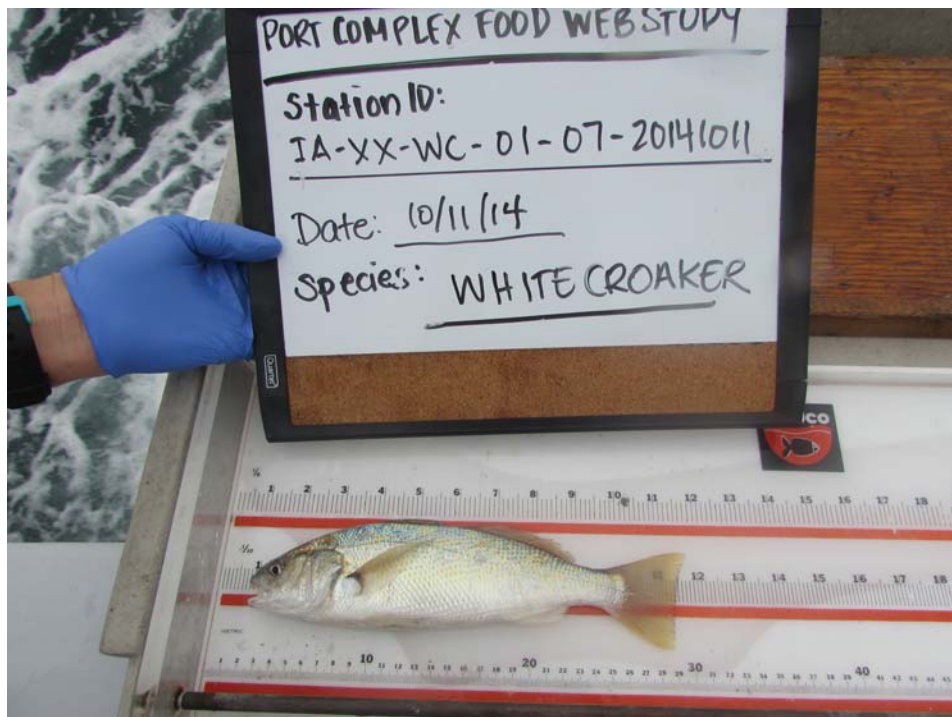
Sample Name: FH-XX-WS-A-08-20141014

Station Location: FH-08

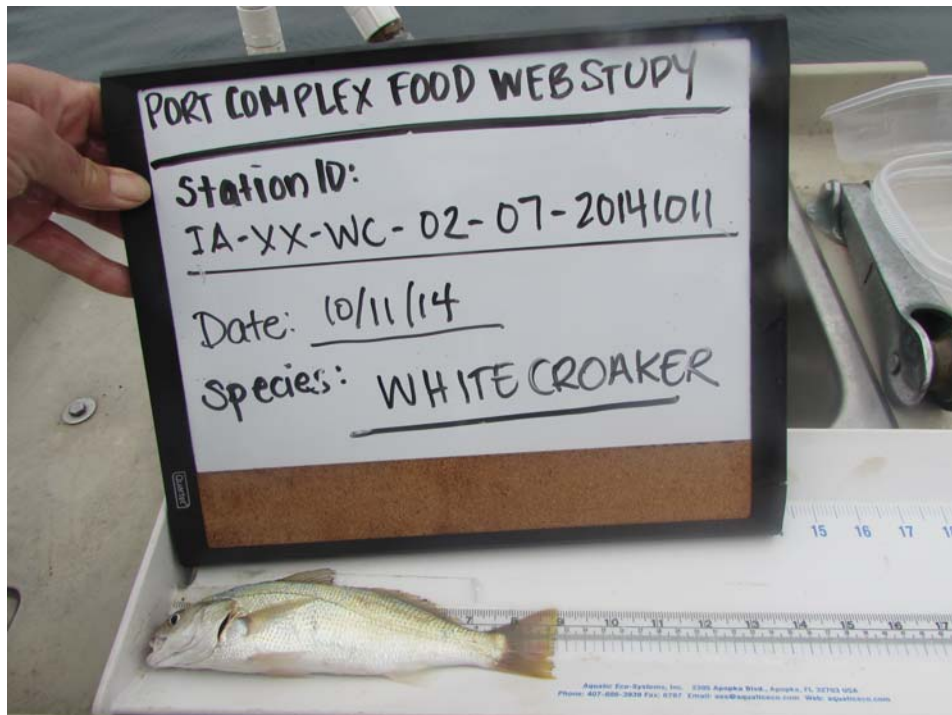
Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

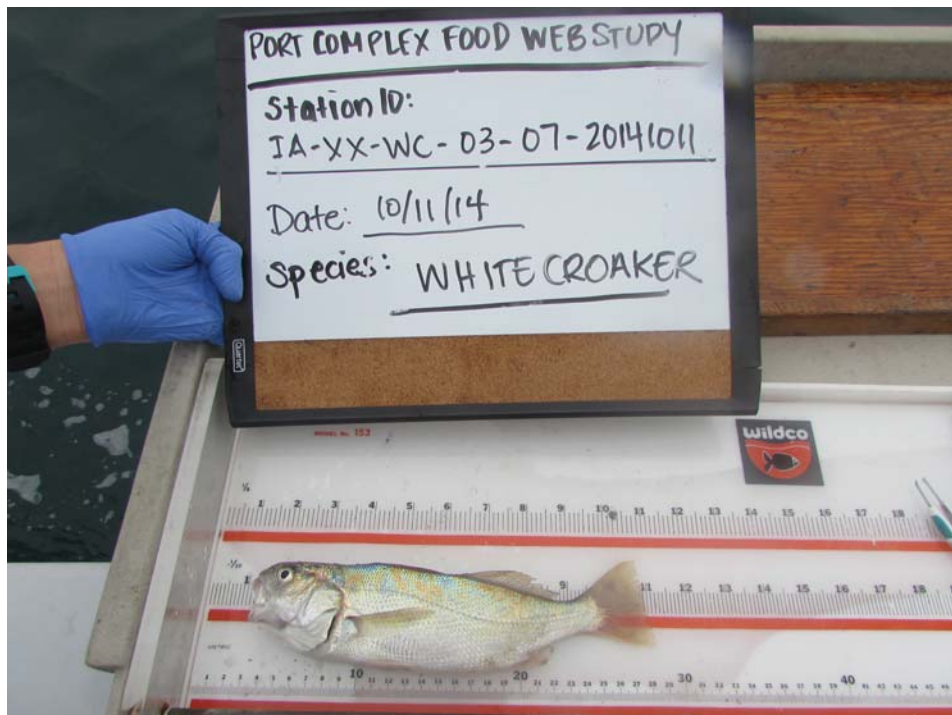
Sample Date: 10/14/2014



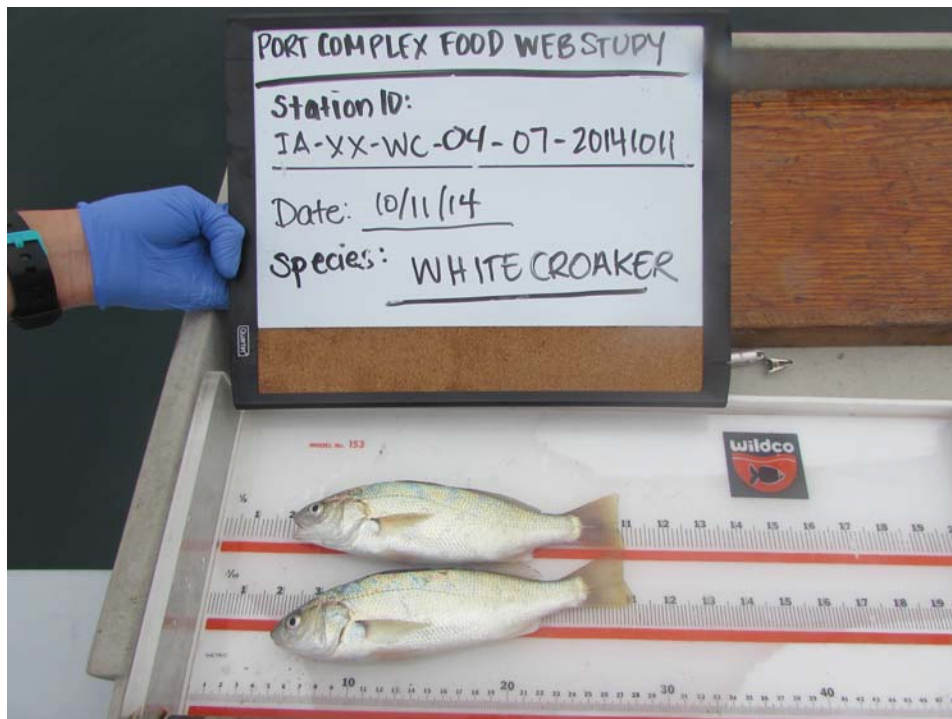
Sample Name: IA--XX--WC--01--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



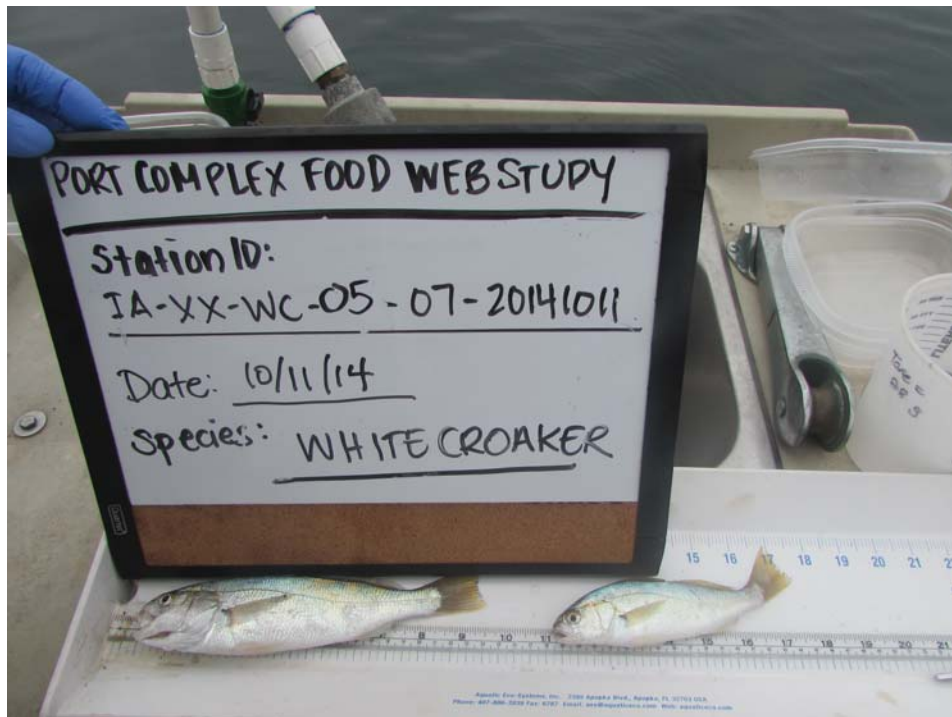
Sample Name: IA--XX--WC--02--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: IA--XX--WC--03--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: IA--XX--WC--04--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



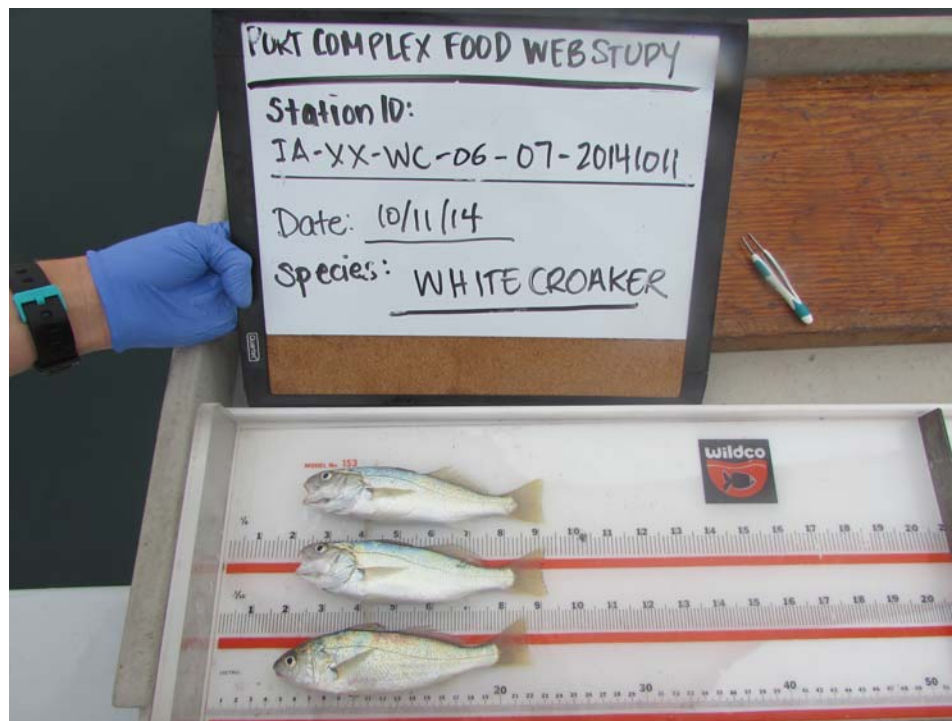
Sample Name: IA--XX--WC--05--07--20141011

Station Location: IA-07

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/11/2014



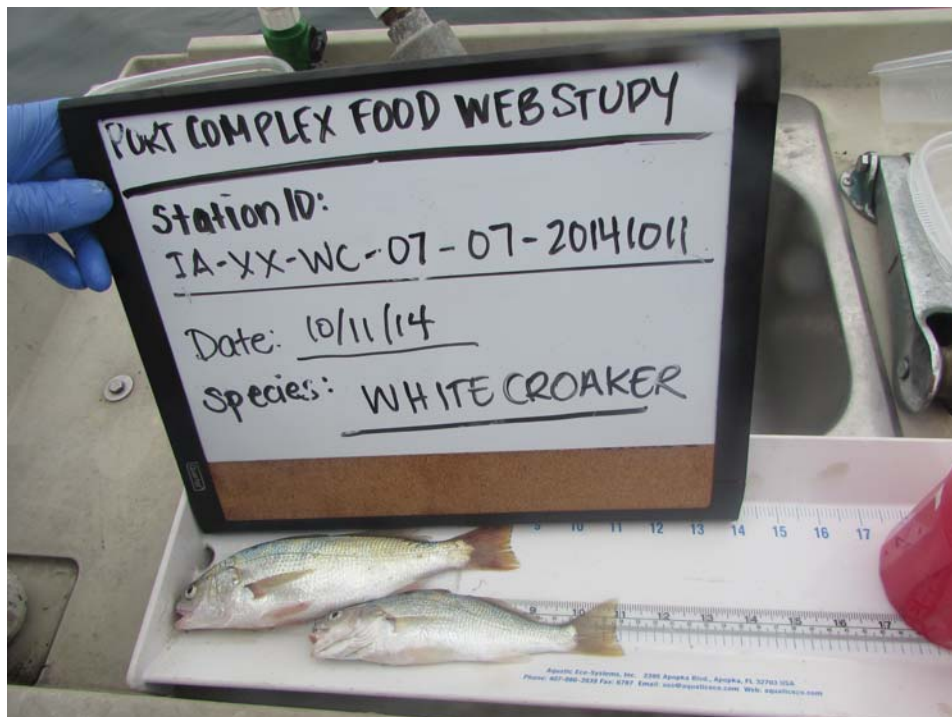
Sample Name: IA--XX--WC--06--07--20141011

Station Location: IA-07

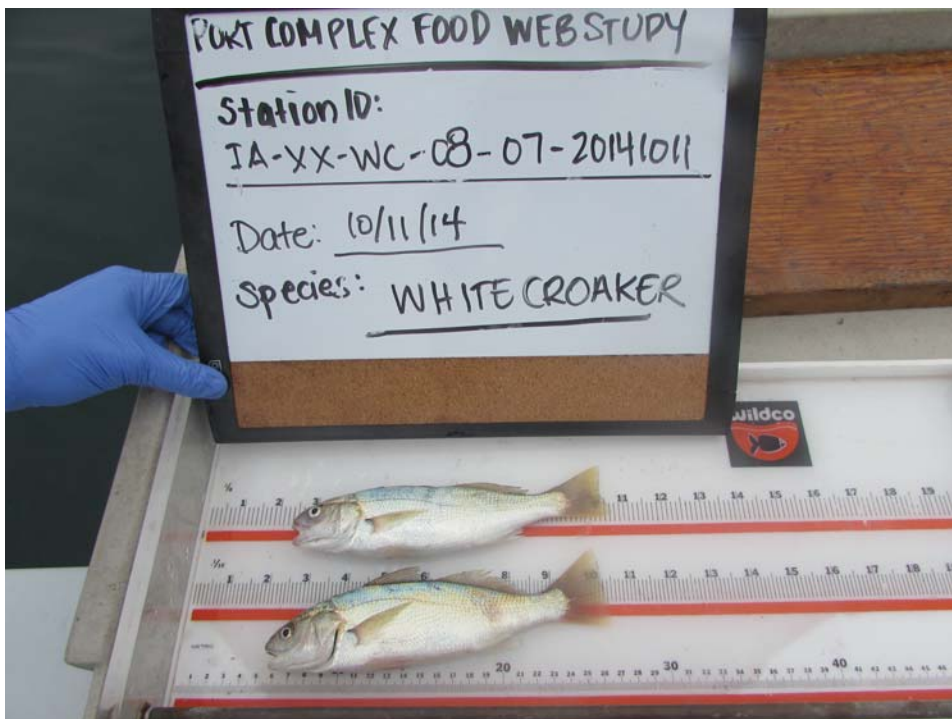
Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

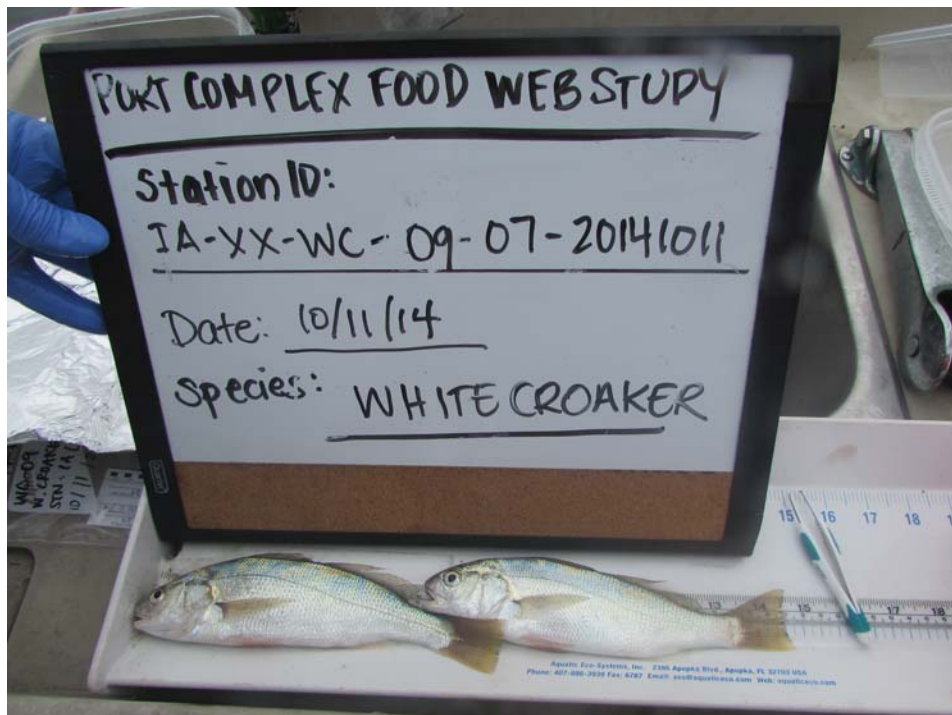
Sample Date: 10/11/2014



Sample Name: IA--XX--WC--07--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: IA--XX--WC--08--07--20141011
Station Location: IA-07
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



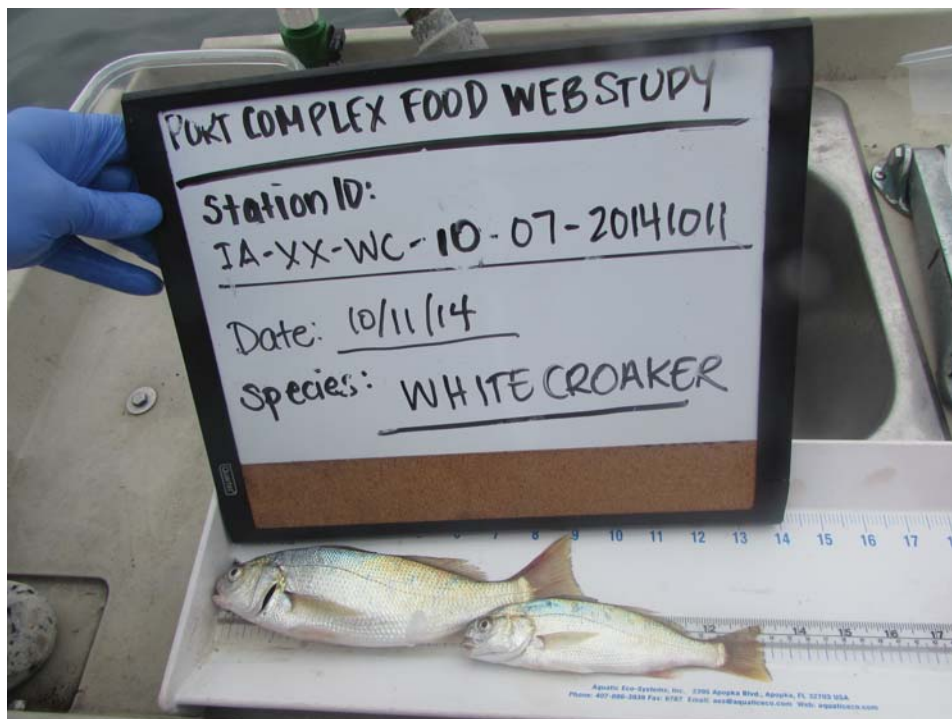
Sample Name: IA--XX--WC--09--07--20141011

Station Location: IA-07

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/11/2014



Sample Name: IA--XX--WC--10--07--20141011

Station Location: IA-07

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/11/2014



Sample Name: IA--XX--WS--01--07--20141011

Station Location: IA-07

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/11/2014



Sample Name: IB--XX--CH--01--05--20141012
Station Location: IB-05
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/12/2014



Sample Name: IB--XX--CH--02--05--20141012
Station Location: IB-05
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/12/2014



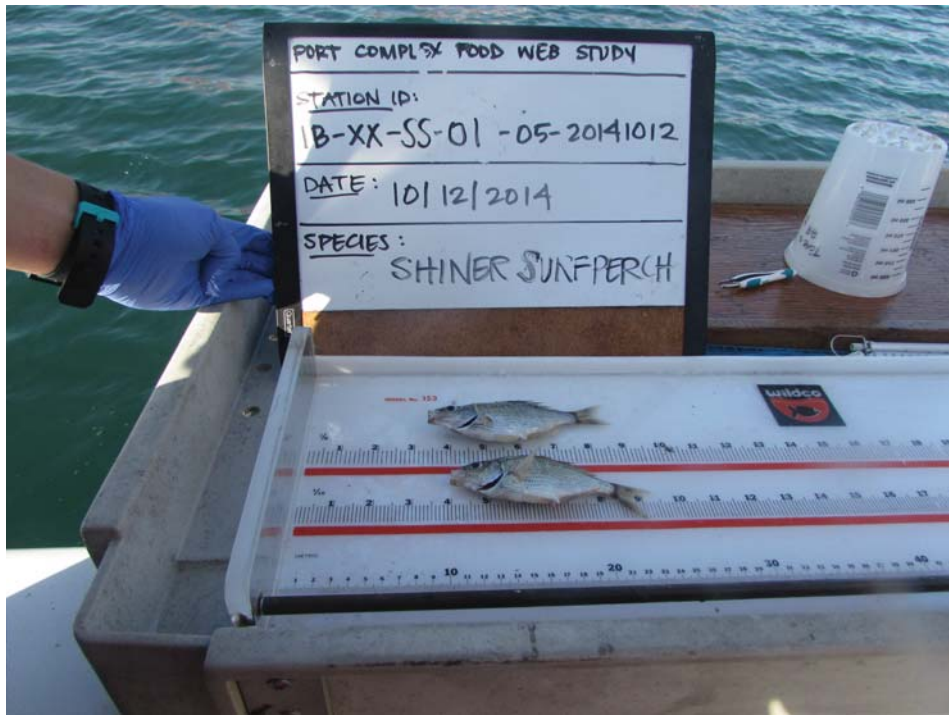
Sample Name: IB--XX--LF--A--05--20141012

Station Location: IB-05

Common Name: California Lizardfish

Scientific Name: *Synodus lucioceps*

Sample Date: 10/12/2014



Sample Name: IB--XX--SS--01--05--20141012
 Station Location: IB-05
 Common Name: Shiner Surfperch
 Scientific Name: *Cymatogaster aggregata*
 Sample Date: 10/12/2014



Sample Name: IB--XX--SS--02--05--20141012
 Station Location: IB-05
 Common Name: Shiner Surfperch
 Scientific Name: *Cymatogaster aggregata*
 Sample Date: 10/12/2014



Sample Name: IB--XX--SS--03--05--20141012
Station Location: IB-05
Common Name: Shiner Surfperch
Scientific Name: *Cymatogaster aggregata*
Sample Date: 10/12/2014



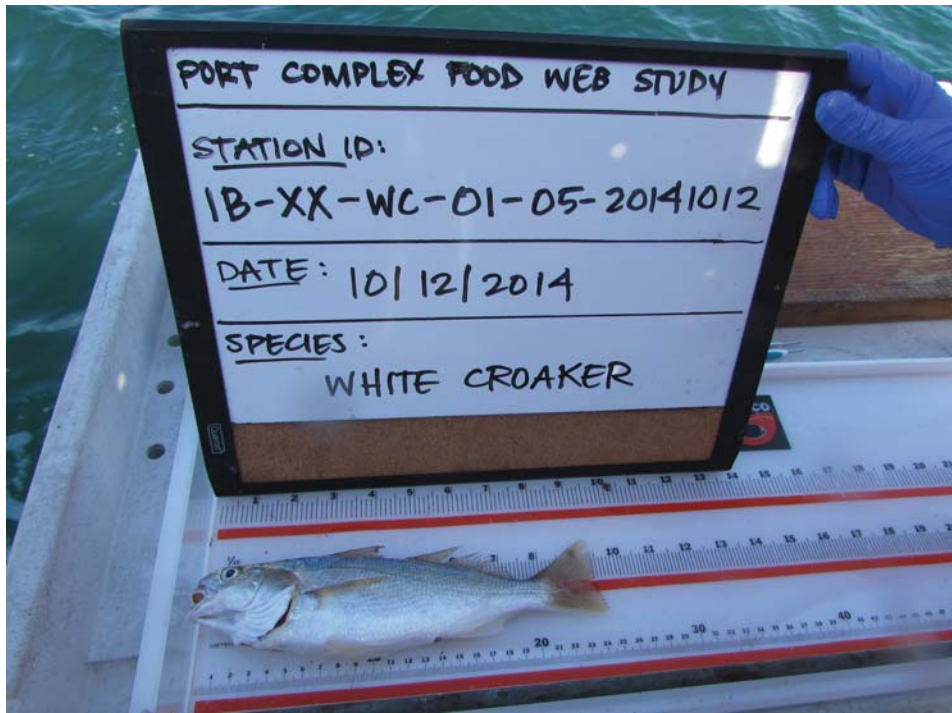
Sample Name: IB--XX--SS--04--05--20141012
Station Location: IB-05
Common Name: Shiner Surfperch
Scientific Name: *Cymatogaster aggregata*
Sample Date: 10/12/2014



Sample Name: IB--XX--SS--05--05--20141012
 Station Location: IB-05
 Common Name: Shiner Surfperch
 Scientific Name: *Cymatogaster aggregata*
 Sample Date: 10/12/2014



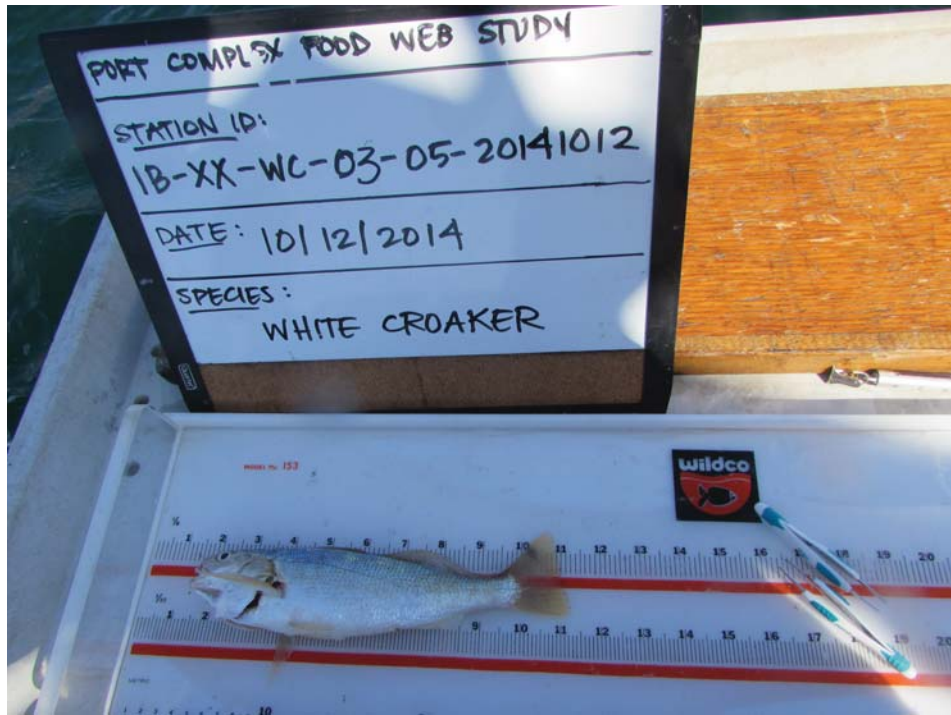
Sample Name: IB--XX--SS--06--05--20141012
 Station Location: IB-05
 Common Name: Shiner Surfperch
 Scientific Name: *Cymatogaster aggregata*
 Sample Date: 10/12/2014



Sample Name: IB--XX--WC--01--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



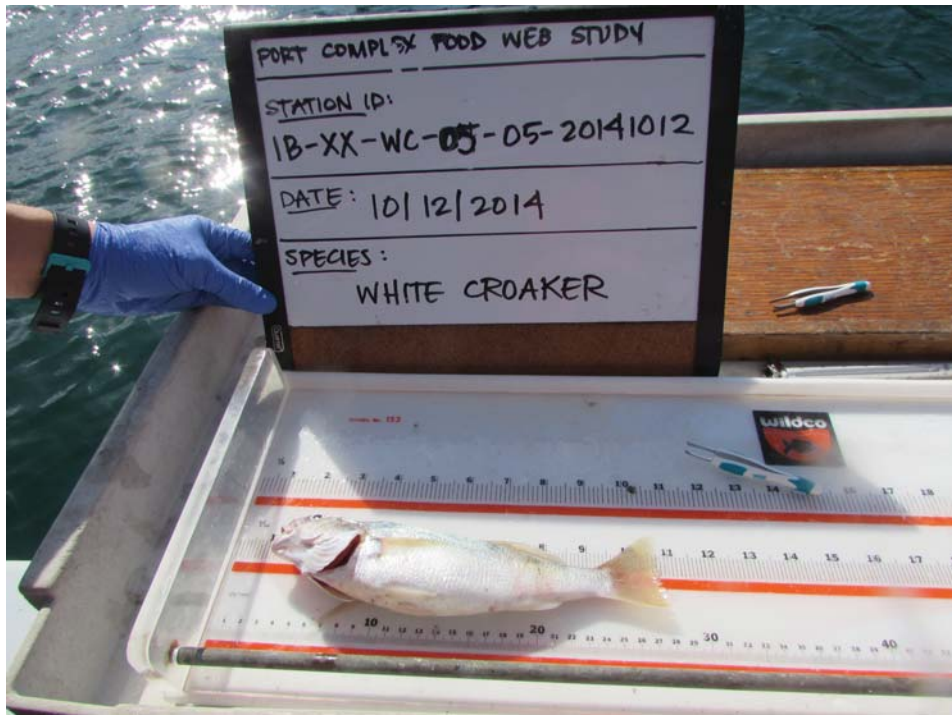
Sample Name: IB--XX--WC--02--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--03--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--04--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB-XX-WC-05-05-20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB-XX-WC-06-05-20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--07--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--08--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--09--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--10--05--20141012
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WC--A--05--20141012

Station Location: IB-05

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/12/2014



Sample Name: IB--XX--WS--01--05--20141012

Station Location: IB-05

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/12/2014



Sample Name: IB--XX--WS--02--05--20141012

Station Location: IB-05

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/12/2014



Sample Name: IB--XX--WS--03--05--20141012
Station Location: IB-05
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/12/2014



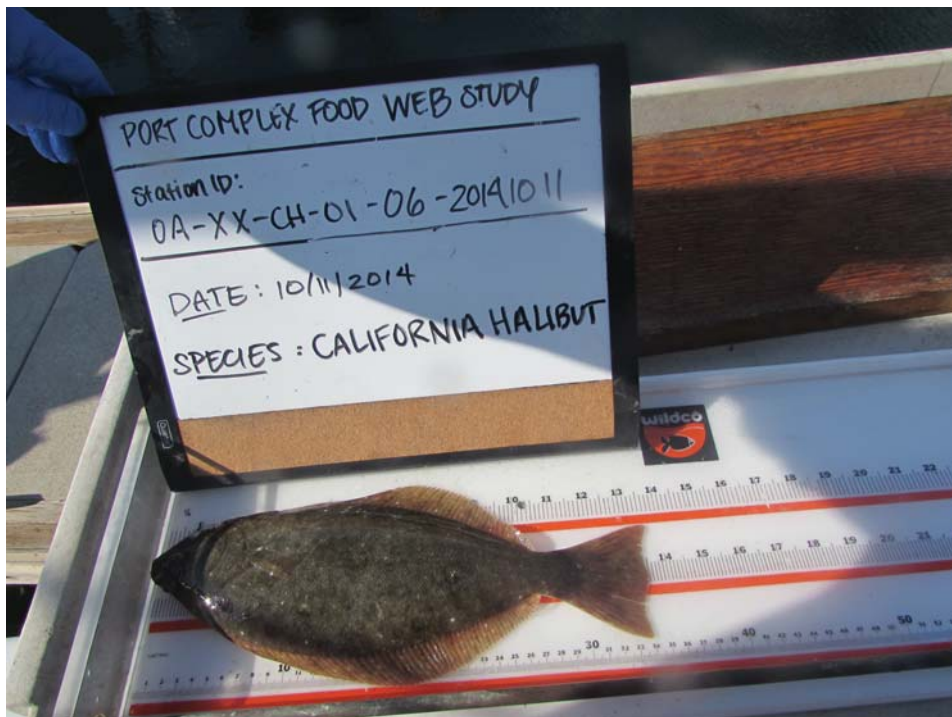
Sample Name: IB--XX--WS--04--05--20141012
Station Location: IB-05
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/12/2014



Sample Name: IB--XX--WS--A--05--20141012 (1 of 2)
 Station Location: IB-05
 Common Name: White Surfperch
 Scientific Name: *Phanerodon furcatus*
 Sample Date: 10/12/2014



Sample Name: IB--XX--WS--A--05--20141012 (2 of 2)
 Station Location: IB-05
 Common Name: White Surfperch
 Scientific Name: *Phanerodon furcatus*
 Sample Date: 10/12/2014



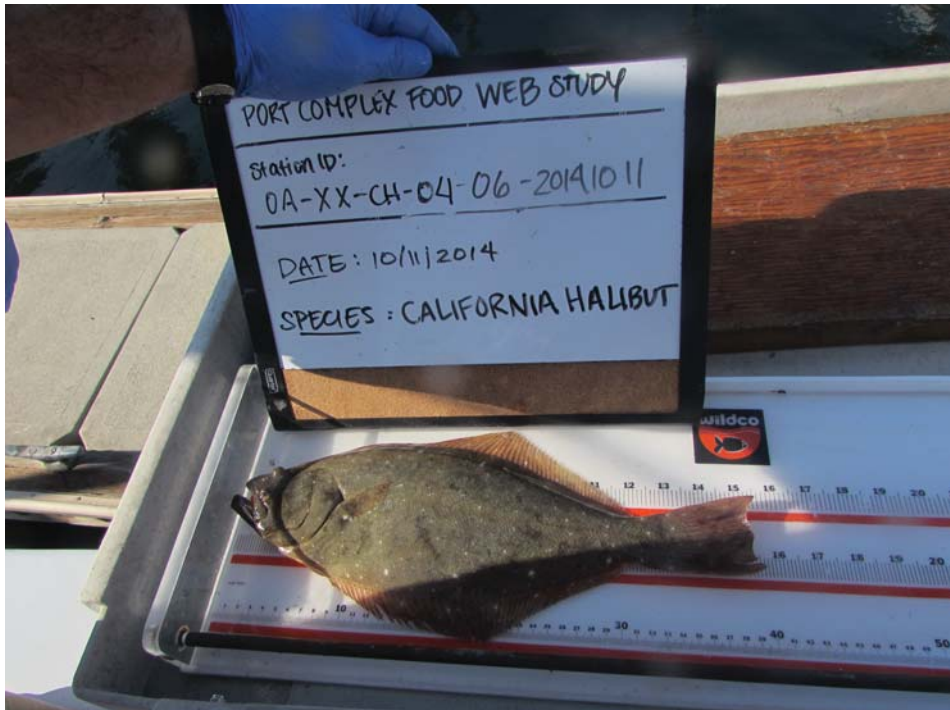
Sample Name: OA--XX--CH--01--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--02--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--03--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--04--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



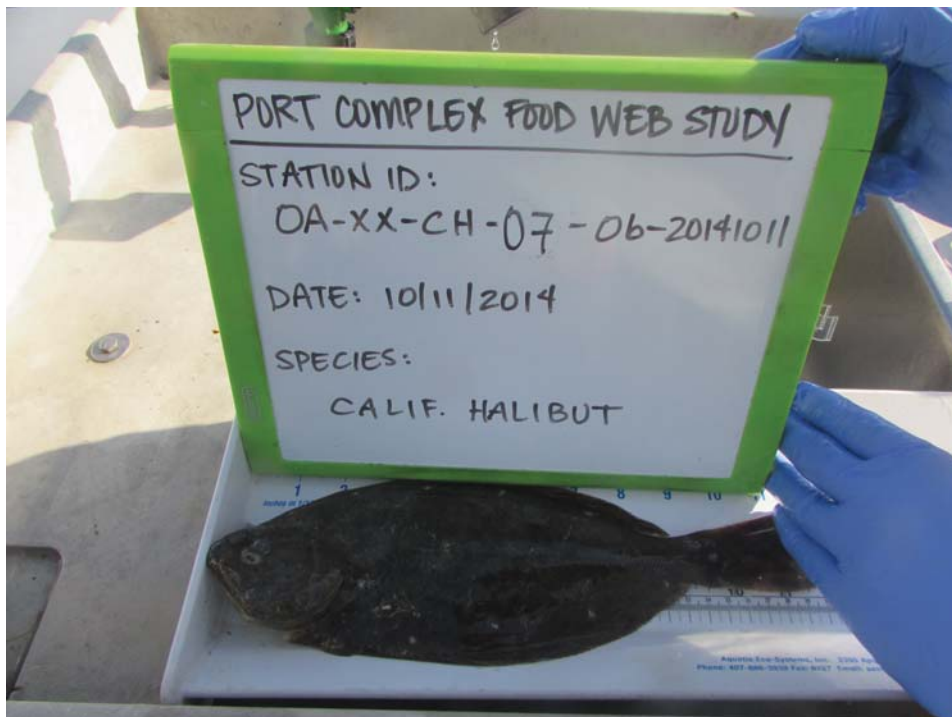
Sample Name: OA--XX--CH--05--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--06--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--07--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--08--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--09--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--10--06--20141011
Station Location: OA-06
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



Sample Name: OA--XX--CH--A--06--20141011

Station Location: OA-06

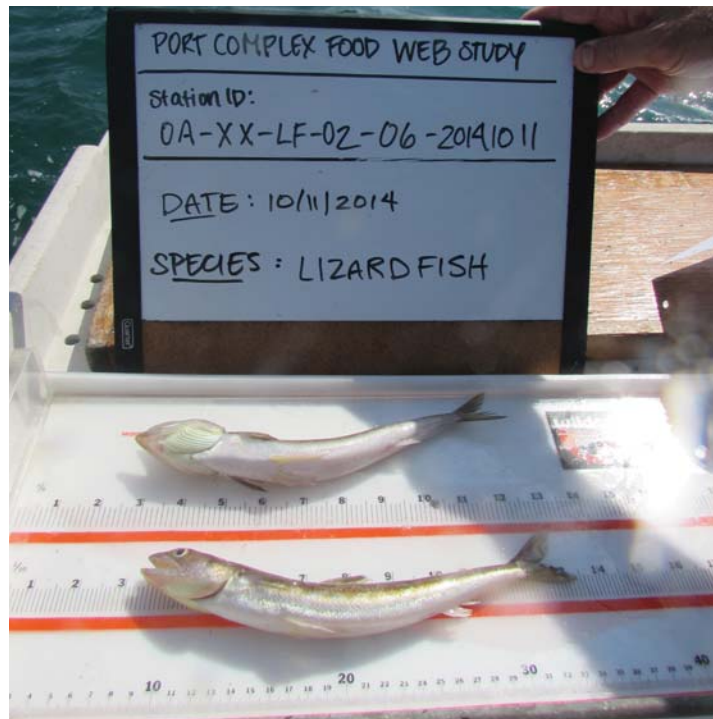
Common Name: California Halibut

Scientific Name: *Paralichthys californicus*

Sample Date: 10/11/2014



Sample Name: OA--XX--LF--01--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



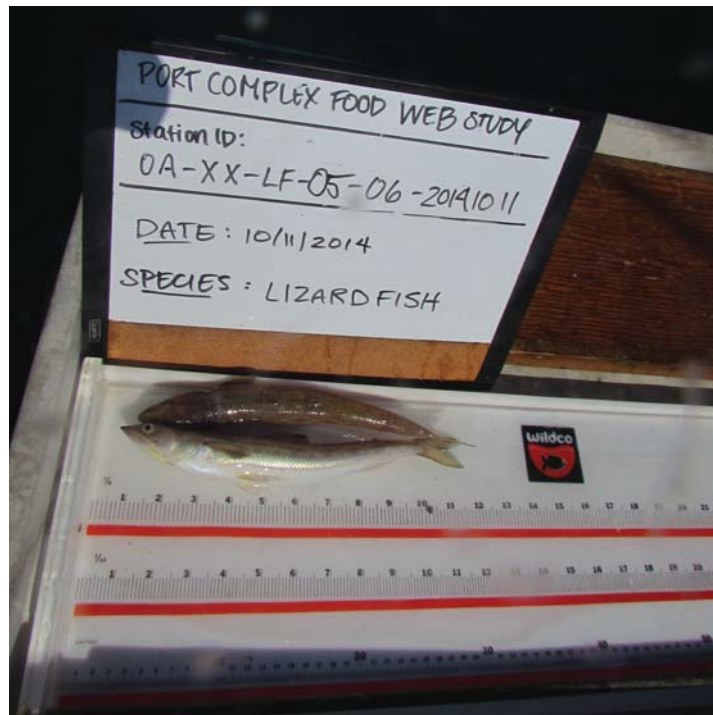
Sample Name: OA--XX--LF--02--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



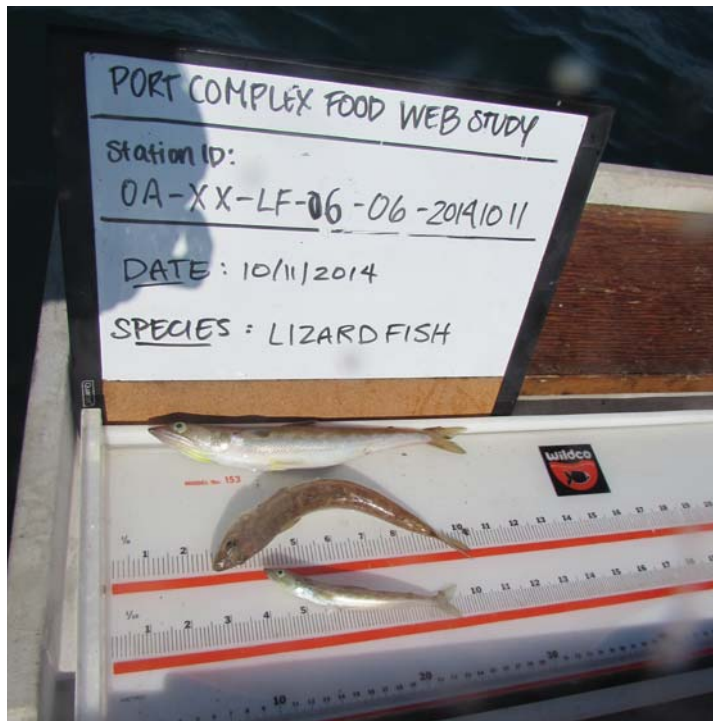
Sample Name: OA--XX--LF--03--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



Sample Name: OA--XX--LF--04--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



Sample Name: OA--XX--LF--05--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



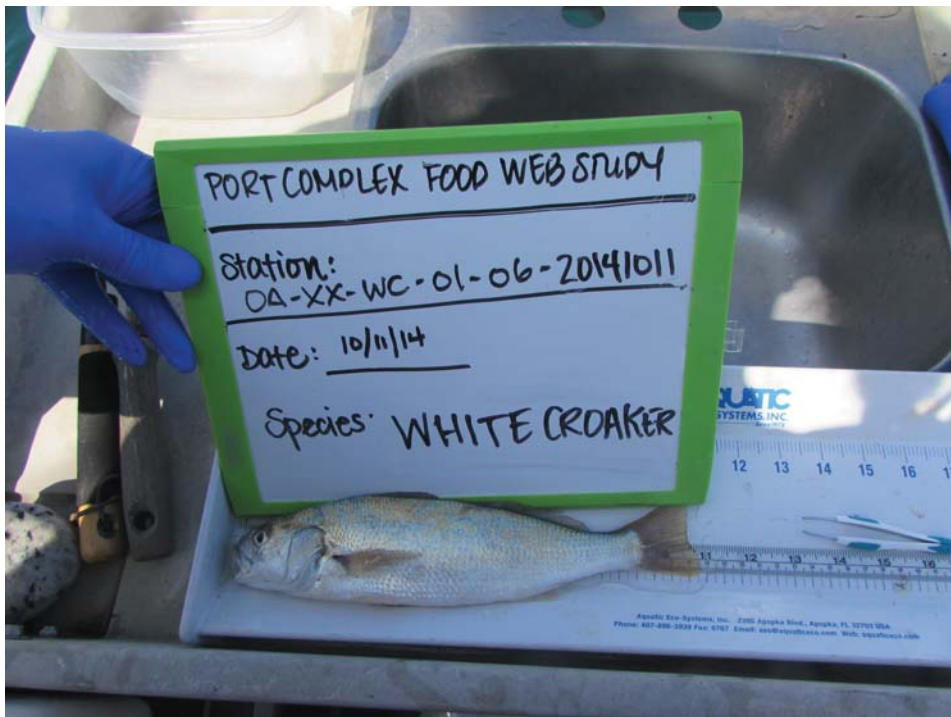
Sample Name: OA--XX--LF--06--06--20141011
Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



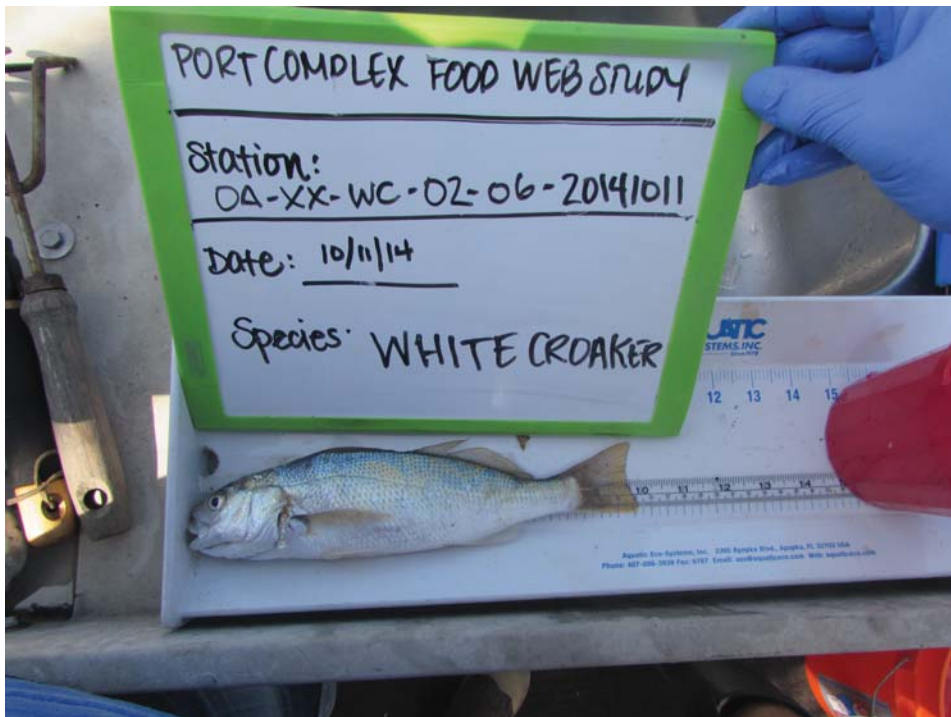
Sample Name: OA--XX--SS--01--06--20141011
Station Location: OA-06
Common Name: Shiner Surfperch
Scientific Name: *Cymatogaster aggregata*
Sample Date: 10/11/2014



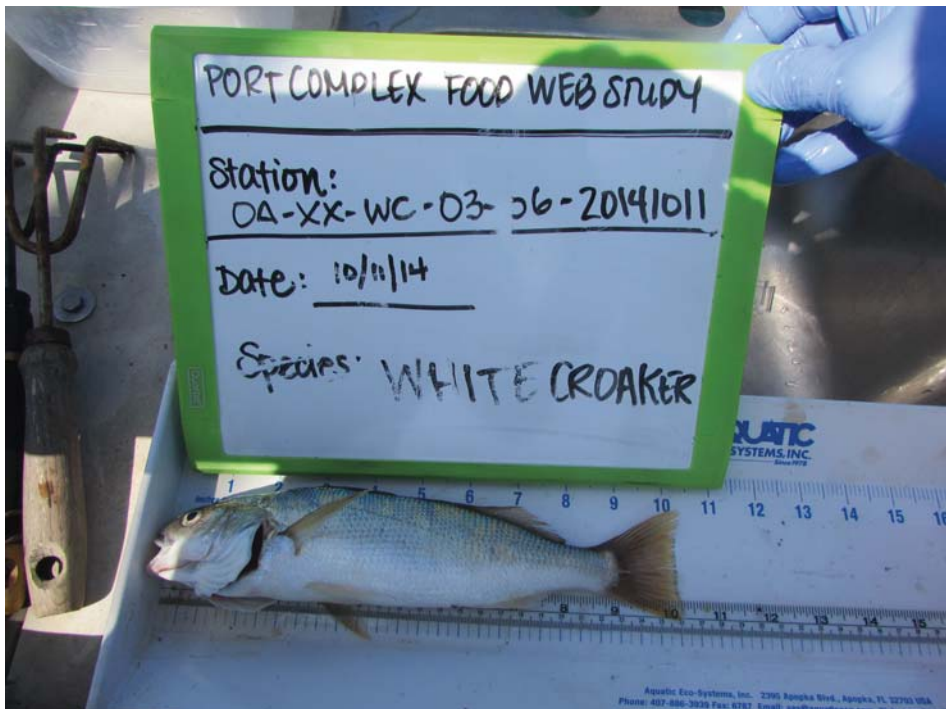
Sample Name: OA--XX--SS--02--06--20141011
Station Location: OA-06
Common Name: Shiner Surfperch
Scientific Name: *Cymatogaster aggregata*
Sample Date: 10/11/2014



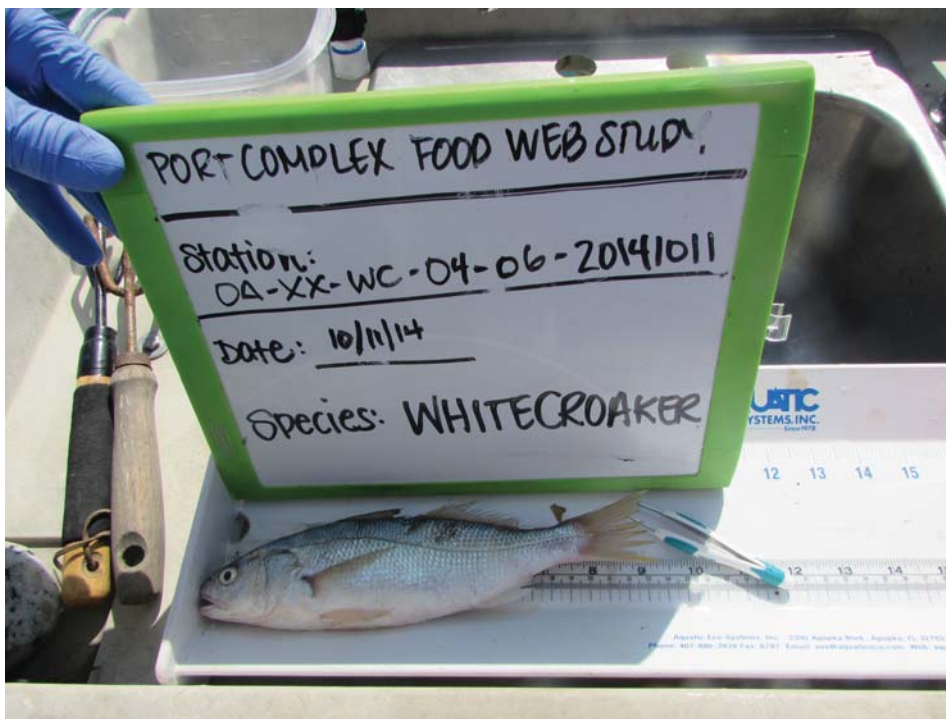
Sample Name: OA--XX--WC--01--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: OA--XX--WC--02--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: OA--XX--WC--03--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: OA--XX--WC--04--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



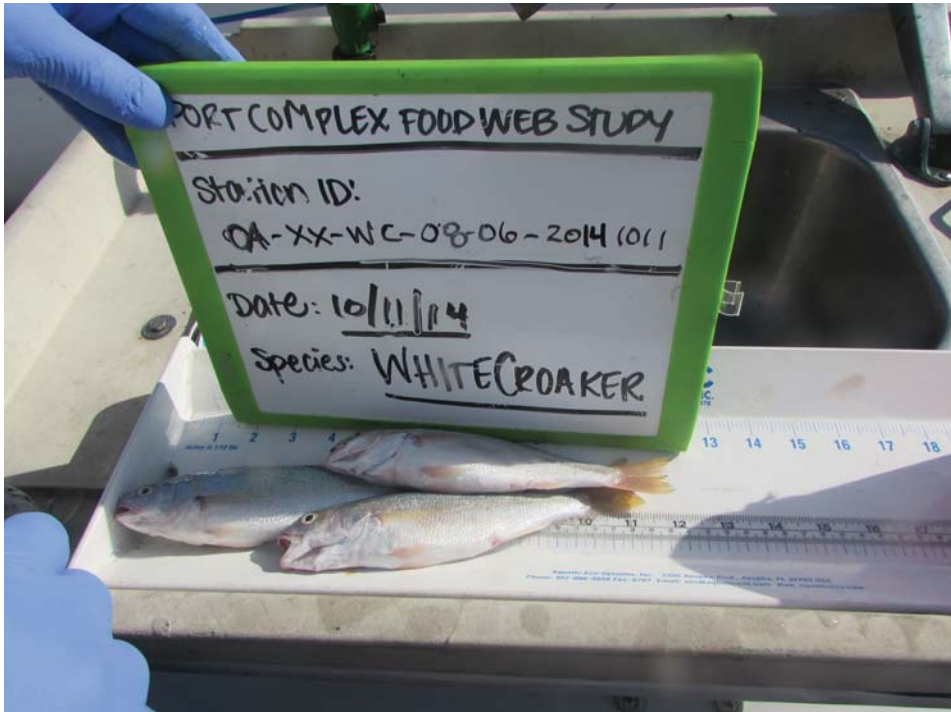
Sample Name: OA--XX--WC--05--06--20141011
 Station Location: OA-06
 Common Name: White Croaker
 Scientific Name: *Genyonemus lineatus*
 Sample Date: 10/11/2014



Sample Name: OA--XX--WC--06--06--20141011
 Station Location: OA-06
 Common Name: White Croaker
 Scientific Name: *Genyonemus lineatus*
 Sample Date: 10/11/2014



Sample Name: OA--XX--WC--07--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



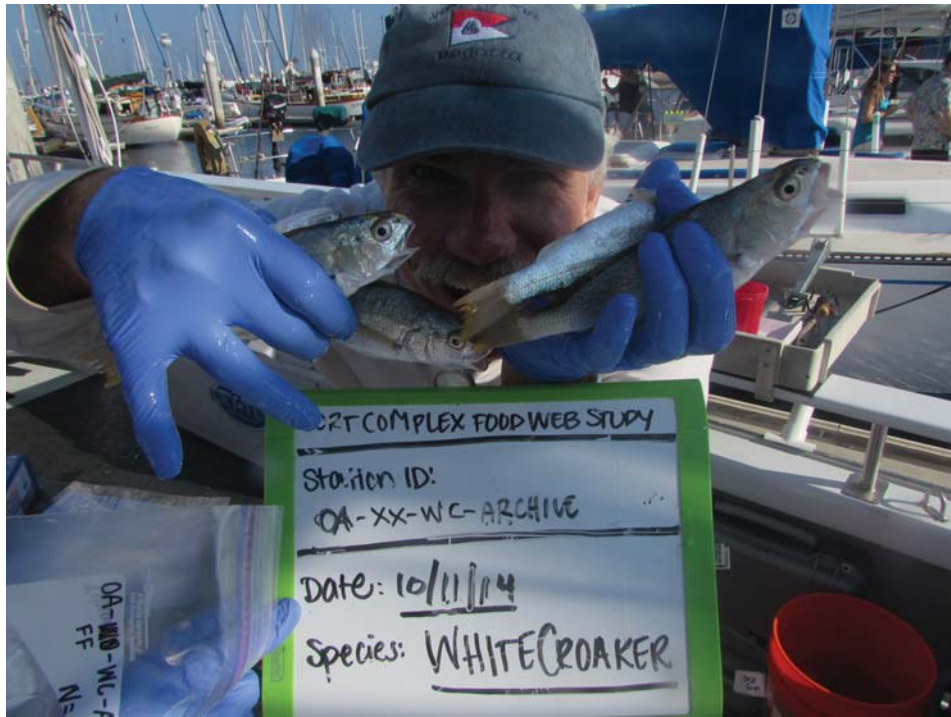
Sample Name: OA--XX--WC--08--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: OA--XX--WC--09--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Sample Name: OA--XX--WC--10--06--20141011
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



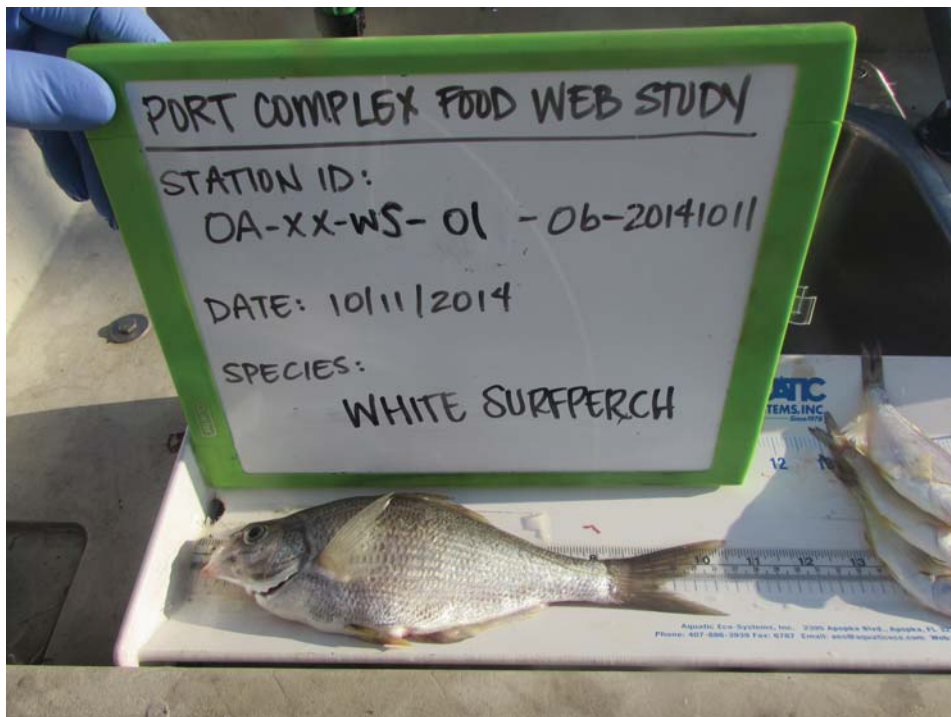
Sample Name: OA--XX--WC--A--06--20141011

Station Location: OA-06

Common Name: White Croaker

Scientific Name: *Genyonemus lineatus*

Sample Date: 10/11/2014



Sample Name: OA--XX--WS--01--06--20141011

Station Location: OA-06

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/11/2014



Sample Name: OA--XX--WS--02--06--20141011

Station Location: OA-06

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/11/2014



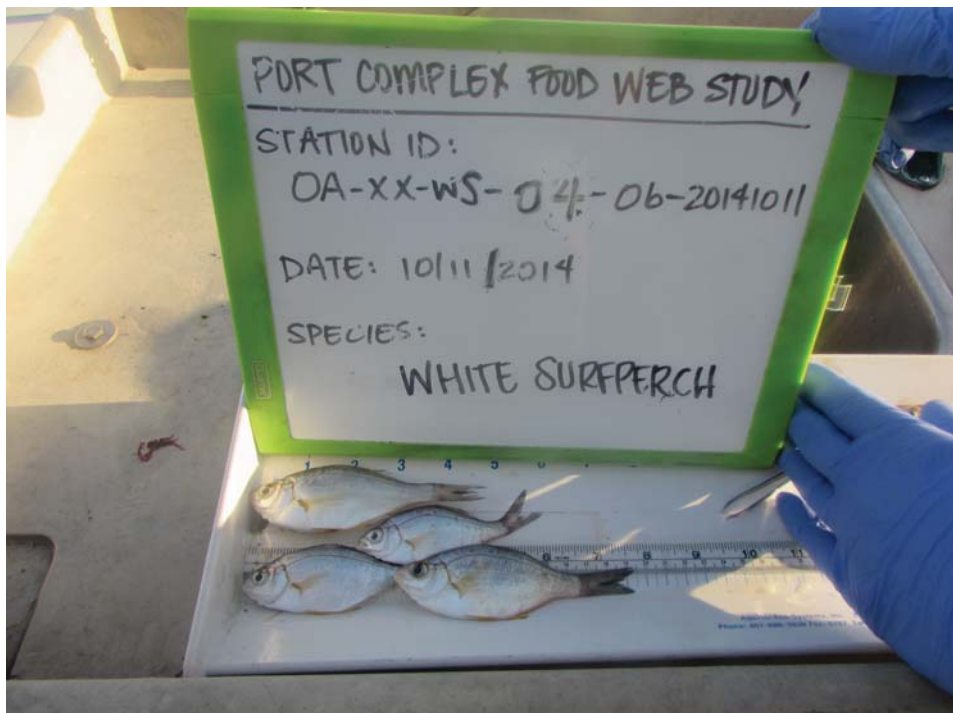
Sample Name: OA--XX--WS--03--06--20141011

Station Location: OA-06

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/11/2014



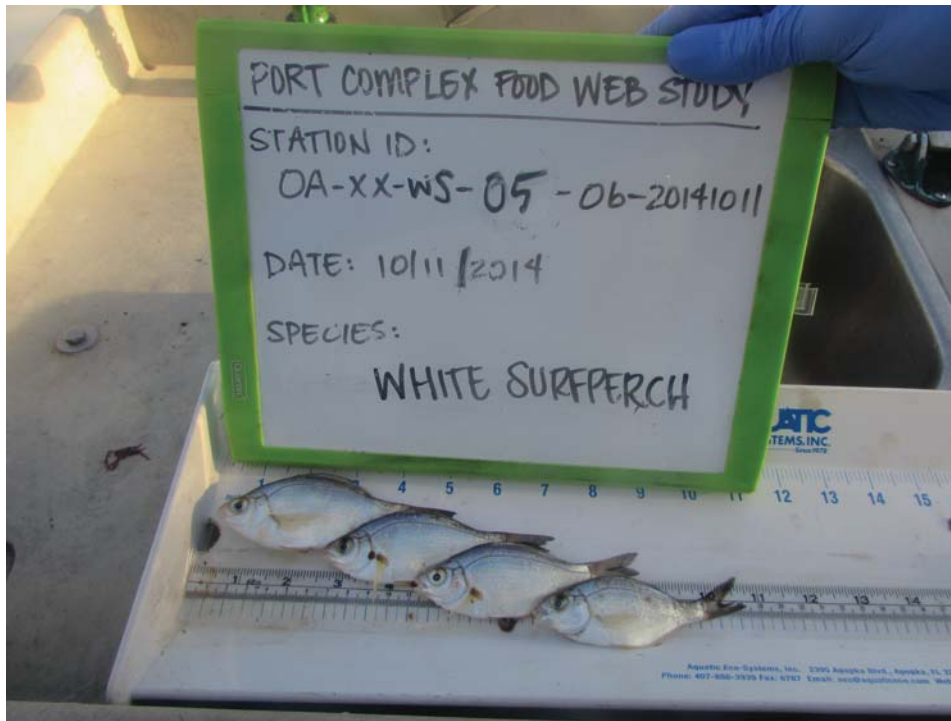
Sample Name: OA--XX--WS--04--06--20141011

Station Location: OA-06

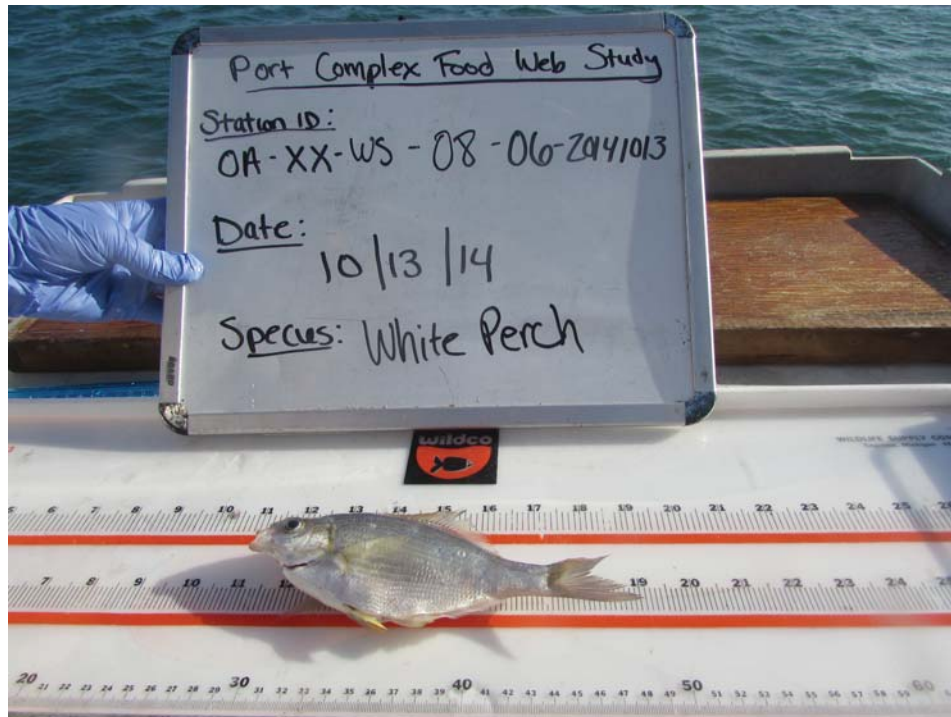
Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/11/2014

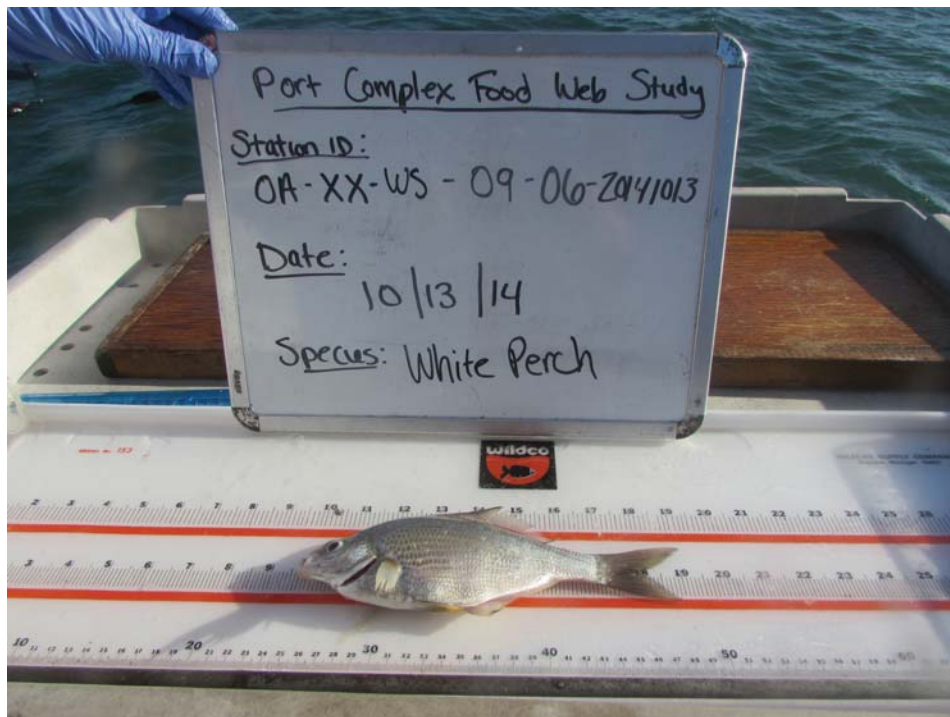


Sample Name: OA--XX--WS--05--06--20141011
 Station Location: OA-06
 Common Name: White Surfperch
 Scientific Name: *Phanerodon furcatus*
 Sample Date: 10/11/2014



Sample Name: OA--XX--WS--08--06--20141013
 Station Location: OA-06
 Common Name: White Surfperch
 Scientific Name: *Phanerodon furcatus*
 Sample Date: 10/13/2014

NOTE: OA--XX--WS--06--06--20141011 and
 OA--XX--WS--06--06--20141011 - No Photos Available



Sample Name: OA--XX--WS--09--06--20141013

Station Location: OA-06

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/13/2014



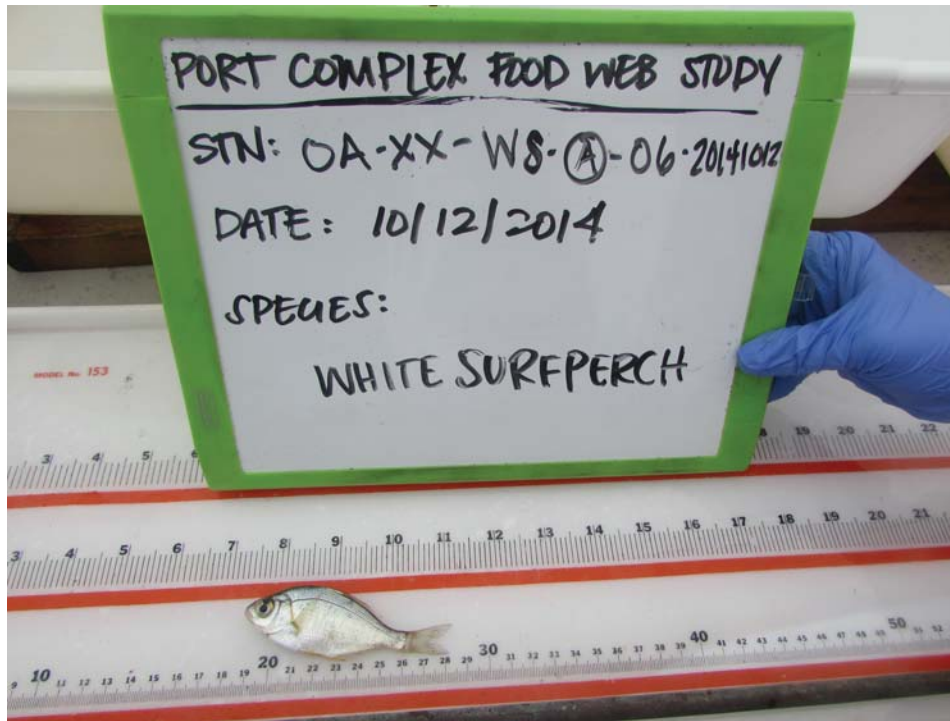
Sample Name: OA--XX--WS--10--06--20141013

Station Location: OA-06

Common Name: White Surfperch

Scientific Name: *Phanerodon furcatus*

Sample Date: 10/13/2014



Sample Name: OA--XX--WS--A--06--20141012 (1 of 2)
Station Location: OA-06
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/12/2014



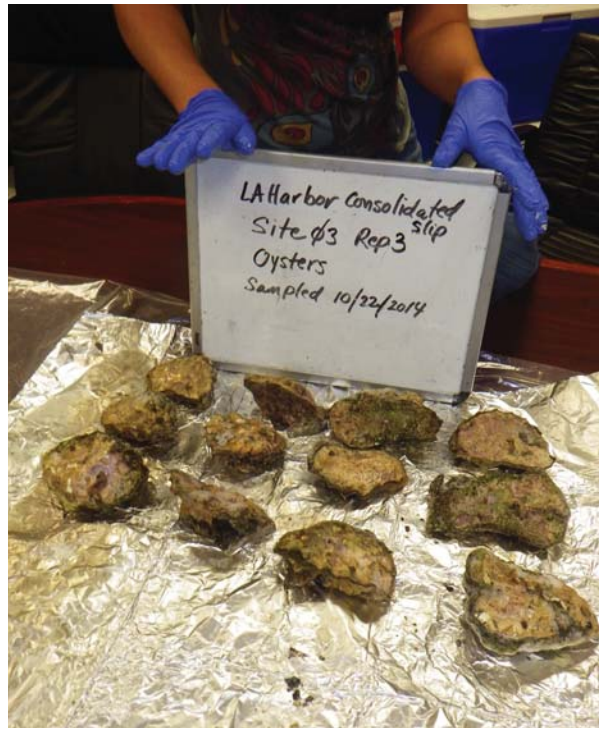
Sample Name: OA--XX--WS--A--06--20141013 (2 of 2)
Station Location: OA-06
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/13/2014



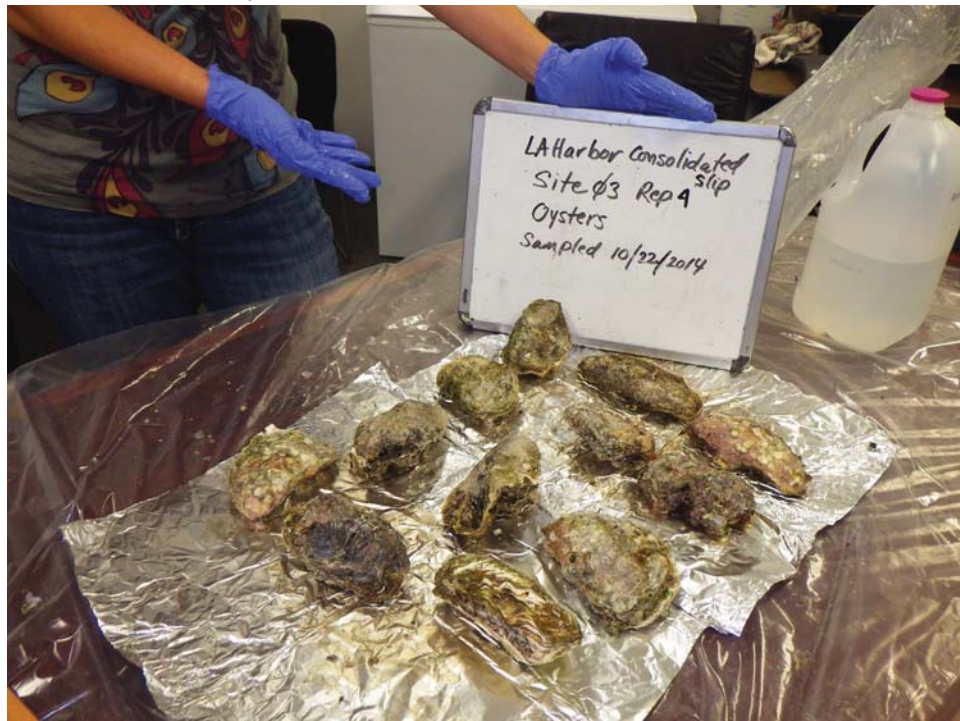
Sample Name: CS-ST-OY-COMP1-03-2014-10-22
Station Location: CS-03
Common Name: Pacific Oyster
Scientific Name: *Crassostrea gigas*
Sample Date: 10/22/2014



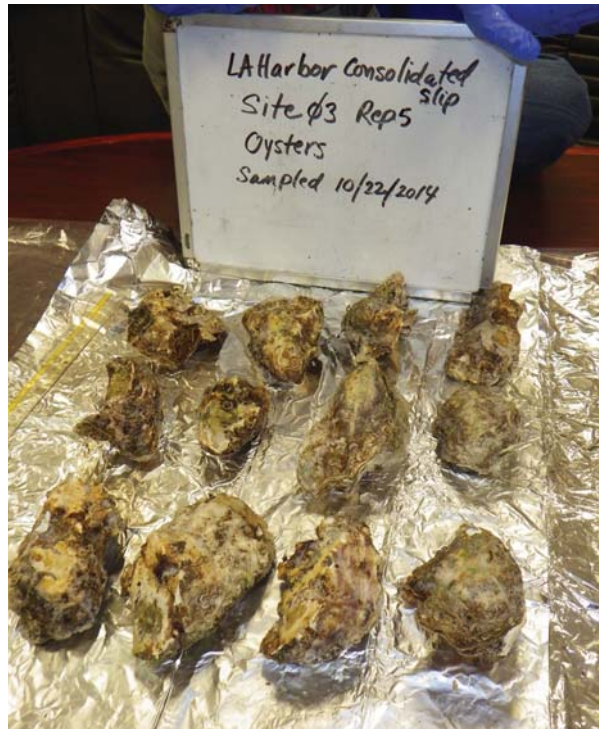
Sample Name: CS-ST-OY-COMP2-03-2014-10-22
Station Location: CS-03
Common Name: Pacific Oyster
Scientific Name: *Crassostrea gigas*
Sample Date: 10/22/2014



Sample Name: CS-ST-OY-COMP3-03-2014-10-22
Station Location: CS-03
Common Name: Pacific Oyster
Scientific Name: *Crassostrea gigas*
Sample Date: 10/22/2014



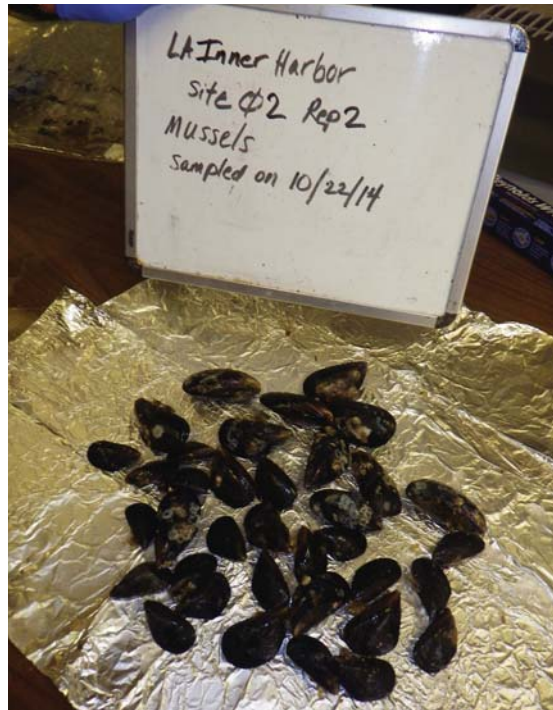
Sample Name: CS-ST-OY-COMP4-03-2014-10-22
Station Location: CS-03
Common Name: Pacific Oyster
Scientific Name: *Crassostrea gigas*
Sample Date: 10/22/2014



Sample Name: CS-ST-OY-COMP5-03-2014-10-22
Station Location: CS-03
Common Name: Pacific Oyster
Scientific Name: *Crassostrea gigas*
Sample Date: 10/22/2014



Sample Name: IA-ST-MS-COMP1-02-2014-10-22
Station Location: IA-02
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: IA-ST-MS-COMP2-02-2014-10-22
Station Location: IA-02
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: IA-ST-MS-COMP3-02-2014-10-22
Station Location: IA-02
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



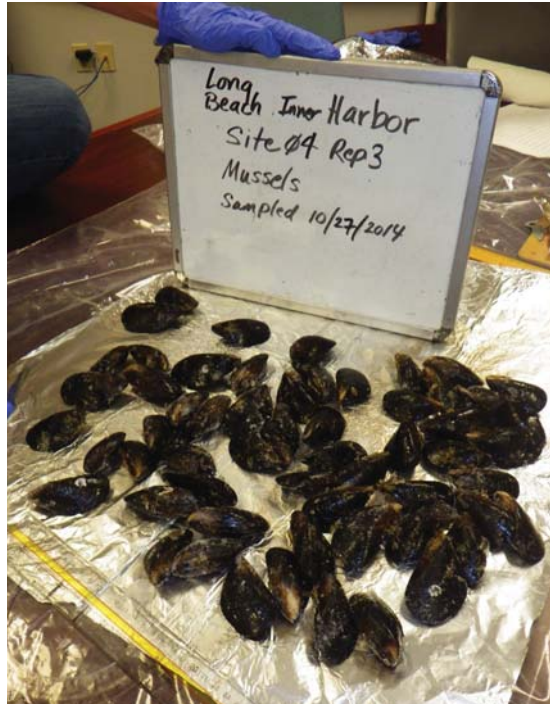
Sample Name: IA-ST-MS-COMP4-02-2014-10-22
Station Location: IA-02
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: IA-ST-MS-COMP5-02-2014-10-22
Station Location: IA-02
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: IB-ST-MS-COMP2-04-2014-10-27
Station Location: IB-04
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/27/2014



Sample Name: IB-ST-MS-COMP3-04-2014-10-27
Station Location: IB-04
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/27/2014

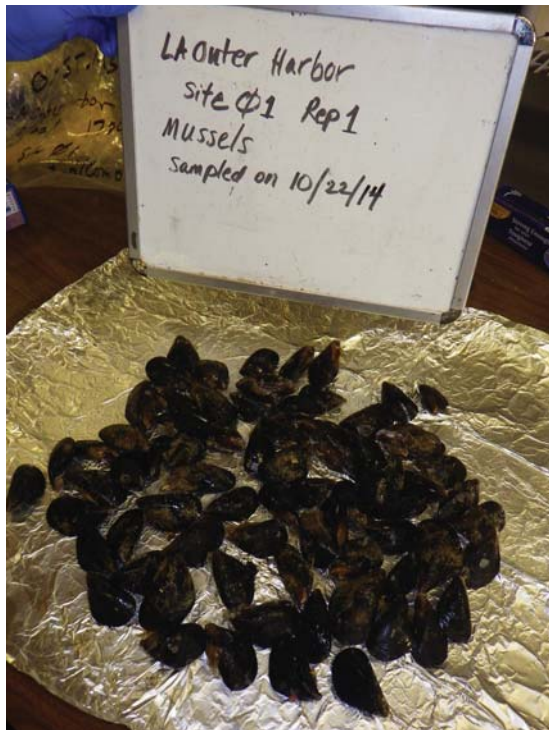
NOTE: IB-ST-MS-COMP1-04-2014-10-27 -
No photo available.



Sample Name: IB-ST-MS-COMP4-04-2014-10-27
Station Location: IB-04
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/27/2014



Sample Name: IB-ST-MS-COMP5-04-2014-10-27
Station Location: IB-04
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/27/2014



Sample Name: OA-ST-MS-COMP1-01-2014-10-22
Station Location: OA-01
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: OA-ST-MS-COMP2-01-2014-10-22
Station Location: OA-01
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: OA-ST-MS-COMP3-01-2014-10-22
Station Location: OA-01
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014



Sample Name: OA-ST-MS-COMP4-01-2014-10-22
Station Location: OA-01
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014

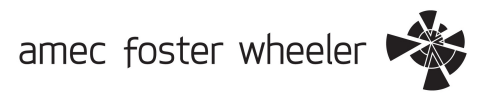


Sample Name: OA-ST-MS-COMP5-01-2014-10-22
Station Location: OA-01
Common Name: Mediterranean mussel
Scientific Name: *Mytilus galloprovincialis*
Sample Date: 10/22/2014

APPENDIX C

BYCATCH DATA TABLES AND PHOTO LOGS

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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Consolidated Slip (CS-03) - Bycatch Fish Species List

Station Location	Common Name	Scientific Name	Sample Date
CS-03	Barred Sand Bass	<i>Paralabrax nebulifer</i>	10/10/2014
CS-03	Bat Ray	<i>Myliobatis californica</i>	10/10/2014
CS-03	Diamond Turbot	<i>Hypsopsetta guttulata</i>	10/10/2014
CS-03	Giant Kelpfish	<i>Heterostichus rostratus</i>	10/10/2014
CS-03	California Lizardfish	<i>Synodus lucioceps</i>	10/10/2014
CS-03	White Croaker	<i>Genyonemus lineatus</i>	10/10/2014
CS-03	White Surfperch	<i>Phanerodon furcatus</i>	10/10/2014

Fish Harbor (FH-08) - Bycatch Fish Species List

Station Location	Common Name	Scientific Name	Sample Date
FH-08	Barred Sand Bass	<i>Paralabrax nebulifer</i>	10/13/2014
FH-08	Bay Goby	<i>Lepidogobius lepidus</i>	10/13/2014
FH-08	California Halibut	<i>Paralichthys californicus</i>	10/13/2014
FH-08	California Lizardfish	<i>Synodus lucioceps</i>	10/13/2014
FH-08	California Tonguefish	<i>Symphurus atricauda</i>	10/13/2014
FH-08	Fantail Sole	<i>Xystreurus liolepis</i>	10/13/2014
FH-08	Giant Kelpfish	<i>Heterostichus rostratus</i>	10/13/2014
FH-08	Hornyhead Turbot	<i>Pleuronichthys verticalis</i>	10/13/2014
FH-08	Kelp Bass	<i>Paralabrax clathratus</i>	10/13/2014
FH-08	Northern Anchovy	<i>Engraulis mordax</i>	10/13/2014
FH-08	Queenfish	<i>Seriphus politus</i>	10/13/2014
FH-08	Sarcastic Fringehead	<i>Neoclinus blanchardi</i>	10/13/2014
FH-08	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	10/13/2014
FH-08	Specklefin Midshipmen	<i>Porichthys myriaster</i>	10/13/2014
FH-08	Spotted Kelpfish	<i>Gibbonsia elegans</i>	10/13/2014
FH-08	Spotted Scorpionfish	<i>Corpaena guttata</i>	10/13/2014
FH-08	Spotted Turbot	<i>Pleuronichthys ritteri</i>	10/13/2014
FH-08	White Surfperch	<i>Phanerodon furcatus</i>	10/13/2014

Los Angeles Inner Harbor (IA-07) - Bycatch Fish Species List

Station Location	Common Name	Scientific Name	Sample Date
IA-07	Barred Sand Bass	<i>Paralabrax nebulifer</i>	10/11/2014
IA-07	California Butterfly Ray	<i>Gymnura marmorata</i>	10/11/2014
IA-07	California Halibut	<i>Paralichthys californicus</i>	10/11/2014
IA-07	California Lizardfish	<i>Synodus lucioceps</i>	10/11/2014
IA-07	Diamond Turbot	<i>Hypsopsetta guttulata</i>	10/11/2014
IA-07	Giant Kelpfish	<i>Heterostichus rostratus</i>	10/11/2014
IA-07	Longnose Skate	<i>Raja rhina</i>	10/11/2014
IA-07	Northern Anchovy	<i>Engraulis mordax</i>	10/11/2014
IA-07	Queenfish	<i>Seriphus politus</i>	10/11/2014
IA-07	Shovelnose Guitarfish	<i>Rhinobatos productus</i>	10/11/2014
IA-07	Spotted Turbot	<i>Pleuronichthys ritteri</i>	10/11/2014
IA-07	White Surfperch	<i>Phanerodon furcatus</i>	10/11/2014

Long Beach Inner Harbor (IB-05) - Bycatch Fish Species List

Station Location	Common Name	Scientific Name	Sample Date
IB-05	Barred Sand Bass	<i>Paralabrax nebulifer</i>	10/12/2014
IB-05	Bat Ray	<i>Myliobatis californica</i>	10/12/2014
IB-05	Bay Goby	<i>Lepidogobius lepidus</i>	10/12/2014
IB-05	California Halibut	<i>Paralichthys californicus</i>	10/12/2014
IB-05	California Lizardfish	<i>Synodus lucioceps</i>	10/12/2014
IB-05	California Tonguefish	<i>Symphurus atricauda</i>	10/12/2014
IB-05	Chub Mackrel	<i>Scomber japonicus</i>	10/12/2014
IB-05	Fantail Sole	<i>Xystreurus liolepis</i>	10/12/2014
IB-05	Giant Kelpfish	<i>Heterostichus rostratus</i>	10/12/2014
IB-05	Longnose Skate	<i>Raja rhina</i>	10/12/2014
IB-05	Paloma Pompono	<i>Trachinotus paitensis</i>	10/12/2014
IB-05	Shovelnose Guitarfish	<i>Rhinobatos productus</i>	10/12/2014
IB-05	Slough Anchovy	<i>Anchoa delicatissima</i>	10/12/2014
IB-05	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	10/12/2014
IB-05	Specklefin Midshipmen	<i>Porichthys myriaster</i>	10/12/2014
IB-05	Spotted Kelpfish	<i>Gibbonsia elegans</i>	10/12/2014
IB-05	Spotted Turbot	<i>Pleuronichthys ritteri</i>	10/12/2014
IB-05	White Croaker	<i>Genyonemus lineatus</i>	10/12/2014
IB-05	White Surfperch	<i>Phanerodon furcatus</i>	10/12/2014
IB-05	Yellofin Sculpin	<i>Icelinus quadriseriatus</i>	10/12/2014

Los Angeles Outer Harbor (OA-06) - Bycatch Fish Species List

Station Location	Common Name	Scientific Name	Sample Date
OA-06	Barred Sand Bass	<i>Paralabrax nebulifer</i>	10/11/2014
OA-06	Bat Ray	<i>Myliobatis californica</i>	10/11/2014
OA-06	Black Croaker	<i>Cheilotrema saturnum</i>	10/11/2014
OA-06	California Corbina	<i>Menticirrhus undulatus</i>	10/11/2014
OA-06	California Lizardfish	<i>Synodus lucioceps</i>	10/11/2014
OA-06	California Tonguefish	<i>Symphurus atricauda</i>	10/11/2014
OA-06	Diamond Turbot	<i>Hypsopsetta guttulata</i>	10/11/2014
OA-06	Fantail Sole	<i>Xystreurus liolepis</i>	10/11/2014
OA-06	Gray Smoothhound Shark	<i>Mustelus californicus</i>	10/11/2014
OA-06	Hornyhead Turbot	<i>Pleuronichthys verticalis</i>	10/11/2014
OA-06	Leopard Shark	<i>Triakis semifasciata</i>	10/11/2014
OA-06	Longnose Skate	<i>Raja rhina</i>	10/11/2014
OA-06	Queenfish	<i>Seriphus politus</i>	10/11/2014
OA-06	Round Stingray	<i>Urolophus halleri</i>	10/11/2014
OA-06	Rubber Lip Surfperch	<i>Rhacochilus taxotes</i>	10/11/2014
OA-06	Sarcastic Fringehead	<i>Neoclinus blanchardi</i>	10/11/2014
OA-06	Shiner Surfperch	<i>Cymatogaster aggregata</i>	10/11/2014
OA-06	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	10/11/2014
OA-06	Specklefin Midshipmen	<i>Porichthys myriaster</i>	10/11/2014
OA-06	Spotted Scorpionfish	<i>Corpaena guttata</i>	10/11/2014
OA-06	Spotted Turbot	<i>Pleuronichthys ritteri</i>	10/11/2014
OA-06	Thornback Ray	<i>Platyrrhinoidis triseriata</i>	10/11/2014
OA-06	Walleye Perch	<i>Hyperprosopon argenteum</i>	10/11/2014
OA-06	White Croaker	<i>Genyonemus lineatus</i>	10/11/2014
OA-06	White Surfperch	<i>Phanerodon furcatus</i>	10/11/2014



Station Location: CS-03
Common Name: Barred Sand Bass
Scientific Name: *Paralabrax nebulifer*
Sample Date: 10/10/2014



Station Location: CS-03
Common Name: Bat Ray
Scientific Name: *Myliobatis californica*
Sample Date: 10/10/2014



Station Location: CS-03
Common Name: Diamond Turbot
Scientific Name: *Hypsopsetta guttulata*
Sample Date: 10/10/2014



Station Location: CS-03
Common Name: Giant Kelpfish
Scientific Name: *Heterostichus rostratus*
Sample Date: 10/10/2014



Station Location: CS-03
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/10/2014



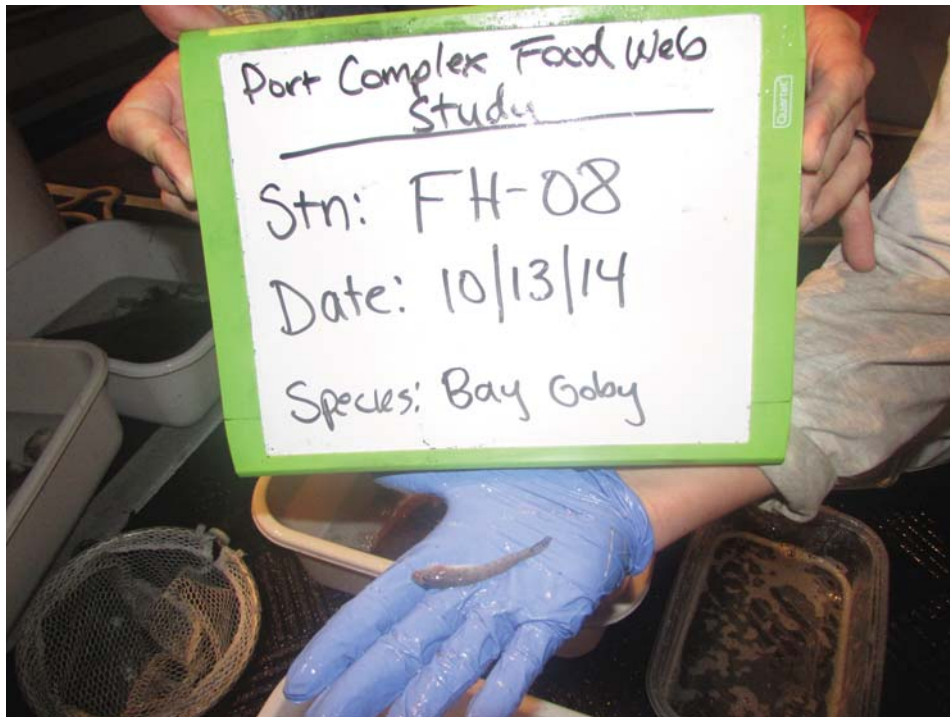
Station Location: CS-03
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/10/2014



Station Location: CS-03
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/10/2014



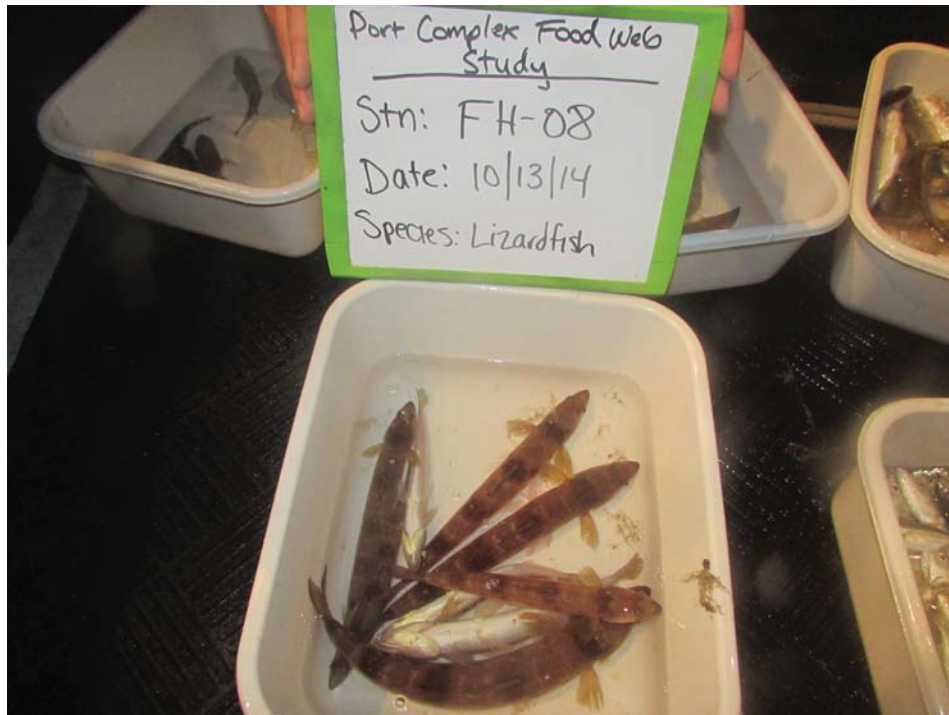
Station Location: FH-08
Common Name: Barred Sand Bass
Scientific Name: *Paralabrax nebulifer*
Sample Date: 10/13/2014



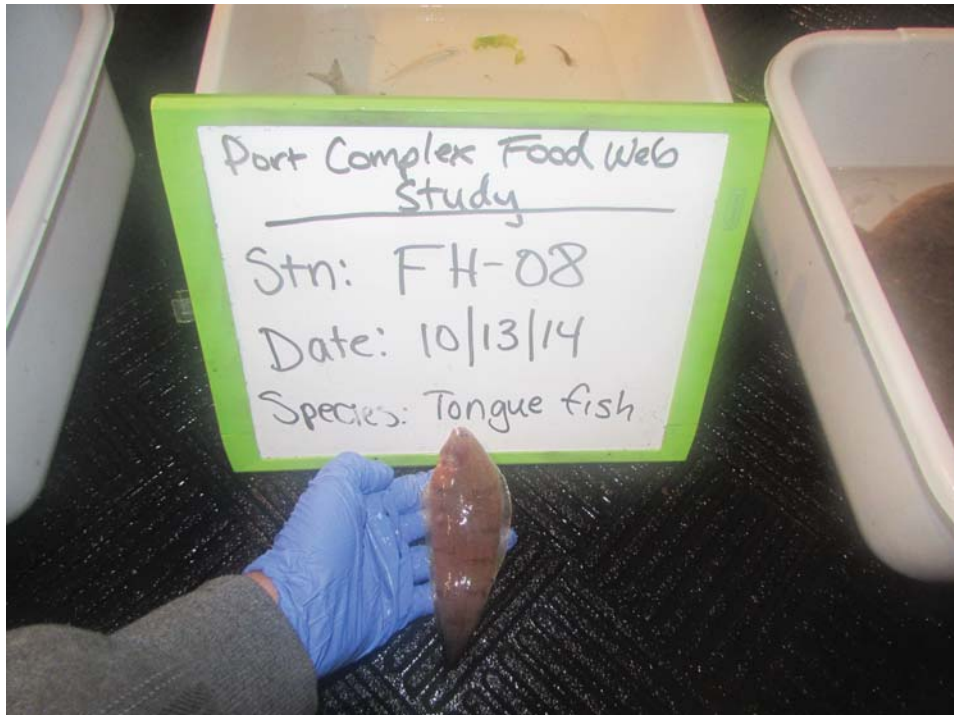
Station Location: FH-08
Common Name: Bay Goby
Scientific Name: *Lepidogobius lepidus*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/13/2014



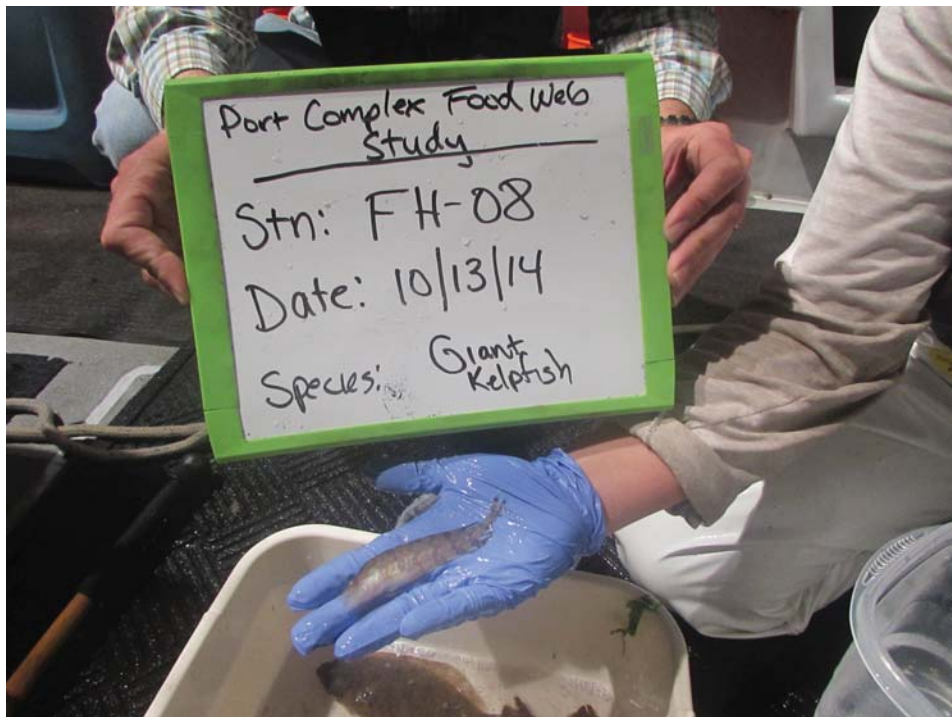
Station Location: FH-08
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: California Tonguefish
Scientific Name: *Symphurus atricauda*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: Fantail Sole
Scientific Name: *Xystreurys liolepis*
Sample Date: 10/13/2014



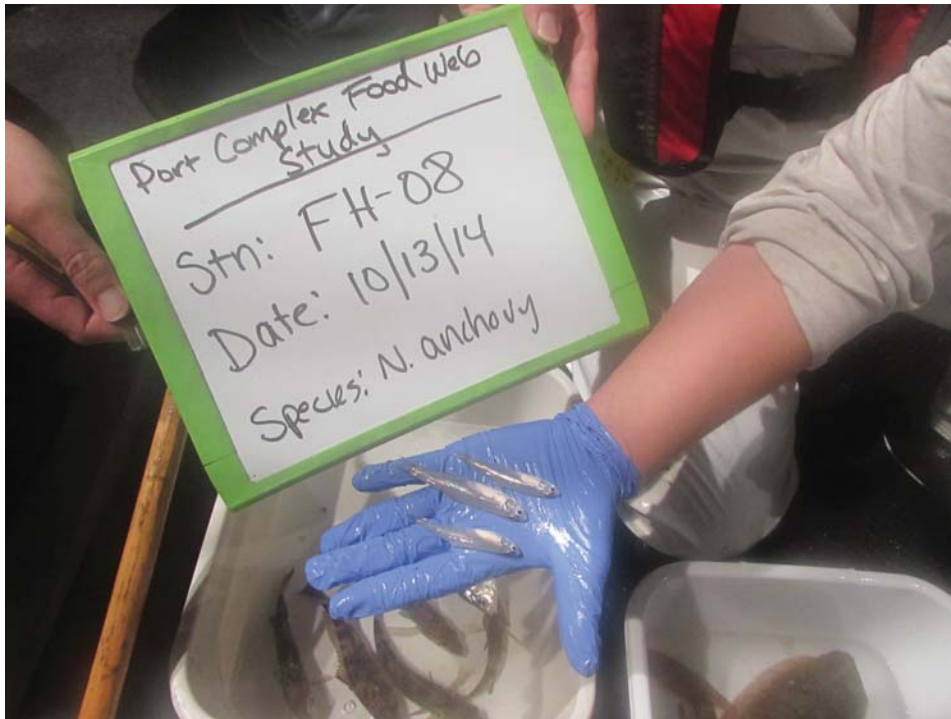
Station Location: FH-08
Common Name: Giant Kelpfish
Scientific Name: *Heterostichus rostratus*
Sample Date: 10/13/2014



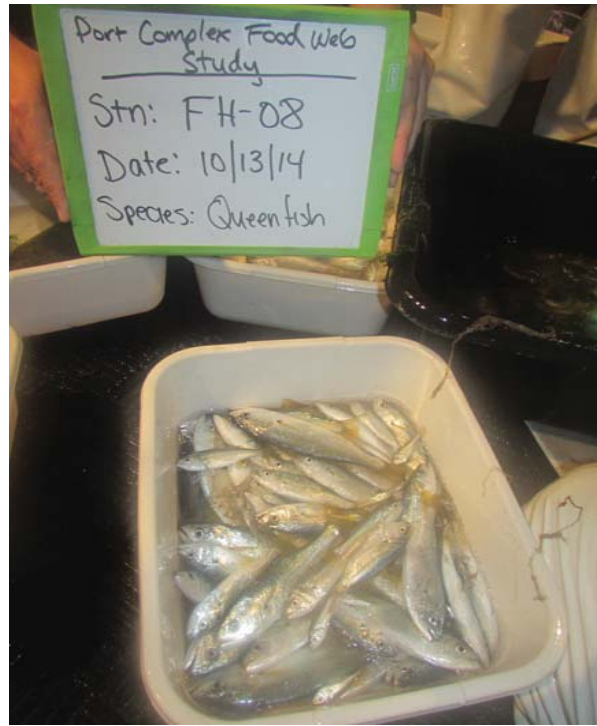
Station Location: FH-08
Common Name: Hornyhead Turbot
Scientific Name: *Pleuronichthys verticalis*
Sample Date: 10/13/2014



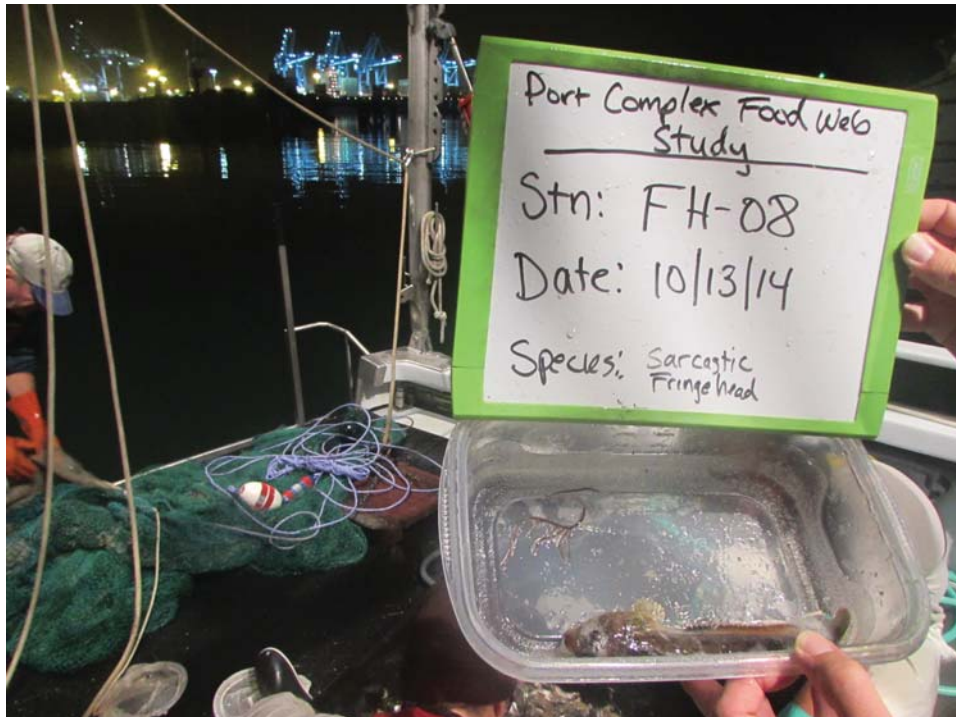
Station Location: FH-08
Common Name: Kelp Bass
Scientific Name: *Paralabrax clathratus*
Sample Date: 10/13/2014



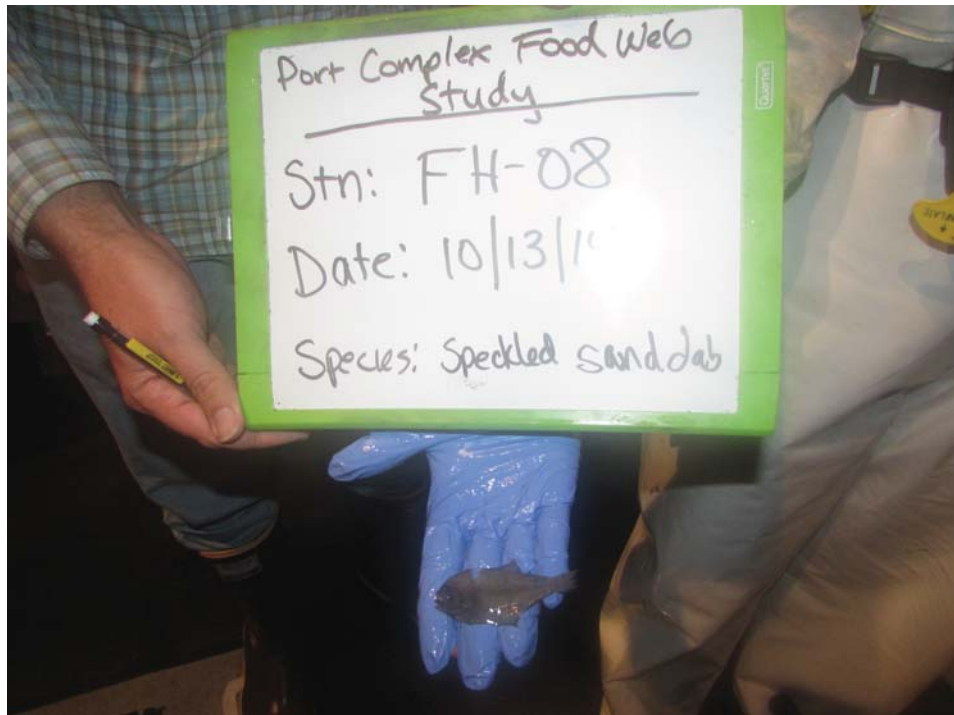
Station Location: FH-08
Common Name: Northern Anchovy
Scientific Name: *Engraulis mordax*
Sample Date: 10/13/2014



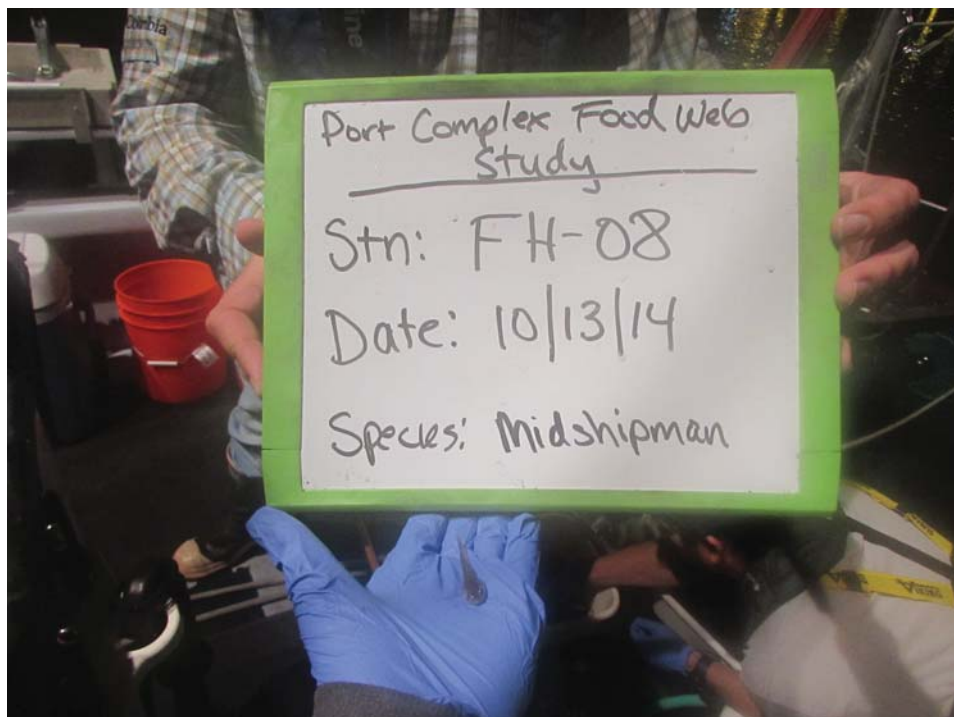
Station Location: FH-08
Common Name: Queenfish
Scientific Name: *Seriphus politus*
Sample Date: 10/13/2014



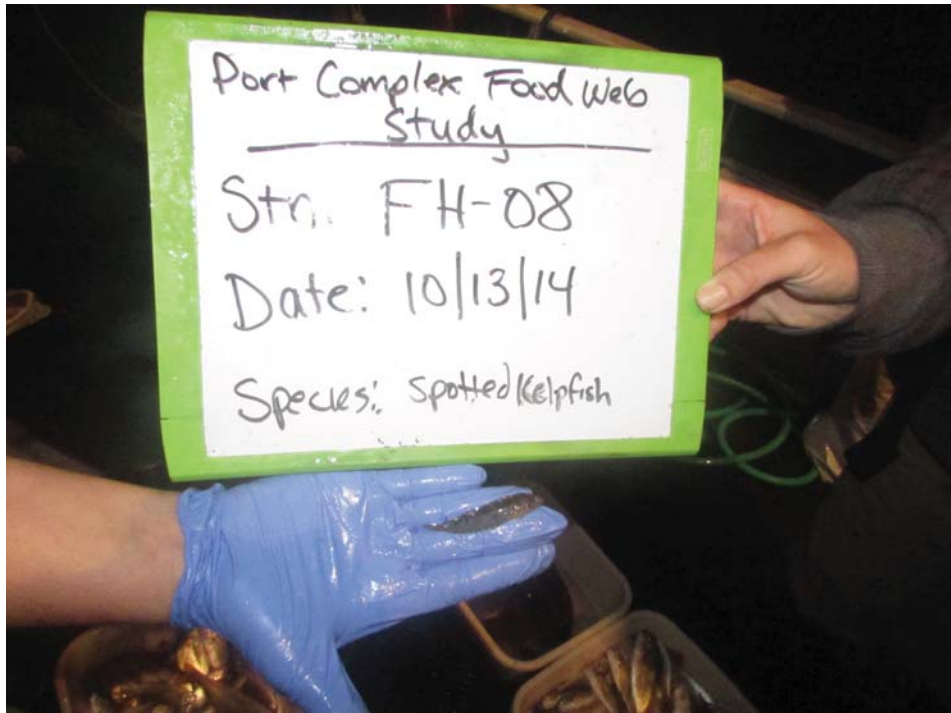
Station Location: FH-08
Common Name: Sarcastic Fringehead
Scientific Name: *Neoclinus blanchardi*
Sample Date: 10/13/2014



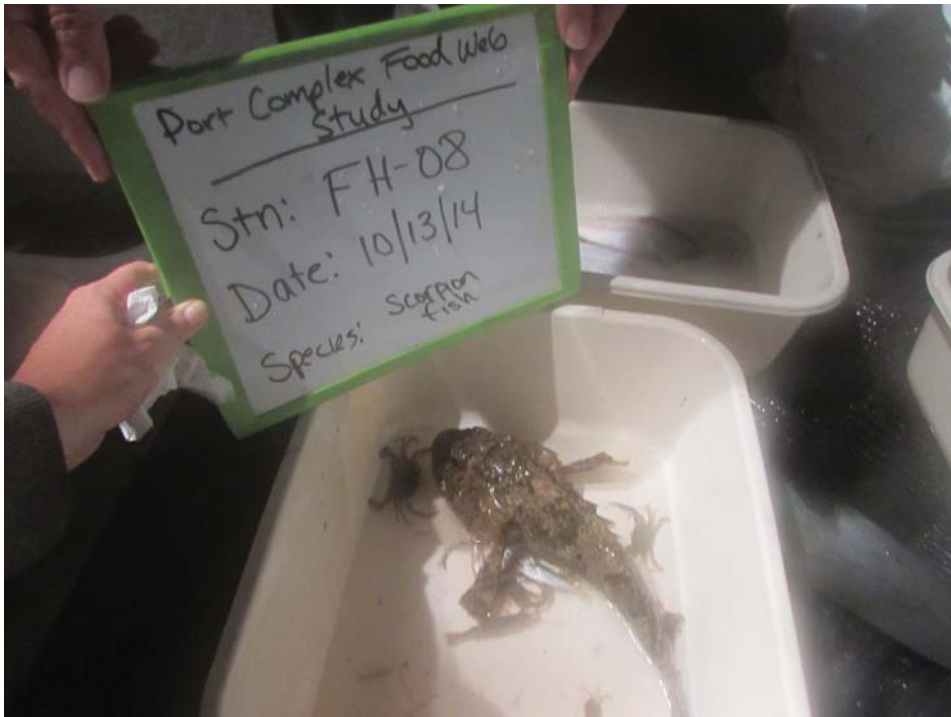
Station Location: FH-08
Common Name: Speckled Sanddab
Scientific Name: *Citharichthys stigmaeus*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: Specklefin Midshipmen
Scientific Name: *Porichthys myriaster*
Sample Date: 10/13/2014



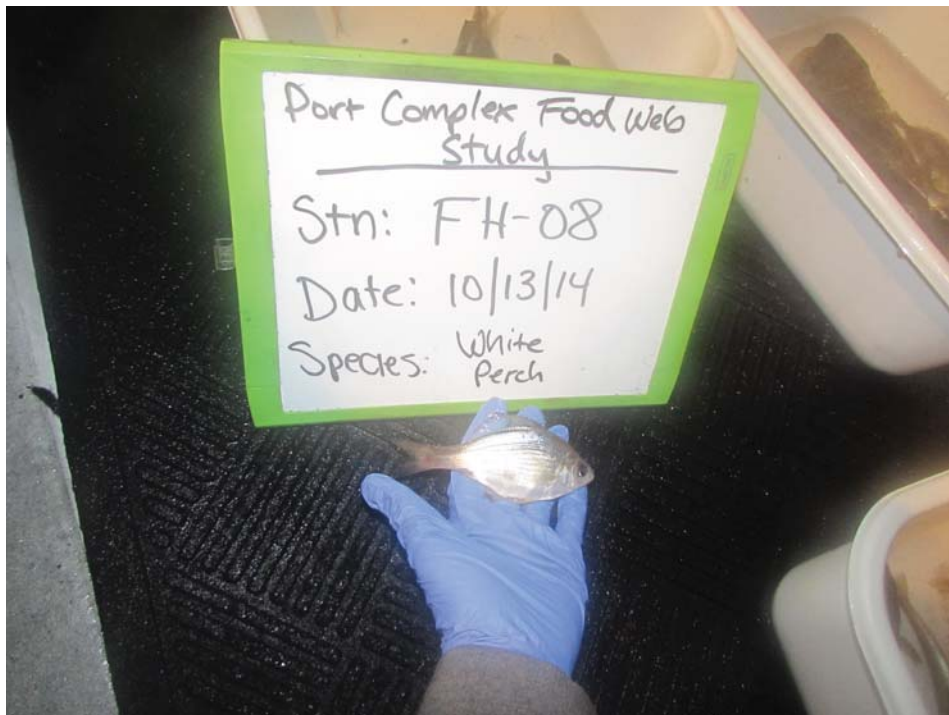
Station Location: FH-08
Common Name: Spotted Kelpfish
Scientific Name: *Gibbonsia elegans*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: Spotted Scorpionfish
Scientific Name: *Corpaena guttata*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: Spotted Turbot
Scientific Name: *Pleuronichthys ritteri*
Sample Date: 10/13/2014



Station Location: FH-08
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/13/2014



Station Location: IA-07
Common Name: Barred Sand Bass
Scientific Name: *Paralabrax nebulifer*
Sample Date: 10/11/2014



Station Location: IA-07
Common Name: California Butterfly Ray
Scientific Name: *Gymnura marmorata*
Sample Date: 10/11/2014



Station Location: IA-07
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/11/2014



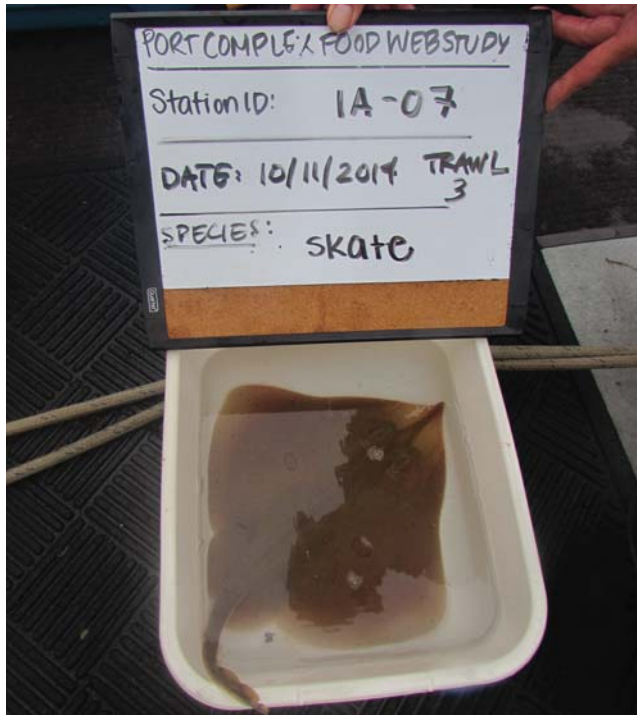
Station Location: IA-07
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



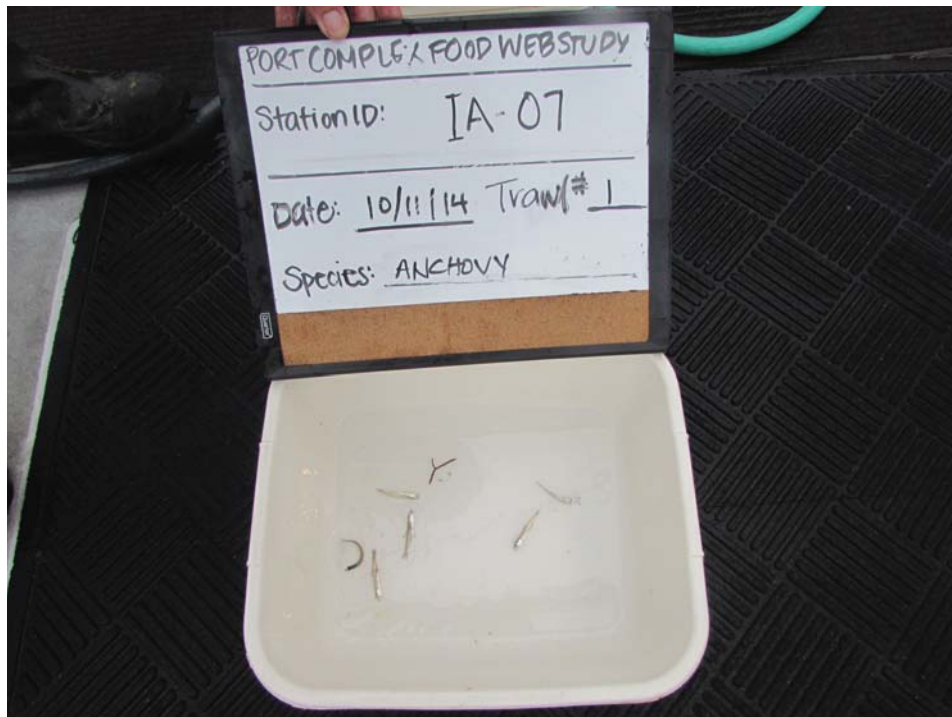
Station Location: IA-07
Common Name: Diamond Turbot
Scientific Name: *Hypsopsetta guttulata*
Sample Date: 10/11/2014



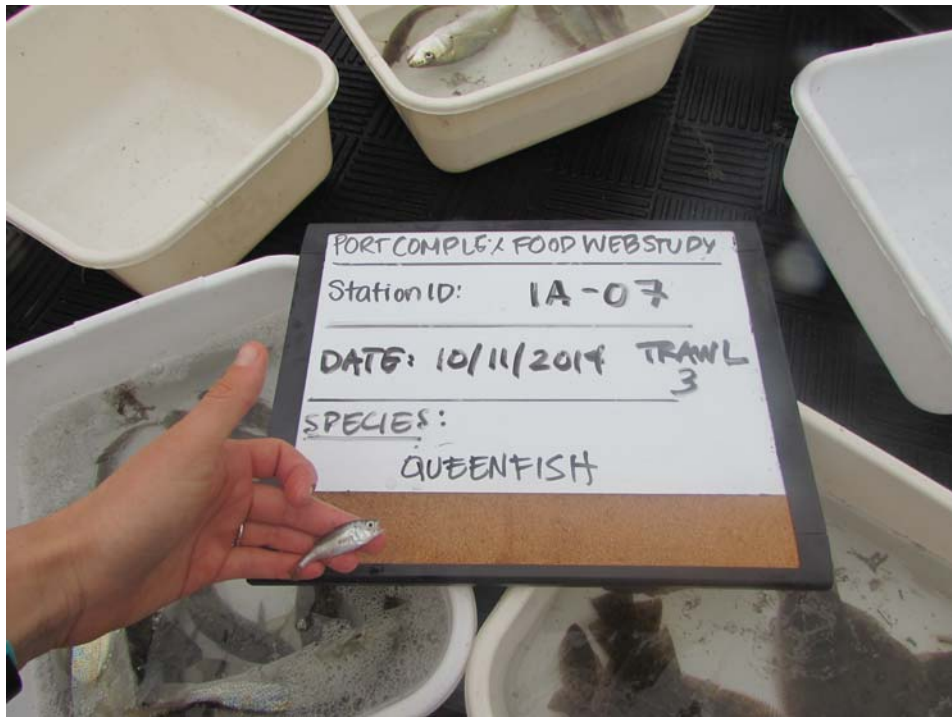
Station Location: IA-07
Common Name: Giant Kelpfish
Scientific Name: *Heterostichus rostratus*
Sample Date: 10/11/2014



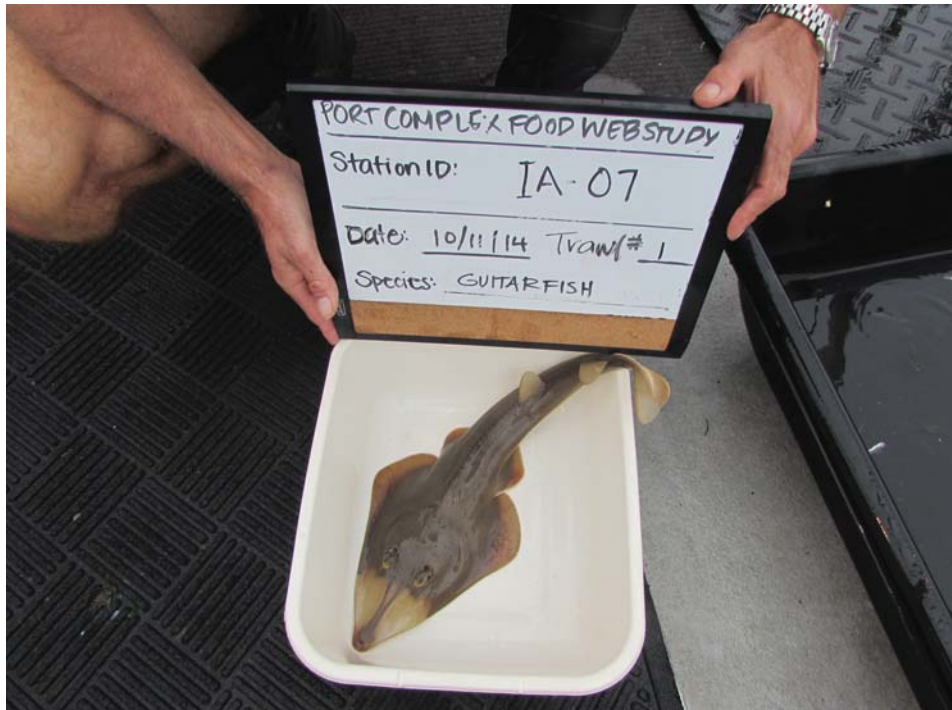
Station Location: IA-07
Common Name: Longnose Skate
Scientific Name: *Raja rhina*
Sample Date: 10/11/2014



Station Location: IA-07
Common Name: Northern Anchovy
Scientific Name: *Engraulis mordax*
Sample Date: 10/11/2014



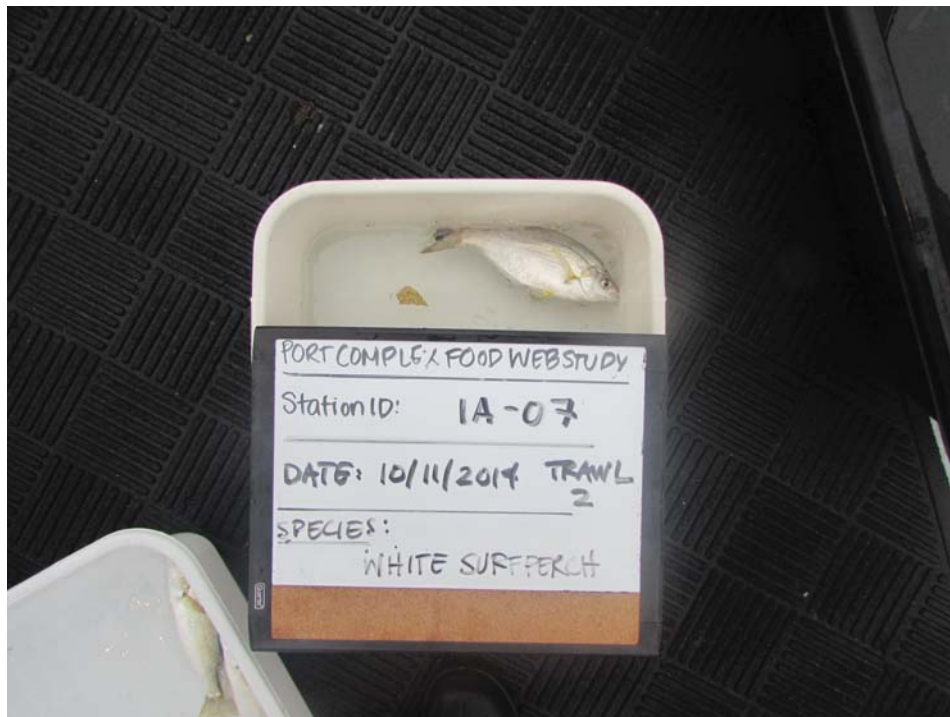
Station Location: IA-07
Common Name: Queenfish
Scientific Name: *Seriphus politus*
Sample Date: 10/11/2014



Station Location: IA-07
Common Name: Shovelnose Guitarfish
Scientific Name: *Rhinobatos productus*
Sample Date: 10/11/2014



Station Location: IA-07
Common Name: Spotted Turbot
Scientific Name: *Pleuronichthys ritteri*
Sample Date: 10/11/2014



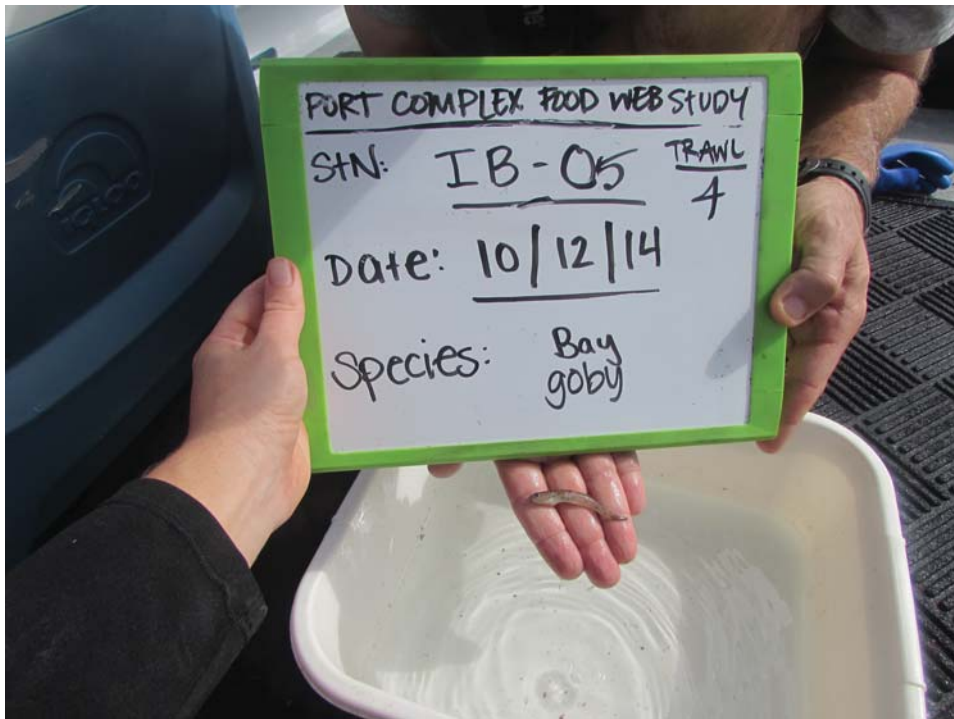
Station Location: IA-07
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/11/2014



Station Location: IB-05
Common Name: Barred Sand Bass
Scientific Name: *Paralabrax nebulifer*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Bat Ray
Scientific Name: *Myliobatis californica*
Sample Date: 10/12/2014



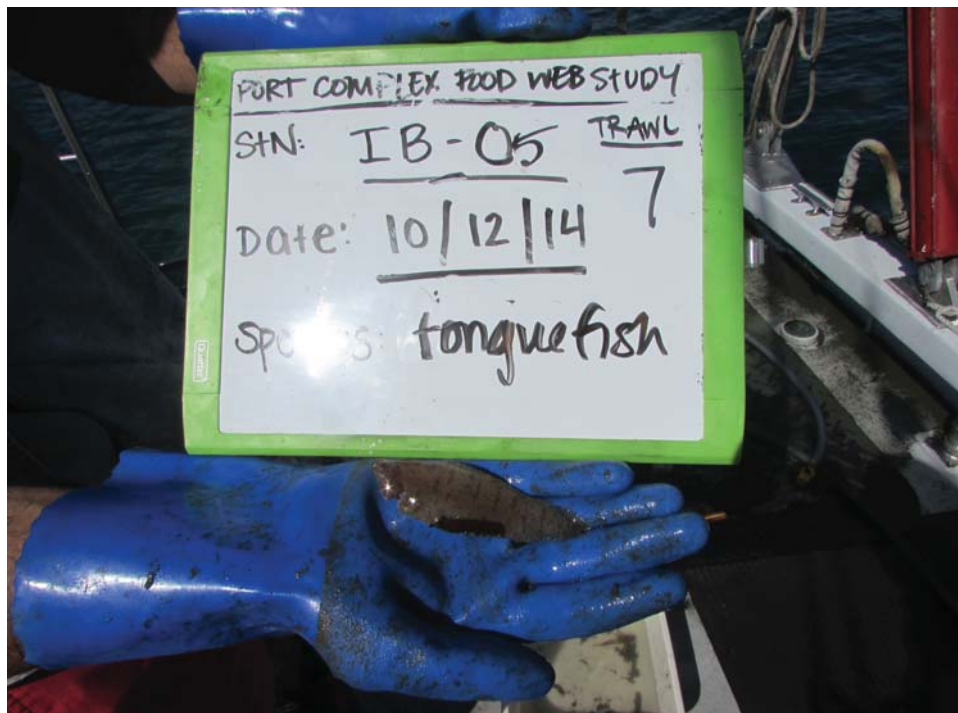
Station Location: IB-05
Common Name: Bay Goby
Scientific Name: *Lepidogobius lepidus*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: California Halibut
Scientific Name: *Paralichthys californicus*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/12/2014



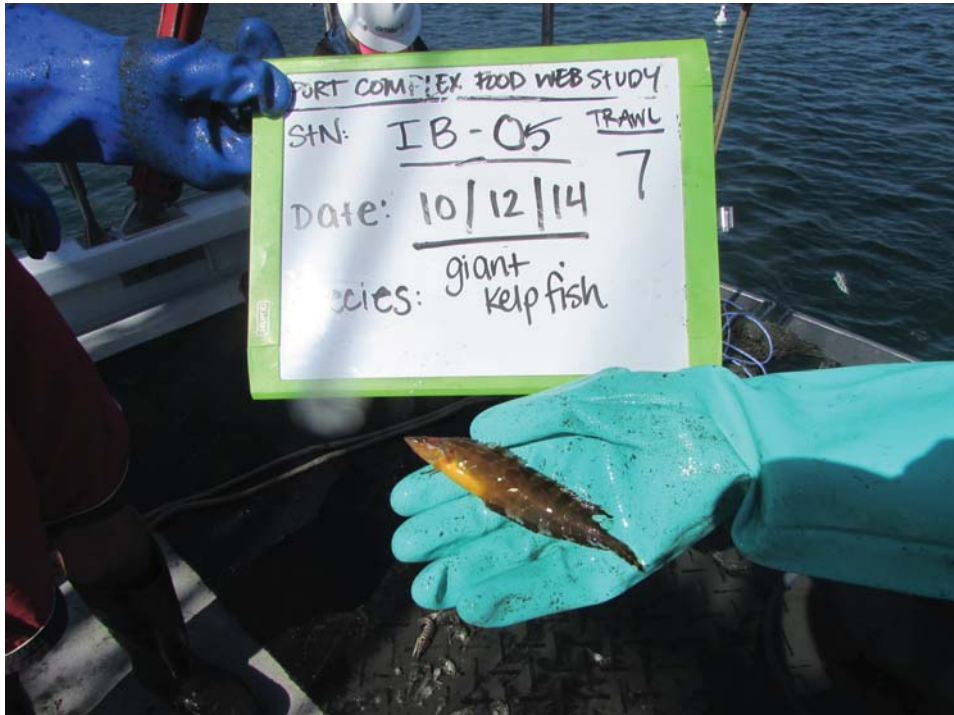
Station Location: IB-05
Common Name: California Tonguefish
Scientific Name: *Symphurus atricauda*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Chub Mackrel
Scientific Name: *Scomber japonicus*
Sample Date: 10/12/2014



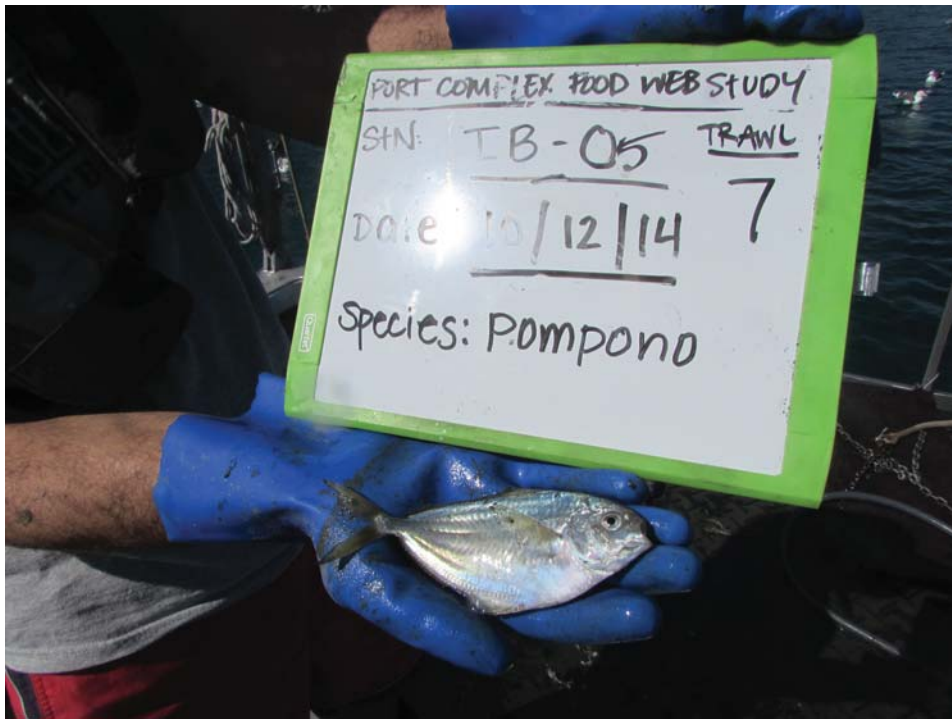
Station Location: IB-05
Common Name: Fantail Sole
Scientific Name: *Xystreurys liolepis*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Giant Kelpfish
Scientific Name: *Heterostichus rostratus*
Sample Date: 10/12/2014



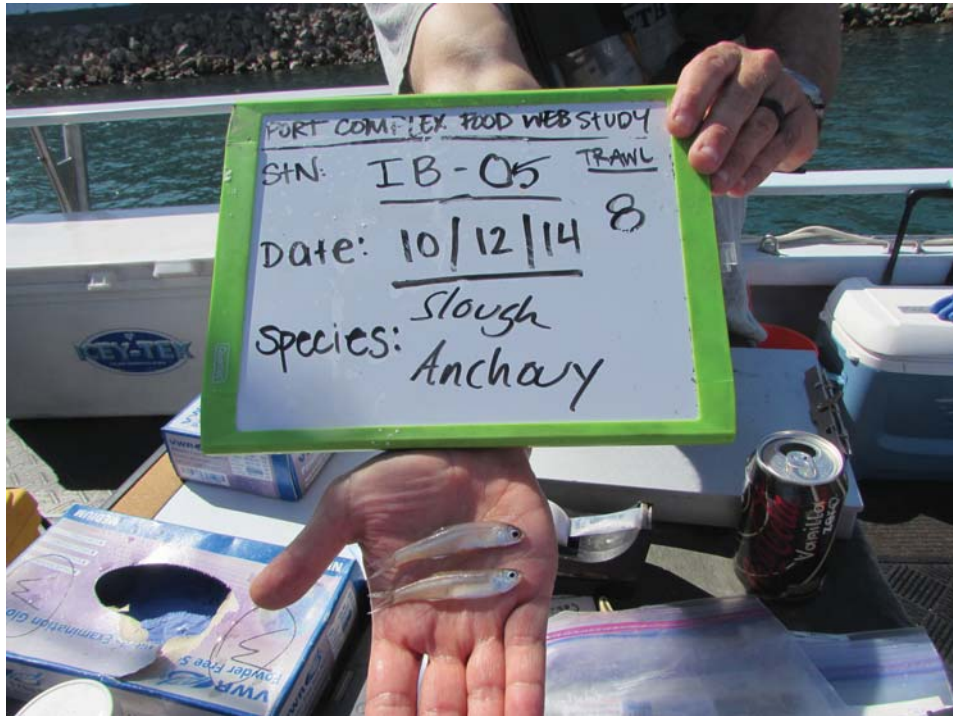
Station Location: IB-05
Common Name: Longnose Skate
Scientific Name: *Raja rhina*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Paloma Pompono
Scientific Name: *Trachinotus paitensis*
Sample Date: 10/12/2014



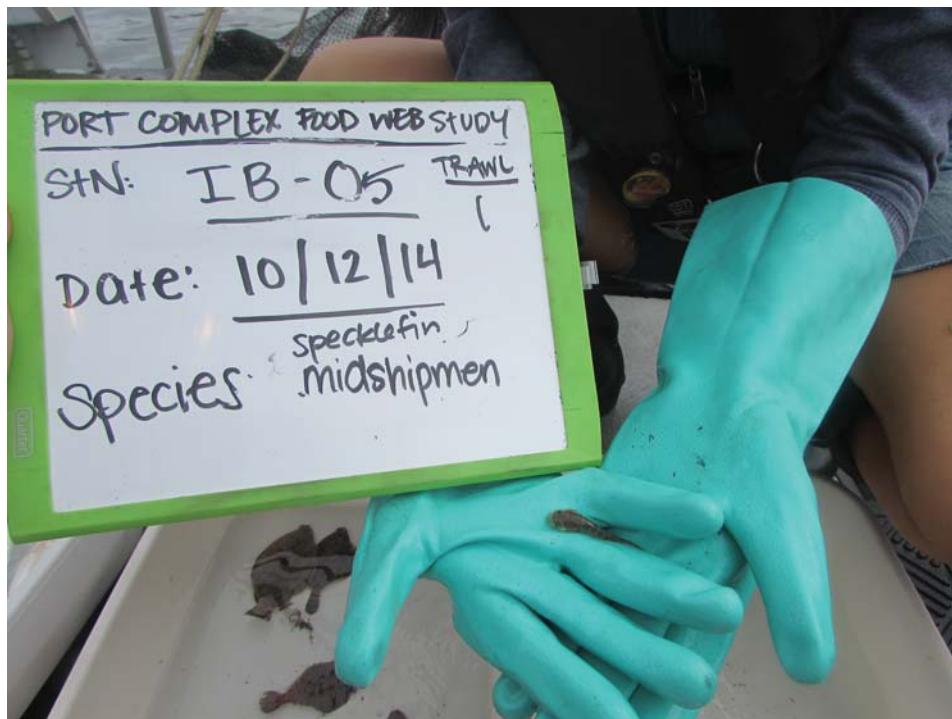
Station Location: IB-05
Common Name: Shovelnose Guitarfish
Scientific Name: *Rhinobatos productus*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Slough Anchovy
Scientific Name: *Anchoa delicatissima*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Speckled Sanddab
Scientific Name: *Citharichthys stigmaeus*
Sample Date: 10/12/2014



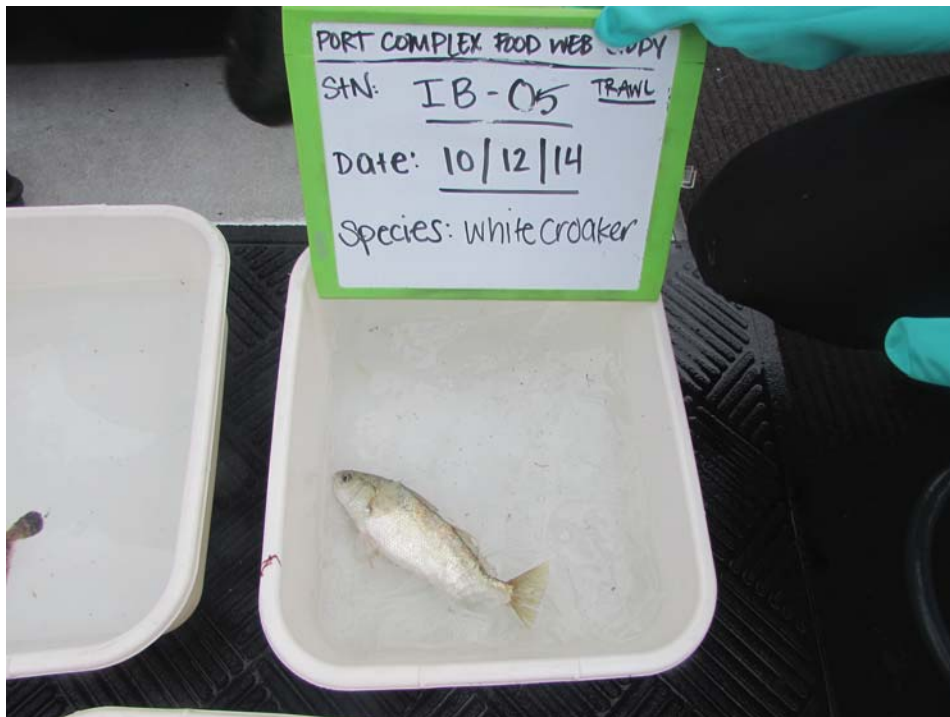
Station Location: IB-05
Common Name: Specklefin Midshipmen
Scientific Name: *Porichthys myriaster*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Spotted Kelpfish
Scientific Name: *Gibbonsia elegans*
Sample Date: 10/12/2014



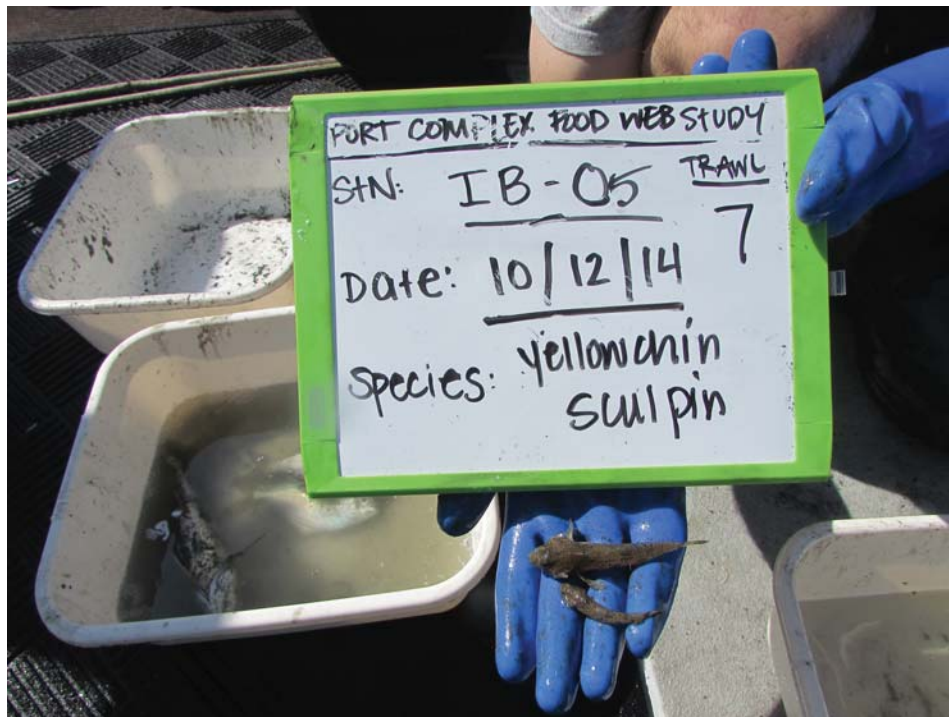
Station Location: IB-05
Common Name: Spotted Turbot
Scientific Name: *Pleuronichthys ritteri*
Sample Date: 10/12/2014



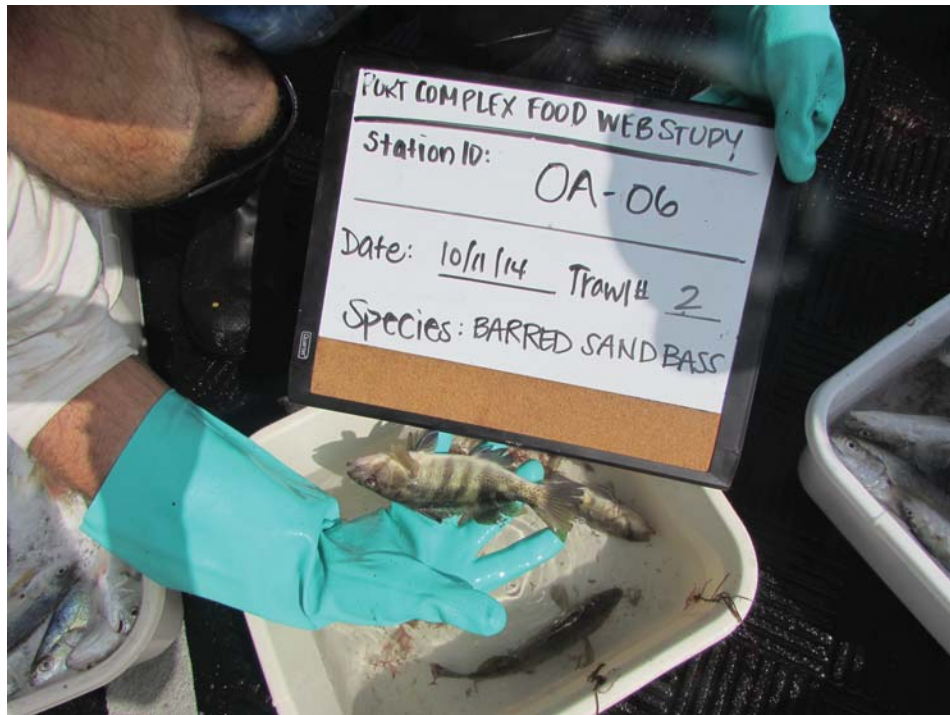
Station Location: IB-05
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/12/2014



Station Location: IB-05
Common Name: Yellowfin Sculpin
Scientific Name: *Icelinus quadriseriatus*
Sample Date: 10/12/2014



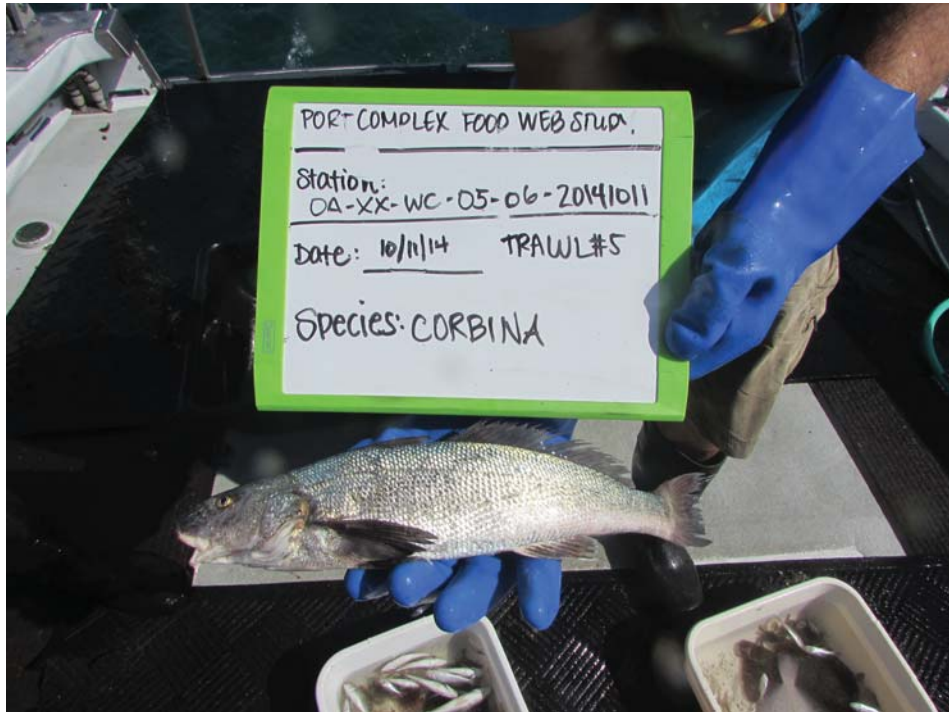
Station Location: OA-06
Common Name: Barred Sand Bass
Scientific Name: *Paralabrax nebulifer*
Sample Date: 10/11/2014



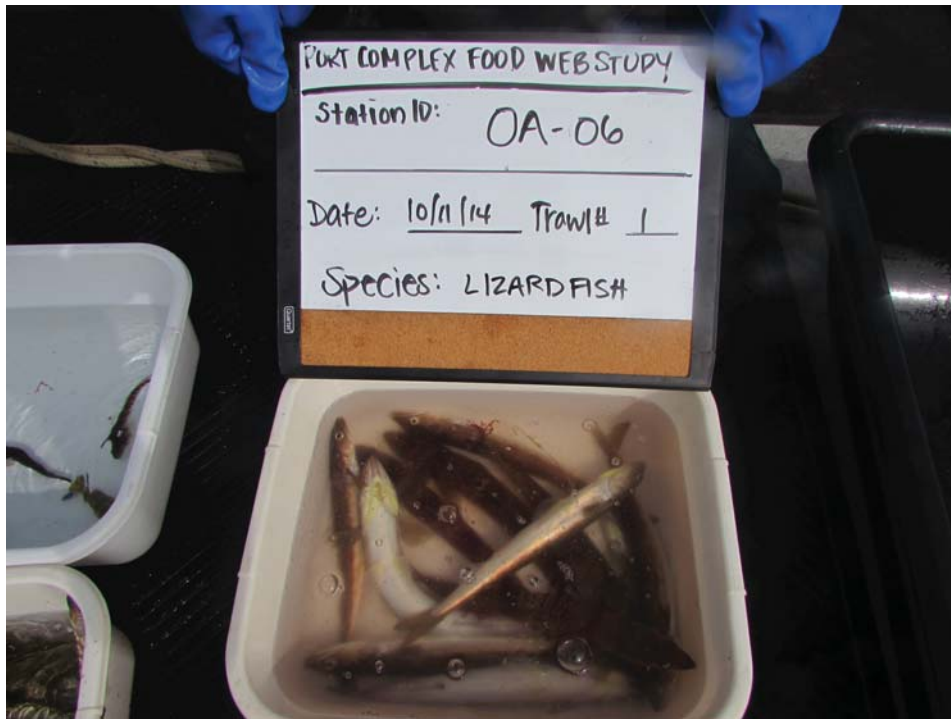
Station Location: OA-06
Common Name: Bat Ray
Scientific Name: *Myliobatis californica*
Sample Date: 10/11/2014



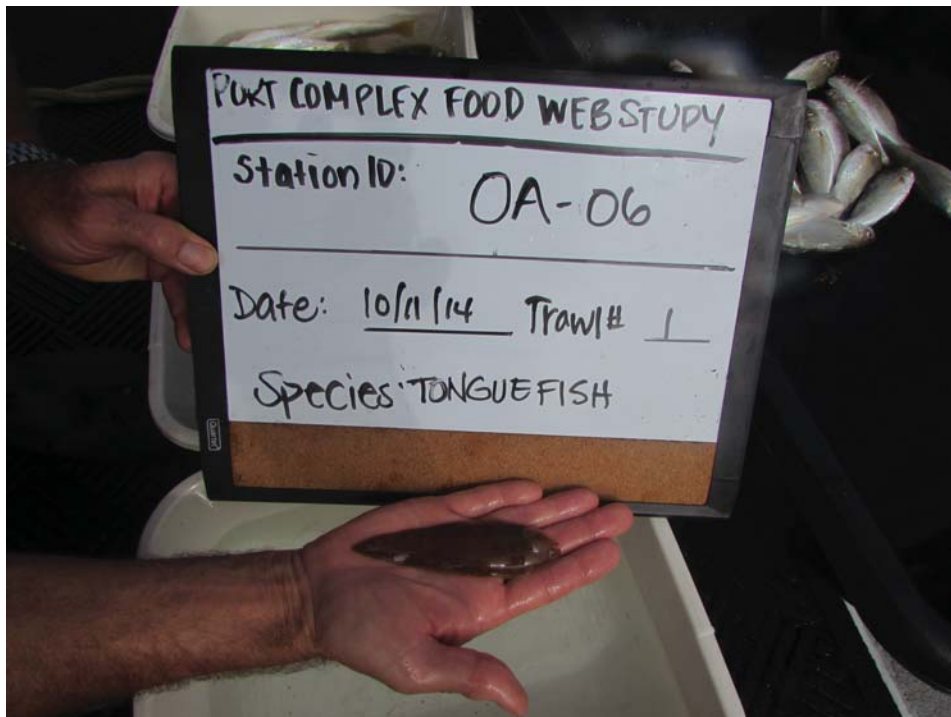
Station Location: OA-06
Common Name: Black Croaker
Scientific Name: *Cheilotrema saturnum*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: California Corbina
Scientific Name: *Menticirrhus undulatus*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: California Lizardfish
Scientific Name: *Synodus lucioceps*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: California Tonguefish
Scientific Name: *Symphurus atricauda*
Sample Date: 10/11/2014



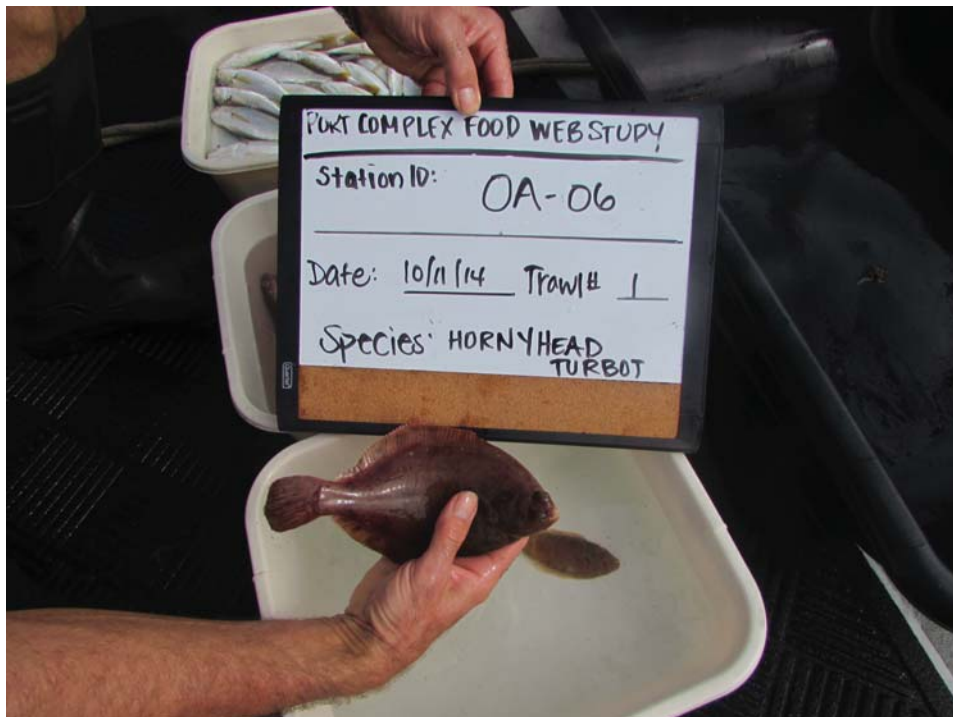
Station Location: OA-06
Common Name: Diamond Turbot
Scientific Name: *Hypsopsetta guttulata*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Fantail Sole
Scientific Name: *Xystreurys liolepis*
Sample Date: 10/11/2014



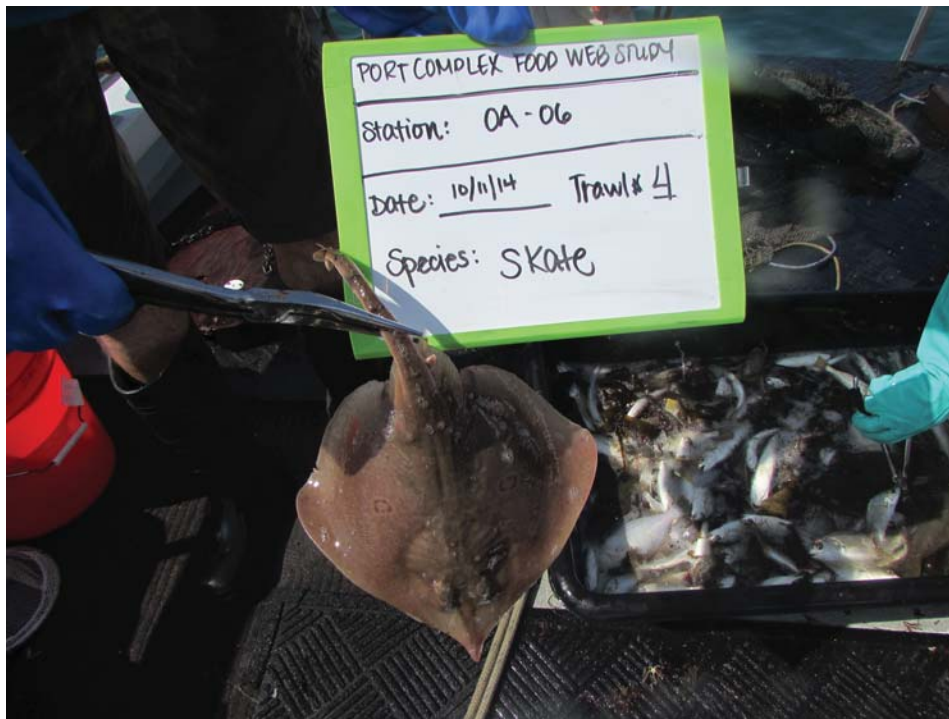
Station Location: OA-06
Common Name: Gray Smoothhound Shark
Scientific Name: *Mustelus californicus*
Sample Date: 10/11/2014



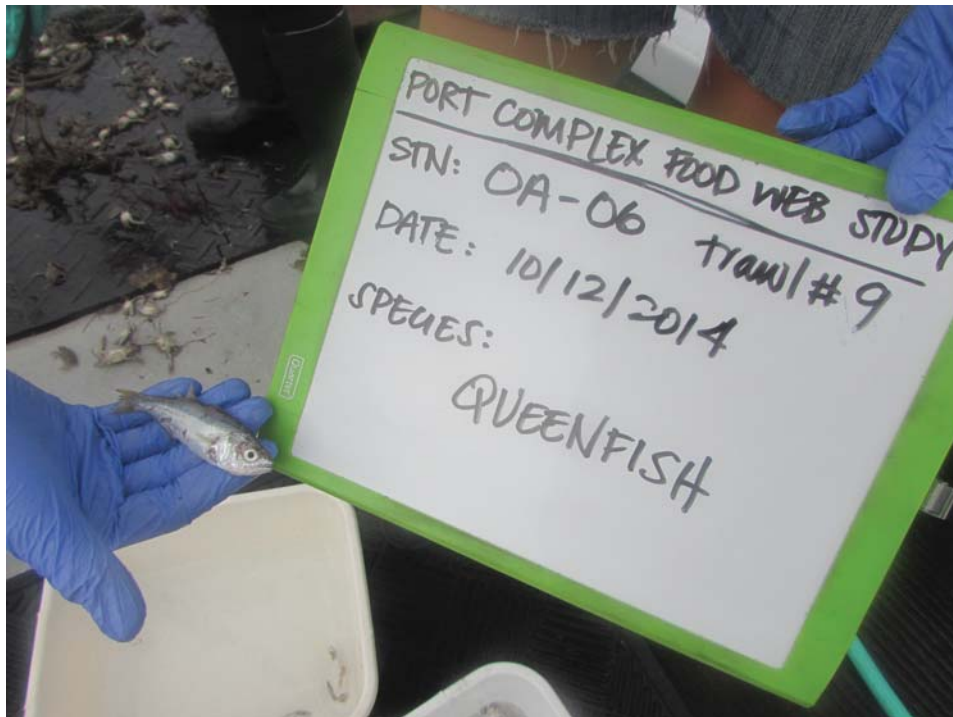
Station Location: OA-06
Common Name: Hornyhead Turbot
Scientific Name: *Pleuronichthys verticalis*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Leopard Shark
Scientific Name: *Triakis semifasciata*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Longnose Skate
Scientific Name: *Raja rhina*
Sample Date: 10/11/2014



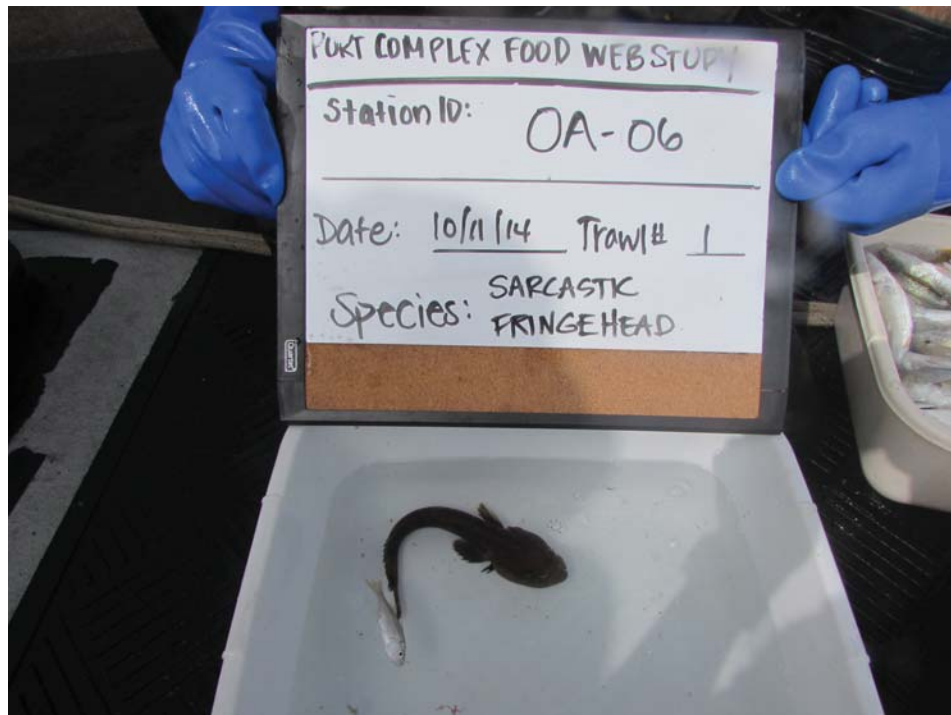
Station Location: OA-06
Common Name: Queenfish
Scientific Name: *Seriphus politus*
Sample Date: 10/11/2014



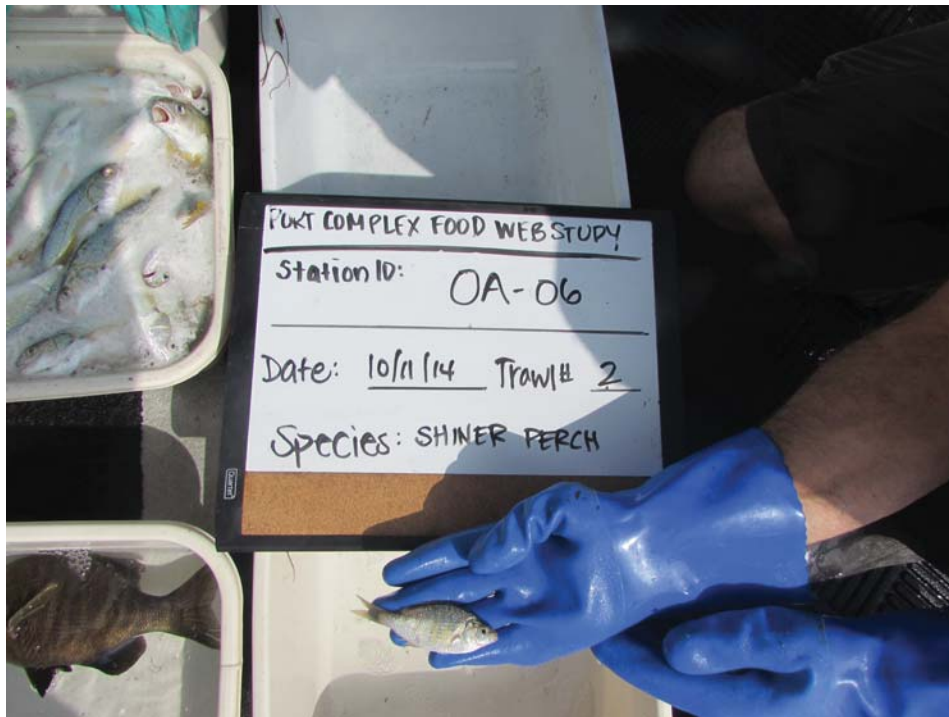
Station Location: OA-06
Common Name: Round Stingray
Scientific Name: *Urolophus halleri*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Rubber Lip Surfperch
Scientific Name: *Rhacochilus taxotes*
Sample Date: 10/11/2014



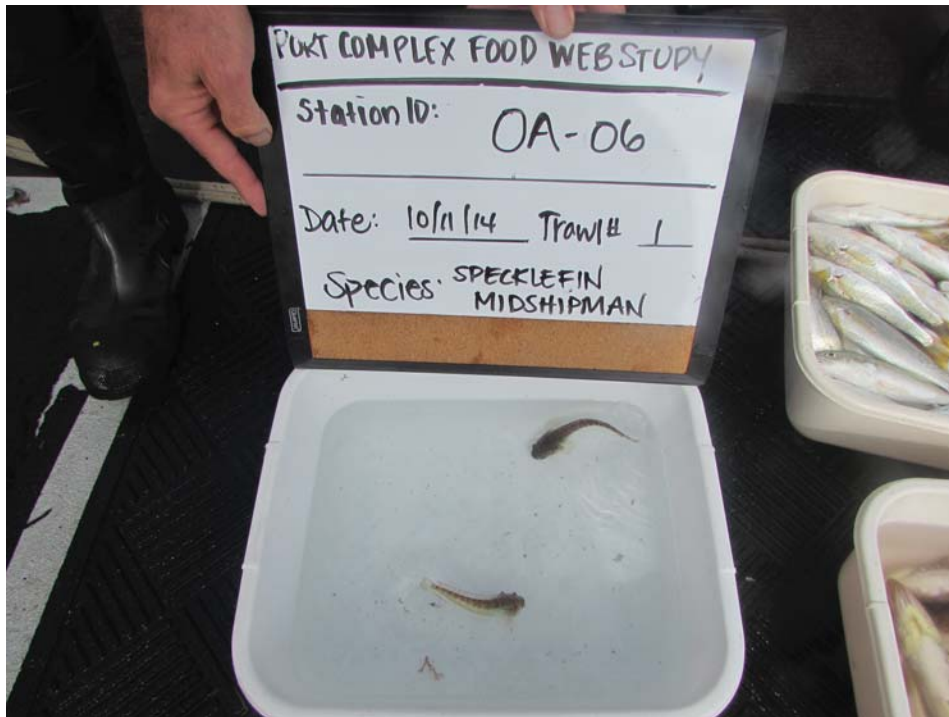
Station Location: OA-06
Common Name: Sarcastic Fringehead
Scientific Name: *Neoclinus blanchardi*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Shiner Surfperch
Scientific Name: *Cymatogaster aggregata*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Speckled Sanddab
Scientific Name: *Citharichthys stigmaeus*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Specklefin Midshipmen
Scientific Name: *Porichthys myriaster*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Spotted Scorpionfish
Scientific Name: *Corpaena guttata*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Spotted Turbot
Scientific Name: *Pleuronichthys ritteri*
Sample Date: 10/11/2014



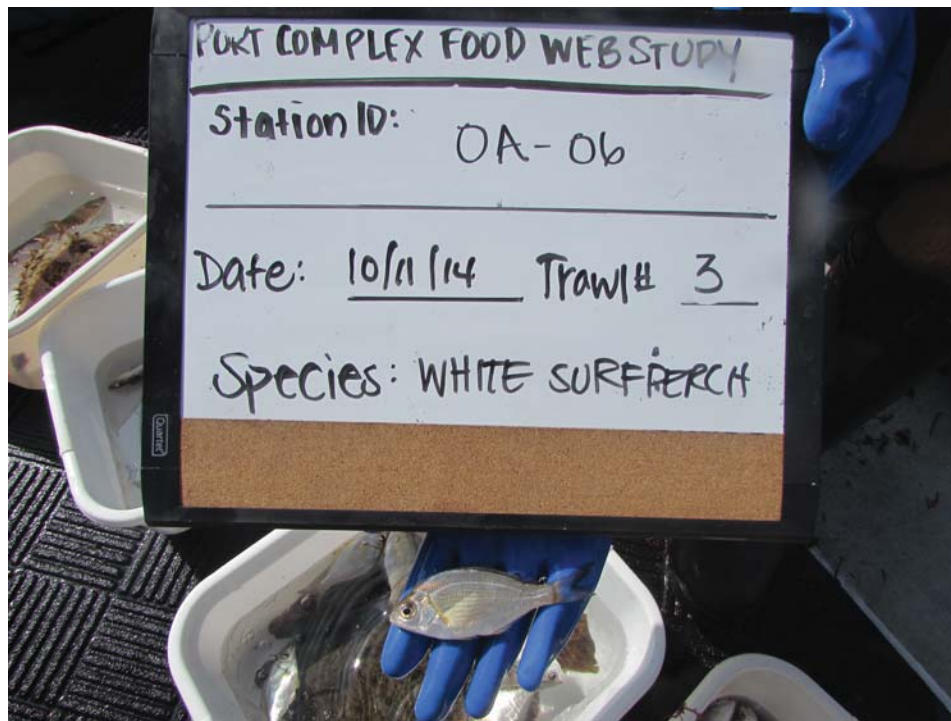
Station Location: OA-06
Common Name: Thornback Ray
Scientific Name: *Platyrhinoidis triseriata*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: Walleye Perch
Scientific Name: *Hyperprosopon argenteum*
Sample Date: 10/11/2014



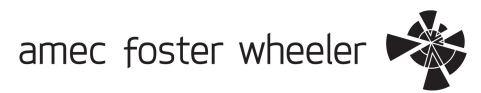
Station Location: OA-06
Common Name: White Croaker
Scientific Name: *Genyonemus lineatus*
Sample Date: 10/11/2014



Station Location: OA-06
Common Name: White Surfperch
Scientific Name: *Phanerodon furcatus*
Sample Date: 10/11/2014

APPENDIX D
FIELD RAW DATA SHEETS

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **FH-08**

Vessel Name **BB II**

Date **10/13/14**

Arrival Time **1830**
(hh:mm)

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts)

Direction (N/S/E/W)

Swell

Period (s)

Height (ft)

Station Comments

Fish Harbor: counter clockwise around harbor,

Fish Harbor - 08

TRAWL EVENTS

Trawl Number	Date	Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)	
1	10/13/14	Net Over	1835	33° 43.859	118° 15.932	6	20m	
		Start Trawl	1836	43.889	15.911			
		Intrvl. 1 (20%)	1837	43.941	15.867			
		Intrvl. 2 (40%)	1839	43.981	15.843			
		Intrvl. 3 (60%)	1841	43.997	15.922			
		Intrvl. 4 (80%)						
		End Trawl	1843	43.969	15.929			
		Net on Deck	1844	43.954	15.931			
2	10/13/14	Net Over	1858	33° 43.840	118° 15.959	6	20m	
		Start Trawl	1900	43.909	15.893			
		Intrvl. 1 (20%)	1903	43.975	15.841			
		Intrvl. 2 (40%)	1904	44.015	15.851			
		Intrvl. 3 (60%)	1906	44.000	15.930			
		Intrvl. 4 (80%)						
		End Trawl	1908	43.949	15.940			
		Net on Deck	1909	43.932	15.933			

*Curve
Curve.
end.*

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



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STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code Amzel

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Chippy
 Rough

Nav Type

DGPS
 GPS

Station ID FK-08

Vessel Name RBT

Date 10/13/14

Arrival Time 0645
 (hh:mm)

1845

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts) _____

Direction (N/S/E/W) _____

Swell

Period (s) 0

Height (ft) 0

Station Comments

Fish Harbor

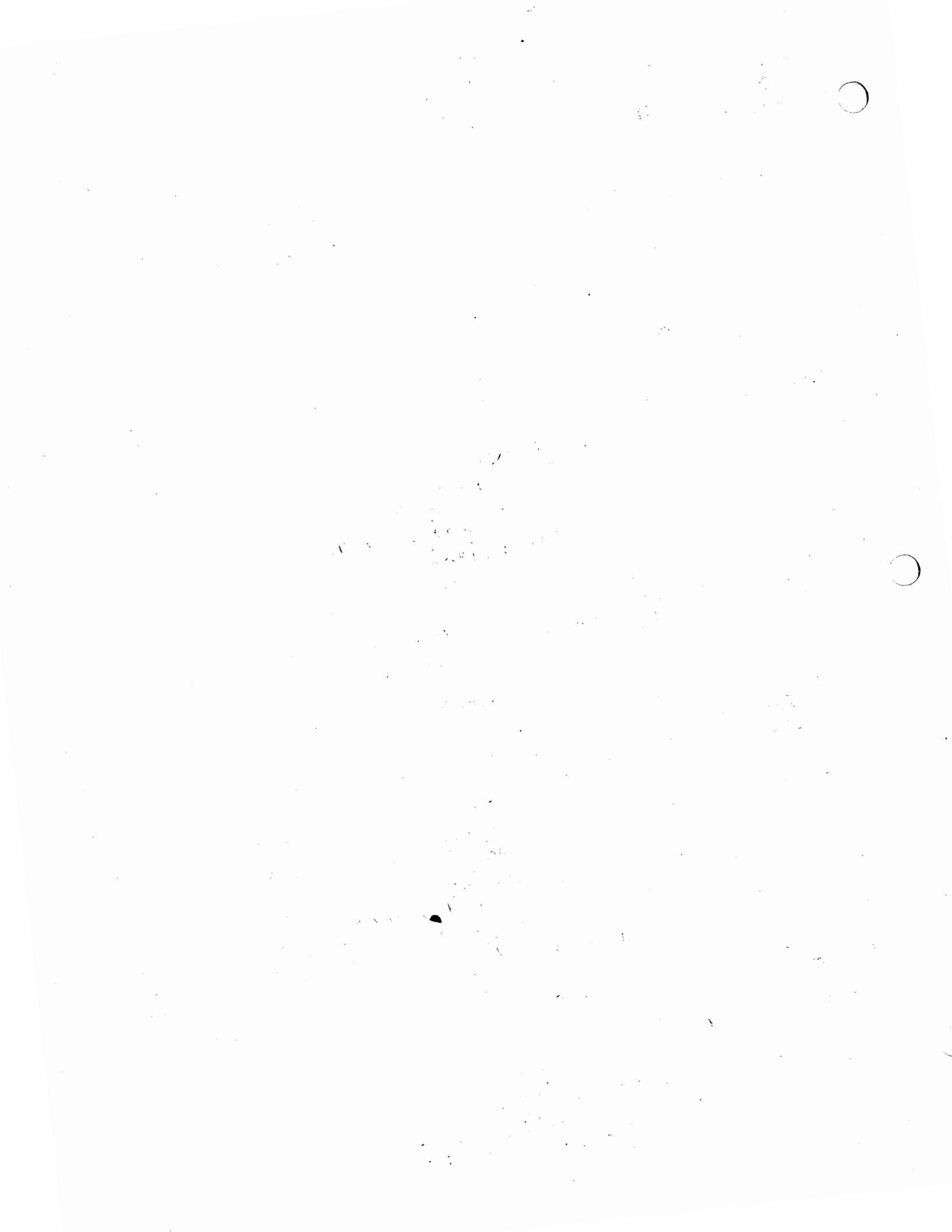
TRAWL EVENTS

Trawl Number	Date	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
3	10/13/14	Net Over	1947	43.843	15.957	6	200m
		Start Trawl	1949	43.919	15.907	6	
		Intrvl. 1 (20%)	1951	43.985	15.859	↓	↓
		Intrvl. 2 (40%)	1953	44.033	15.887	↓	↓
		Intrvl. 3 (60%)	1955	43.941	15.946	↓	↓
		Intrvl. 4 (80%)	1957	43.916	15.944	↓	↓
		End Trawl	1958	43.893	15.937		
		Net on Deck	1958	43.889	15.930		
4		Net Over	2029	43.911	15.892	6	20
		Start Trawl	2033	43.998	15.893	6	
		Intrvl. 1 (20%)	2035	43.964	15.914		
		Intrvl. 2 (40%)					
		Intrvl. 3 (60%)					
		Intrvl. 4 (80%)					
		End Trawl	2036	43.910	15.948	6	20
		Net on Deck	2036	43.907	15.950	↓	

Dark / Night Fishing
Mouth of Fish Harbor

Short trawl

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AmEC

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>		

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>

Nav Type

DGPS	<input checked="" type="checkbox"/>
GPS	<input type="checkbox"/>

Station ID FH-08

Vessel Name E.B.2

Date 10/13/14

Arrival Time 2045
(hh:mm)

Abandoned site? Station Fail Code

Y or N (if Y explain in comments)

Wind

Speed (kts) 0
Direction (N/S/E/W) 0

Swell

Period (s) 0
Height (ft) 0

Station Comments

FRESH Harbor - 08, Trawl B+G

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
5	Net Over	2055	33° 43.850	118° 15.957	6	20	
	Start Trawl	2056	43.907	15.901	↓		
	Intrvl. 1 (20%)	2058	43.933	15.872			
	Intrvl. 2 (40%)	2100	43.983	15.833	↓		
	Intrvl. 3 (60%)	2					
	Intrvl. 4 (80%)						
	End Trawl	2100	44.020	15.842			
Net on Deck	2103	43.999	15.862				
6	Net Over	2123	43.880	15.950	6	20	
	Start Trawl	2127	43.930	15.890	↓		
	Intrvl. 1 (20%)	2129	43.975	15.862			
	Intrvl. 2 (40%)	2131	44.015	15.893	↓		
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)	2132	43.958	15.948			
	End Trawl	2133	43.933	15.948			
Net on Deck	2134	43.920	15.942				

Swags? No snag, No tear
Swag Sust something
Snagged.
end early.

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID FH-08

Vessel Name E.B.2

Date 10/13/14

Arrival Time
 (hh:mm)

Abandoned site?
 Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts)

Direction (N/S/E/W)

Swell

Period (s) 0

Height (ft) 0

Station Comments

Fish Harbor,

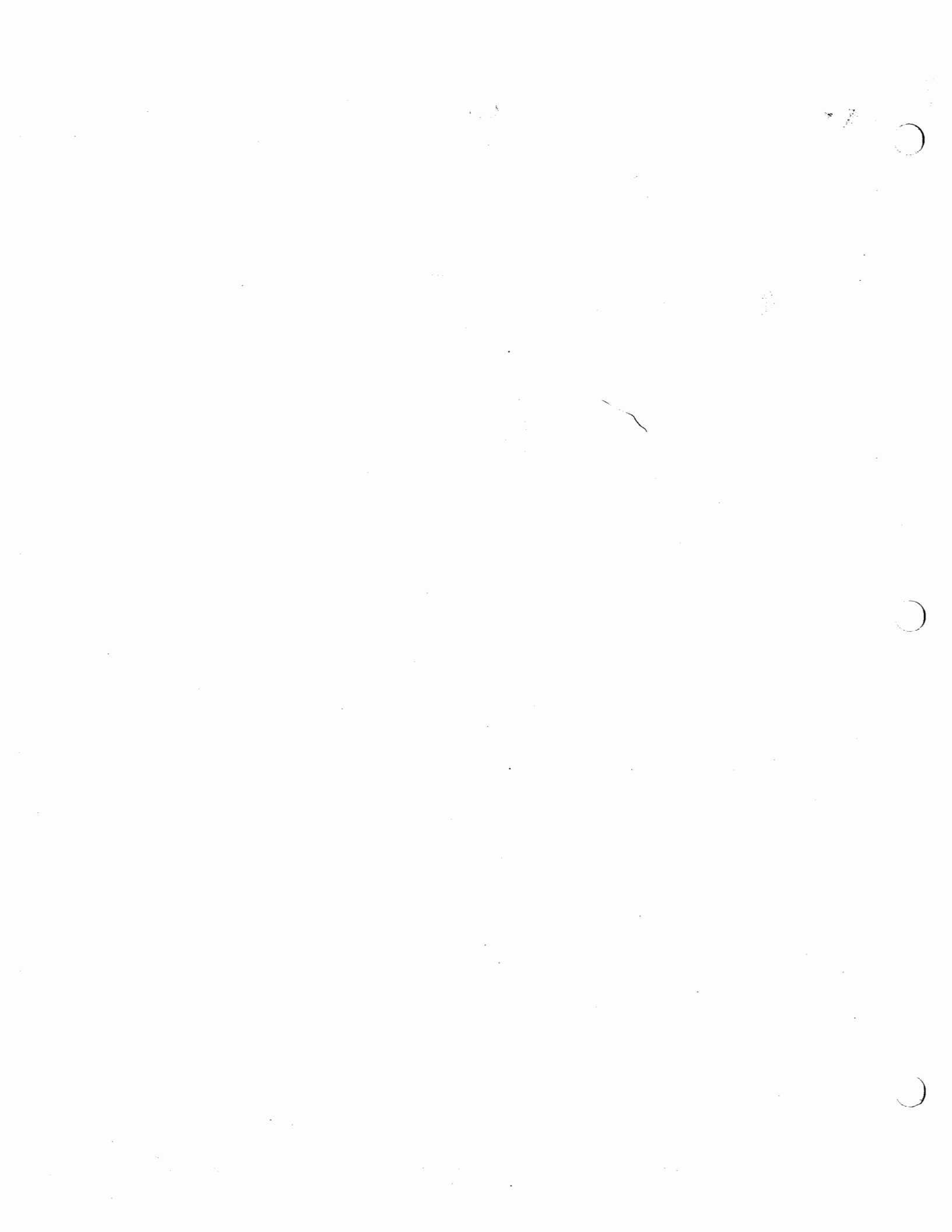
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
7	Net Over	2154	33°43.925	118°15.942	5.5	20	
	Start Trawl	2155	43.957	118°15.910	5	20	
	Intrvl. 1 (20%)	2157	44.016	15.867	6	20	
	Intrvl. 2 (40%)	2159	44.003	5.859			let out/new line.
	Intrvl. 3 (60%)	2203	43.906	15.956			
	Intrvl. 4 (80%)						
	End Trawl	2204	43.900	15.953			
	Net on Deck	2204	43.899	15.951			
8	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

wind in to doors + flip around to do a longer trawl.

trawl 7 lost
 trawl, head back out
 of FH @ 2200.
 2201.
 wash net.

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMPCL

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID FH-08

Vessel Name E.B.D.

Date 10/14/14

Arrival Time 1300
(hh:mm)
OSIR

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts) _____

Direction (N/S/E/W) _____

Swell

Period (s) 0

Height (ft) 0

target: 33.73413
 -118.26603

Station Comments

Trawl 8 is 1st of today!

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out (m)	Trawl Fail Code (1)
8	Net Over	1304	33° 43.847	118° 15.970	6	20m	
	Start Trawl	1306	43.905	15.903	6		
	Intrvl. 1 (20%)	1309	43.992	15.848			
	Intrvl. 2 (40%)	1310	44.021	15.867			
	Intrvl. 3 (60%)	1312	43.999	15.927			
	Intrvl. 4 (80%)	1314	43.959	15.945			
	End Trawl	1316	43.895	15.932			
	Net on Deck	1317	43.884	15.927			
	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

10 perch on that trawl!
 got all of our
 required fish.

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)

○

○

○

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

Station ID: FH-08 Arrival Date/Time: 10/13/14
1830

Site Acceptable for Trawl Sampling? Y or N

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

Is site accessible?	Y
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and ≥25pt salinity).	Y
Vessel has conducted pre-trawl survey? Site acceptable?	Y
Station DGPS coordinates (± 3 m) recorded?	Y
Station occupation form completed?	Y

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	Y
Weighing scales calibrated?	Y
Vessel passed through 100 m radius of station?	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y
Trawl remained within 10% of target depth?	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y
Fish obtained in trawl?	Y
All fish positively identified (for specimens collected as samples)?	Y
Standard length of all bony fish measured?	Y
Total biomass of each invertebrate group retained as samples recorded?	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING


3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	✓
Proper persons have signed and dated all COCs?	✓
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	✓

4. Sample Storage and Delivery:

Fish scales samples collected?	✓
Tissue samples stored immediately on ice and frozen asap?	✓
Completed COC is included in plastic bag in cooler?	✓

Additional Notes: _____

Signature of QA/QC Personnel:  Date/Time: 10/13/14

Print Name/Company: tye Hill CAMREC

2014 POLA/POLB Complex Food Web Model
 Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/13/14	FH-08T1	Lizardfish	11
		White Croaker	55
		Queenfish	10
		Barred Sandbass	6
		N. anchovy	3
		Tonguefish	2
		Sanddab	1
		CA Halibut	4
		Fantail Sole	1
	FH-08		
	T2		
		Scorpionfish	1
		Lizardfish	14
		Midshipman	7
		White Croaker	99
		Spotted Turbot	1
		Hornhead Sole	1
		White Perch	2
		Tonguefish	7
		Barred Sandbass	9
		Speckled Sanddab	1
		Fantail Sole	2
		N. anchovy	1
		Queenfish	125
	FH-08-B		
	T3		
		CA Halibut	9
		Lizardfish	15
		Queenfish	122
		White Croaker	95
		White Perch	5
		Tonguefish	8
		Speckled in midshipman	2
		Sand Bass	12
		N. anchovy	5
		Bay Goby	1
		Fantail Sole	1
	FH-08T4		
	T4		
		Scorpionfish	1
		Tonguefish	7
		N. anchovy	1
		Speckled in midshipman	1

Trawl
 1845 ↓

2014 POLA/POLB Complex Food Web Model
 Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/13/14	FH-08 T4	Banded Sandbass	6
		CA Halibut	6
		White Croaker	51
		White Perch	1
		Queenfish	53
FH-08 T5	Fantail Sole	1	
	CA Halibut	2	
	Queenfish	122	
	Scorpionfish	2	
	Speckled sanddab	1	
	Tonguefish	3	
	N. anchovy	3	
	Speckletin Midshipman	8	
	Lizardfish	6	
	Banded Sandbass	12	
	White Croaker	62	
	Shiner Surf Perch	1	
	White Surf Perch	3	
FH-08 T6	Fantail Sole	2	
	Kelp Bass	1	
	Queenfish	137	
	White Croaker	36	
	Sand Bass	26	
	Lizardfish	11	
	N. anchovy	4	
	Bay Gobby	2	
	Speckletin midshipman	10	
	Speckled Sanddab	1	
	CA Halibut	4	
	White Perch	2	
FH-08 T7	Sarcastic Fringehead	1	
	Spotted Kelpfish	1	
	Queenfish	92	
	White Croaker	62	
	Tonguefish	4	
	N. anchovy	6	
	White Perch	1	
	Lizardfish	7	
	Banded Sandbass	26	
	Spotted Turbot	1	
CA Halibut	7		

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: FH-08
 Date: 10/13/14

Fish Harbor
 Page 1 of 1
 Completed by: MH

140g/rep

Data from Short/Long Trawl @ >300 m Depth Yes No

Species	N=	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos Y/N
				Gross	Tare	Net	
1 CA	1	41	35	680	0	680	Y
2 Halibut	1	34	29	350	14	336	Y
3 Halibut	1	35	30	410	14	396	Y
4	1	34	30	405	14	391	Y
5	1	32	28	340	14	326	Y
6	1	31	27	305	14	291	Y
7	1	33	29	325	14	311	Y
8	1	29	25	230	14	216	Y
9	1	28	24	195	14	181	Y
10	2	1st: 26, 2nd: 23	1st: 22, 2nd: 20	190/135	14/14	176/121	Y
1 Ca	1	23	20	115	14	101	Y
2 Ca	1	19	17	75	14	61	Y
3 Halibut	1	23	20	130	14	116	Y
4	1	22	20	105	14	91	Y
5 (Archive)	1	23	20	115	14	101	Y
6							
7							
8							
9 all 5 in one pool/Bag							
10							
1 Perch	1	18	14	74	0	74	Y
2 Perch	2	13, 14	10, 11	27/35	0	27/35	Y
3 Perch	3	13, 11, 10	10, 9, 8	27/18/13	0	27/18/13	Y
4 (White surf perch)	3	14, 10, 11	10, 8, 8	27, 14, 17	0	27, 14, 17	Y
5 (White surf perch)	3	12, 12, 12	10, 9, 9	22, 21, 21	0	22, 21, 21	Y
6 (White surf perch)	3	13, 12, 11	10, 10, 8	25, 24, 17	0	25, 24, 17	Y
7 (60g min)	1	20	16	115	-14	101	Y
8 (60g min)	1	22	17	115	-14	101	Y
9 (60g min)	1	22	17	130	-14	116	Y
10 -WS-	1	22	17	125	-14	111	Y

2500g sale
 600g sale
 (14g per)

600g sale
 (14g per)

100g sale

16g sale
 9g

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

Comments:

FH-08 Trawl #8 10/14/14

White Perch Archive

n = 7

	(cm)		Wt (g)	Photo
	TL	SL		
1.	21	16	109	Y
2.	20	16	104	Y
3.	20	16	87	Y
4.	20	15	77	Y
5.	19	15	87	Y
6.	19	15	74	Y
7.	18	14	68	Y

FH-08 Trawl #7 10/13/14
Shiner Perch

n = 1

	TL (cm)	SL	Wt (g)	Photo
1	12	9	20	Y

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: FH-08

Page of

Date: 10/13/14

Completed by: KTB

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	White Croaker	2	25,17	21,14	187,85	-14	173,71	Y
2		1	24	21	195	-14	181	Y
3		2	23,18	20,16	185,90	-14	171,76	Y
4		2	22,18	19,16	170,90	-14	156,76	Y
5		2	23,20	20,17	170,120	-14	156,106	Y
6		2	22,21	19,18	165,125	-14	151,111	Y
7		2	21,21	19,18	150,120	-14	136,106	Y
8		2	22,20	19,17	155,120	-14	141,106	Y
9		2	21,22	18,18	140,140	-14	126,126	Y
10		2	21,19	18,16	150,110	-14	136,96	Y
1	WHITE CROAKER ARCHIVE	5	21,22,19,20,19	18,18,16,17,16	120,140,110,110,110	-14	106,126,96,96,96	Y
2	BARRED SAND BASS ARCHIVE	10	21,17,17,15,16	18,14,14,13,13	125,60,70,40,70	-14	111,46,56,26,56	Y
3	↓	↓	13,17,16,14,16	11,14,13,12,13	30,60,80,50,60	-14	16,46,66,36,46	Y
4								
5								
6								
7								
8								
9								
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.
 Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMFC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **03 (CS)**

Vessel Name **Early Bird**

Date **10/10/14**

Arrival Time **0957**
 (hh:mm)

Abandoned site?
 Y or N (If Y explain in comments) Station Fail Code

Wind

Speed (kts) **~ 2 mph**
 Direction (N/S/E/W) **W**

Swell

Period (s) **0**
 Height (ft) **0**

Station Comments

only one track of fish present. following abundance.

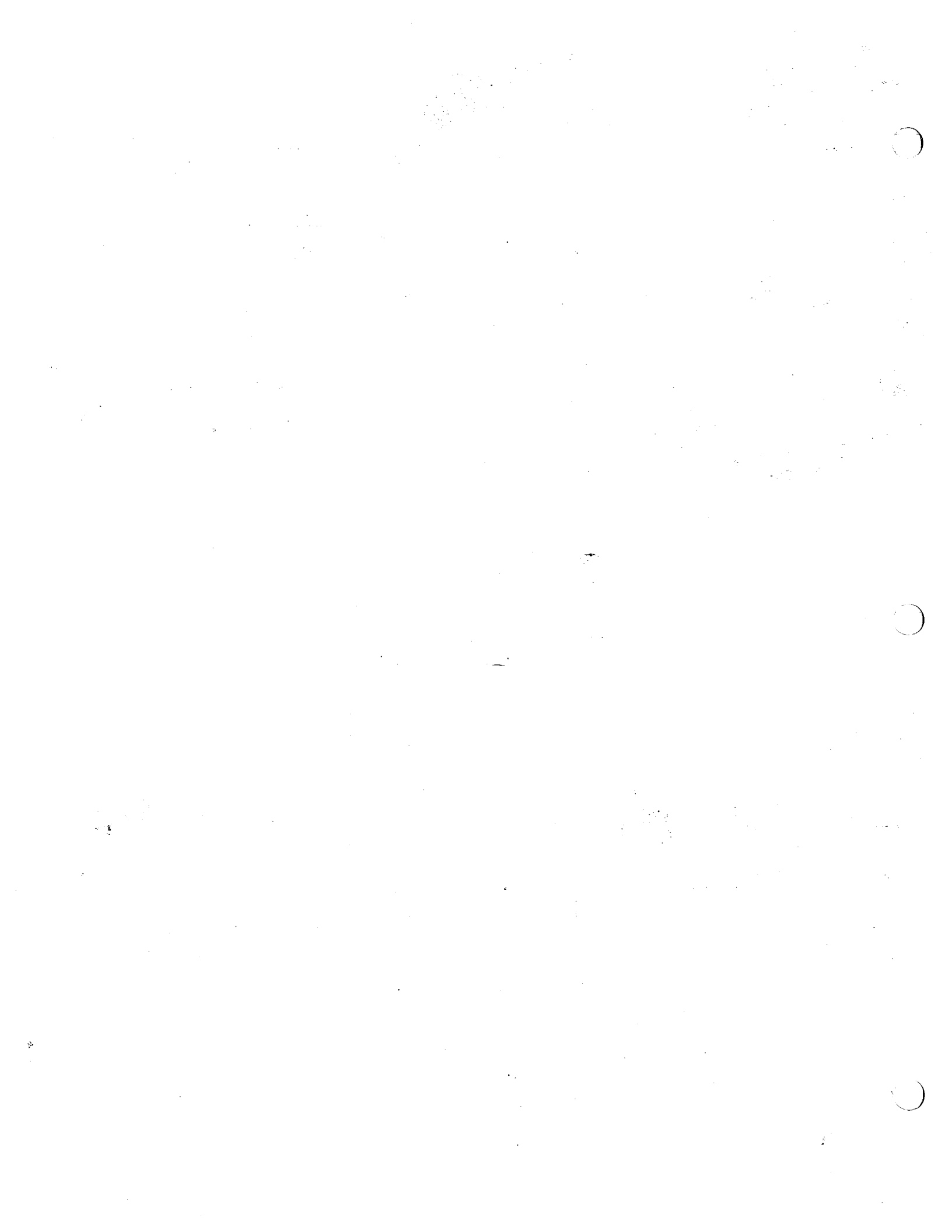
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
①	Net Over	0958	33°46.493	-118°14.773	8	0958	
	Start Trawl	0958	↓	↓	8	0958 32	
	Intrvl. 1 (20%)		?				
	Intrvl. 2 (40%)	1004	33°46.406	-118°14.908	7.9		
	Intrvl. 3 (60%)				1	later	
	Intrvl. 4 (80%)		33°46.298	-118°14.985	13.6	60	
	End Trawl	1010	33°46.185	-118°15.043			
Net on Deck	1010	33°46.207	-118°15.035	13.0			
	Net Over	1028	33°46.505	-118°14.725	8.2		
	Start Trawl	1028	33°46.490	-118°14.753	8.2	32	@ 0 min
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)	1032	33°46.418	-118°14.910	8.0	32	@ 5 min
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)	1035	33°46.361	-118°14.948	8.0	32	@ 3 min
	End Trawl	1039	33°46.225	-118°15.022	13.8	13.8	
	Net on Deck	1041	33°46.193	-118°15.044	13.8		

in electronic sheet
 ← end of trawl at 80%
 TRAWL ON DECK
 END TRAWL

-118°14.987
 33°46.290 depth cable
 @ 1:30 left 13.8 58

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Sea State

Nav Type

Station ID 003 CS

Vessel Name EARLY BIRD II

Clear
Overcast
Partly cloudy
Drizzle

Rain
Thunderstorm
Fog

Calm
Choppy
Rough

DGPS
GPS

Date 10/10/14

Arrival Time 0957
(hh:mm)

Abandoned site?
Y or N (if Y explain in comments)

Station Fail Code N/A

Wind

Speed (kts) 2

Direction (N/S/E/W) W

Swell

Period (s) 0

Height (ft) 0

Station Comments

soberan
Same as last
third trawl Station 3 in CS
Trawl 3 something very heavy in net
HUGE TIRE!

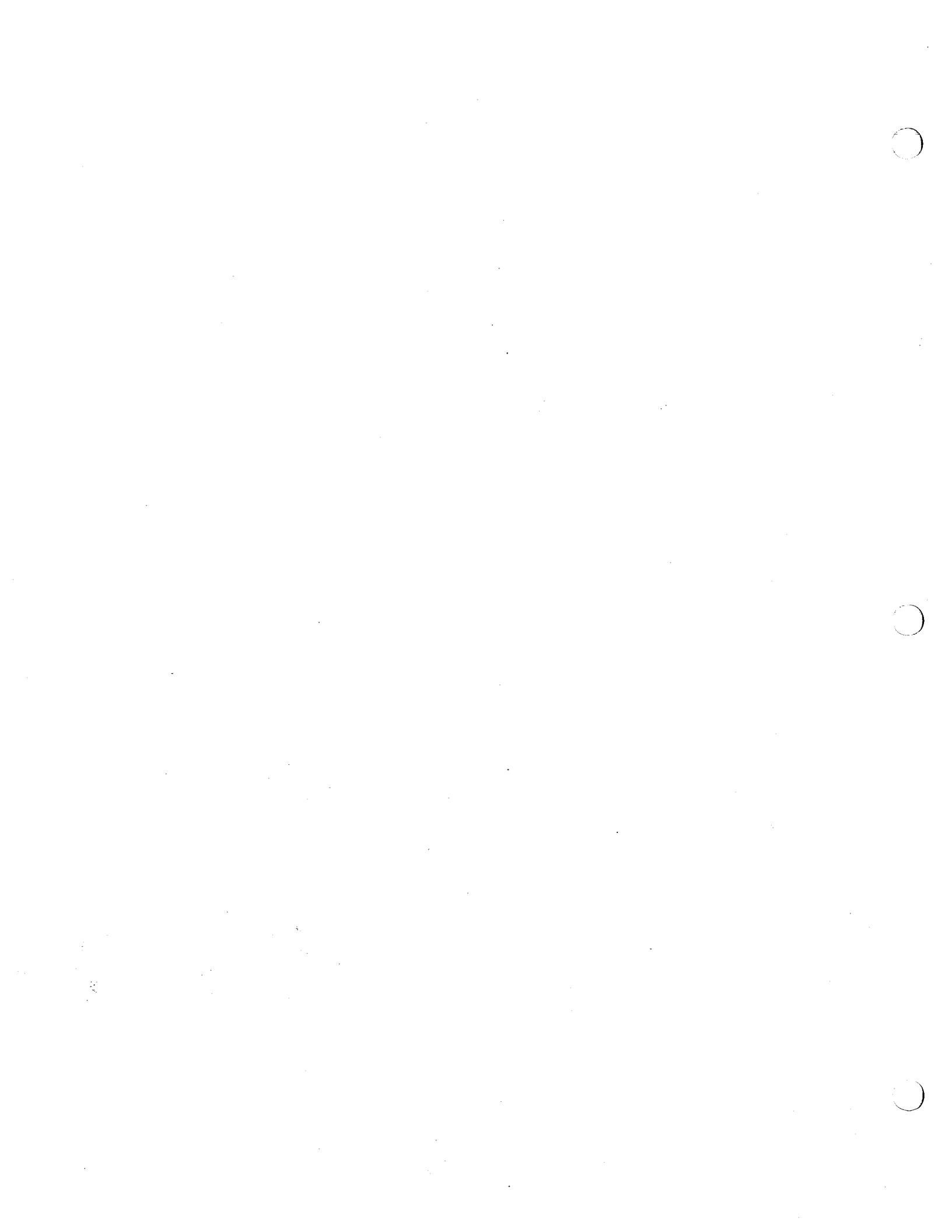
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
3	Net Over	1057	33°46.531	-118°14.660	8.0	-	
	Start Trawl	1059	33°46.509	-118°14.724	8.0	32	
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)	1104	33°46.445	-118°14.870	7.9	32	@5min
	Intrvl. 3 (60%)	1106	33°46.401	-118°14.951	7.9	32	@3min @3min
	Intrvl. 4 (80%)						
	End Trawl	1115	33°46.156	-118°15.080	14.4	32	+5min
	Net on Deck	1116	33°46.150	-118°15.077	14.4	32	
4	Net Over	1207	33°46.547	-118°14.623	8.0	-	
	Start Trawl	1208	33°46.488	-118°14.750	8.0	32	
	Intrvl. 1 (20%)	1210	33°46.440	-118°14.848	8.0	32	@7mins
	Intrvl. 2 (40%)	1210 1213	33°46.406	-118°14.904	8.0	32	@5mins
	Intrvl. 3 (60%)	1215	33°46.361	-118°14.950	8.0	32	@3mins
	Intrvl. 4 (80%)	1219	33°46.254	-118°15.006	13	52	@0mins (10 mins)
	End Trawl	1219	33°46.264	-118°15.006	13	52	
	Net on Deck	122	33°46.213	-118°15.031	13	-	

← electronic sheet ended @ 10min
electronic data sheet reset
at end of trawl. NO DATA
recorded electronically

@9mins depth dropt to 13'
@0mins (10 mins)-electronic form stop.
↑ time for next station.

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather
 Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State
 Calm
 Choppy
 Rough

Nav Type
 DGPS
 GPS

Station ID **C5(03)**

Vessel Name **EARLY BIRD**

Date **10/10/14**

Arrival Time **0958**
(hh:mm)

Abandoned site?
Y or N (if Y explain in comments) Station Fail Code

Wind
 Speed (kts) 2
 Direction (N/S/E/W) W

Swell
 Period (s) 0
 Height (ft) 0

Station Comments

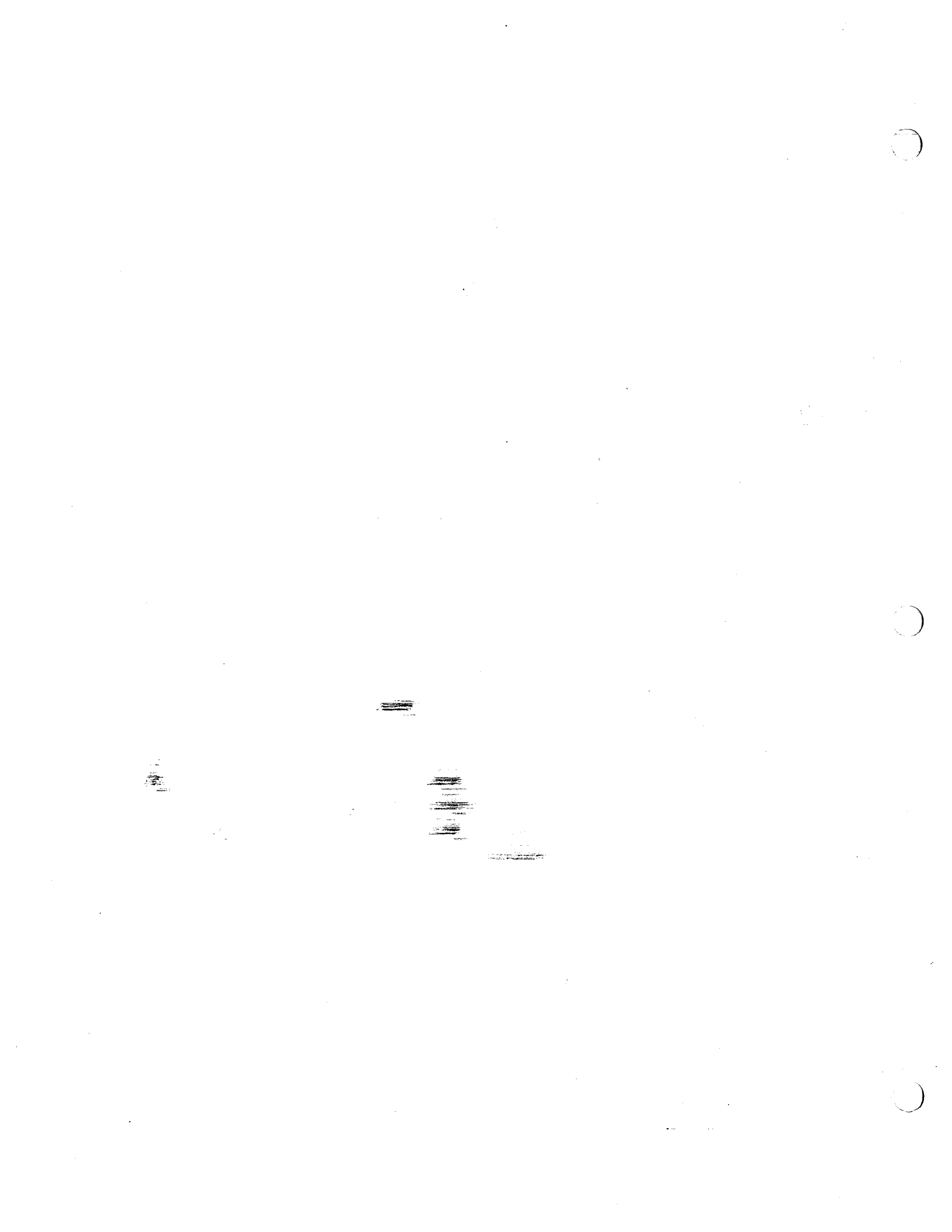
trawl time reset to 20 mins on tablet

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
5	Net Over	1237	33° 46.663	-118° 14.600	8	—	
	Start Trawl	1239	33° 46.477	-118° 14.769	8	32	
	Intrvl. 1 (20%)	1242	33° 46.426	-118° 14.859	8	32	@17min
	Intrvl. 2 (40%)	1244	33° 46.383	-118° 14.919	8	32	@15min
	Intrvl. 3 (60%)	1246	33° 46.328	-118° 14.960	8	32	@13min
	Intrvl. 4 (80%)	1248	33° 46.283	-118° 14.985	13	52	@10min
	End Trawl		33° 46.213	-118° 15.019	13	52	@ 11.5min
	Net on Deck		33° 46.177	-118° 15.048		—	
	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

depth change to 13 @ 9mins into trawl

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 03(CCS)

Page 1 of 1

Date: 10/10/14

Completed by: KG / BCS

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	Total Length (cm)	Std Length Size Class (cm)	Weight (kg) g			Photos	
				Gross	Tare	Net	Y/N	
1	white surf perch	25	20	-	-	160	Y	
2	↓	225	180	-	-	140	Y	
3		205	160	-	-	105	Y	
4		210	165	-	-	125	Y	
5		210	170	-	-	115	Y	
6		182	142	-	-	90	Y	
7		182	145	-	-	90	Y	
8		190	151	-	-	90	Y	
9		175	138	-	-	75	Y	
10		216	168	-	-	125	Y	
11		white surf perch	186 186	140 140	-	-	84	Y
12	↓	barred sandbass	235 235	200 200	-	-	150	Y
13		185, 210	155, 175	-	-	70, 110	Y	
14		202, 170	172, 145	-	-	110, 65	Y	
15		170, 192, 188	142, 142, 113	-	-	64, 89, 33	Y	
16		180, 180	152, 155	-	-	79, 78	Y	
17		160, 150, 158, 128	131, 125, 130, 105	-	-	46, 40, 48, 26	Y	
18		160, 150, 170	135, 126, 143	-	-	51, 41, 68	Y	
19		155, 150, 167	130, 126, 140	-	-	45, 45, 54	Y	
20		131, 143, 130, 107	118, 120, 115, 86	-	-	33, 37, 25, 14	Y	
21		BARRED SANDBASS						
22	↓	LIZARDFISH	203 203	175	-	-	50	
23		230	203	-	-	-	67	
24		230	200	-	-	-	64	
25		260	230	-	-	-	105	
26		266	230	-	-	-	110	
27								
28								
29								
30								

secondary

33 total collector

secondary

25 total collector

secondary

5 total collector

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

Comments:

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 03 (CS)

Page 1 of 1

Date: 10/10/14

Extra for Anchor QEA

Completed by: JR + CS

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
				Gross	Tare	Net	Y/N
1	White Croaker	25	22	200	-	200	✓
2	↓	26	22	225	-	225	✓
3	↓	27	24	255	-	255	✓
4							
5							
6							
7							
8							
9							
10							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

- 1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
- 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
- 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

- 2nd - white surfperch *Phanerodon furcatus*
- 2nd - topsmelt *Atherinops affinis*
- 2nd - Northern anchovy *Engraulis mordax*
- 2nd - California lizardfish *Synodus lucioceps*
- 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB - Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 03 (CS)

Page 1 of 1

Date: 10/10/14

Completed by: JR + CS

Data from Short/Long Trawl @ >300 m Depth Yes No

Trawl

	Species	n=	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	California Halibut	25	28	21, 24	115, 200	-	115, 200	✓
2		2	22, 24	18, 20	85, 135	-	85, 135	✓
3		1	34	29	365	-	365	✓
4		2	18, 31	15, 27	50, 295	-	50, 295	✓
5		2	21, 23	17, 20	75, 120	-	75, 120	✓
6		3	18, 20, 22	13, 17, 20	60, 75, 100	-	60, 75, 100	✓
7		11	see below	see below	see below			✓
8		2	26, 32	23, 29	160, 325	-	160, 325	✓
9		1	49	44	1250	-	1250	✓
10		1	43	38	870	-	870	✓
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

- 1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
- 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm)
- Juvenile Ca. halibut acceptable)
- 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

- 2nd - white surfperch *Phanerodon furcatus*
- 2nd - topsmelt *Atherinops affinis*
- 2nd - Northern anchovy *Engraulis mordax*
- 2nd - California lizardfish *Synodus lucioceps*
- 2nd - barred sand bass *Paralabrax nebulifer*

#7 TL
13, 13, 15, 14, 13
14, 16, 16, 15, 18, 18

SL
11, 11, 13, 12, 12
13, 13, 14, 13, 16, 16

WT (g)
25, 25, 35, 28, 20
31, 34, 44, 48, 62, 57

DUPLICATE! THIS FORM HAS BEEN REPRODUCED.

POLA/POLB - Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 03 (CS)

Page 1 of 1

Date: 10/10/14

Completed by: Kimberly E. Chris Stransky

Data from Short/Long Trawl @ >300 m Depth Yes No

Trawl #	Species	N	Sta Total Length (cm)	Sta Length Size Class (cm)	Weight (kg) g			Photos Y/N
					Gross	Tare	Net	
1	white surf perch (kg)	1	200	25	-	-	160	Y
2	"	1	180	25	-	-	140	Y
3	"	1	160	205	-	-	105	Y
4	"	1	165	210	-	-	125	Y
5	"	1	170	210	-	-	115	Y
6	"	1	142	182	-	-	90	Y
7	"	1	145	182	-	-	90	Y
8	"	1	151	190	-	-	90	Y
9	"	1	138	175	-	-	75	Y
10	"	1	168	215	-	-	125	Y
11	barred sand bass	1	140	186	-	-	84	Y
2	"	2	175, 155	210, 195	-	-	110, 70	Y
3	"	2	172, 145	202, 170	-	-	110, 65	Y
4	"	3	142, 162, 113	170, 192, 138	-	-	66, 89, 33	Y
5	"	2	152, 155	180, 180	-	-	79, 78	Y
6	"	4	181, 125, 130, 105	160, 150, 158	128	-	46, 40, 48, 26	Y
7	"	3	135, 124, 143	160, 150, 170	-	-	51, 41, 68	Y
8	"	3	130, 126, 140	155, 150, 161	-	-	45, 45, 54	Y
9	"	4	115, 120, 115, 86	137, 143, 130, 107	-	-	33, 37, 25, 14	Y
10	total weight							
1	LIZARD FISH							
2	230, 267							
3	230							
4	230							
5	230							
6	230, 238							
7	230							
8	TOTAL WEIGHT							
9	LIZARD FISH	4	175, 203	203, 230	50, 67	64	105	110
10			200, 230, 230	230, 260				

33 Total Collect

25 Total Collect

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

ⓔ 230, 260

2014 POLA/POLB Complex Food Web Model
 Bycatch Fish Collection Tally List

Demersal

Date	Station ID	Species	Number Collec.
10/10	03 T1	diamond turbot	3
	03 T1	bat ray	1
	03 T1	giant kelp fish	1
	03 T1	barred sandbass *	8
	03 T1	ca. Halibot **	5
	03 T2	bat Bat ray	1
	03 T2	diamond turbot	4
	03 T2	lizard fish	2
	03 T2	white surf perch *	1
	03 T2	ca. Halibot *	1
	03 T2	barred sandbass * ✓	6
	03 T3	lizard fish	
	03 T3	ca. white halibot *	3
	03 T3	white perch *	3
	03 T3	diamond turbot	1
	03 T3	barred sandbass *	3
	03 T4	white croaker *	1
	03 T4	ROUND STRINGRAY :-	1
	03 T4	lizard fish	1
	03 T4	white perch *	2
	03 T4	ca. Halibot *	11
	03 T4	diamond turbot	7
	03 T4	barred sandbass *	8
	03 T1	white perch	10
	03 T5	OCTOPUS!!!	2
	03 T5	White Perch	9
	03 T5	Diamond Turbot	5
	03 T5	CA Halibot	8
	03 T5	Kelp fish, Giant	1
	03 T5	Lizard fish	2
	03 T5	Barred Sandbass	2

Sx8
P x5
Sx1
P x1
Sx6
P x3
Sx3
Sx3
P x P (1)
Sx2
P x (20)
Sx8 (25)
Sx10

T = trawl

03-65?

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

Station ID: FB-85 Arrival Date/Time: 10/10/14

Site Acceptable for Trawl Sampling? Y or N 0930

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

Is site accessible?	yes 10/10
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and ≥25pt salinity).	depth 10/10
Vessel has conducted pre-trawl survey? Site acceptable?	yes
Station DGPS coordinates (± 3 m) recorded?	yes 10/10
Station occupation form completed?	yes 10/10

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	10/10 Y
Weighing scales calibrated?	Y
Vessel passed through 100 m radius of station?	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y
Trawl remained within 10% of target depth?	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y
Fish obtained in trawl?	Y
All fish positively identified (for specimens collected as samples)?	Y
Standard length of all bony fish measured?	Y
Total biomass of each invertebrate group retained as samples recorded?	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y

In freezer

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	
Proper persons have signed and dated all COCs?	
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	

4. Sample Storage and Delivery:

Fish scales samples collected?	✓
Tissue samples stored immediately on ice and frozen asap?	✓
Completed COC is included in plastic bag in cooler?	

Additional Notes: all samples collected

Signature of QA/QC Personnel: [Signature] Date/Time: 10/10/14 1600

Print Name/Company: AMEC

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Clear

Overcast

Partly cloudy

Drizzle

Rain

Thunderstorm

Fog

Sea State

Calm

Choppy

Rough

Nav Type

DGPS

GPS

Station ID 07 (IAS)

Date 10/11/14

Vessel Name EARLY BIRD

Arrival Time 0758
(hh:mm)

Abandoned site?
Y or N (If Y explain in comments)

Station Fail Code NONE

Wind

Speed (kts) 1.5

Direction (N/S/E/W) W

Swell

Period (s) 0

Height (ft) 0

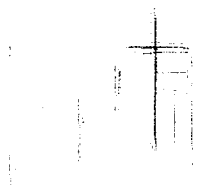
Station Comments

no electronic data
trawl 1 or 2 - GPS never
kicked in

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
1	Net Over	0758	33°44.395	-118°14.831	4	-	
	Start Trawl	0759	33°44.380	-118°14.761	4	18	ended @ 2.5 mins into trawl b/c of obstruction
	Intrvl. 1 (20%)		44.355	14.099	4	18	
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
Net on Deck							
2	Net Over	0809	33°44.508	-118°14.839	4.5	-	
	Start Trawl	0811	33°44.547	-118°14.811	4.5	18	
	Intrvl. 1 (20%)	0813	33°44.987	-118°14.788	4.5	18	@ 2:30 min into trawl
	Intrvl. 2 (40%)	0815	33°44.410	-118°14.759	4.5	18	@ 5:00 min
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl	0818	33°44.358	-118°14.720	4.5	18	@ ~ 7.5 min into trawl
Net on Deck	0819	33°44.357	-118°14.699	4.5	-		

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC Weather Clear Rain Sea State Calm X Chippy Rough Nav Type DGPS GPS Station ID 07CIAJ

Vessel Name earlybird II Overcast Thunderstorm Fog Abandoned site? Station Fail Code

Arrival Time 0758 (hh:mm) Drizzle Y or N (If Y explain in comments)

Wind Speed (kts) 1.5 Swell Period (s) 0

Direction (N/S/E/W) W Height (ft) 0

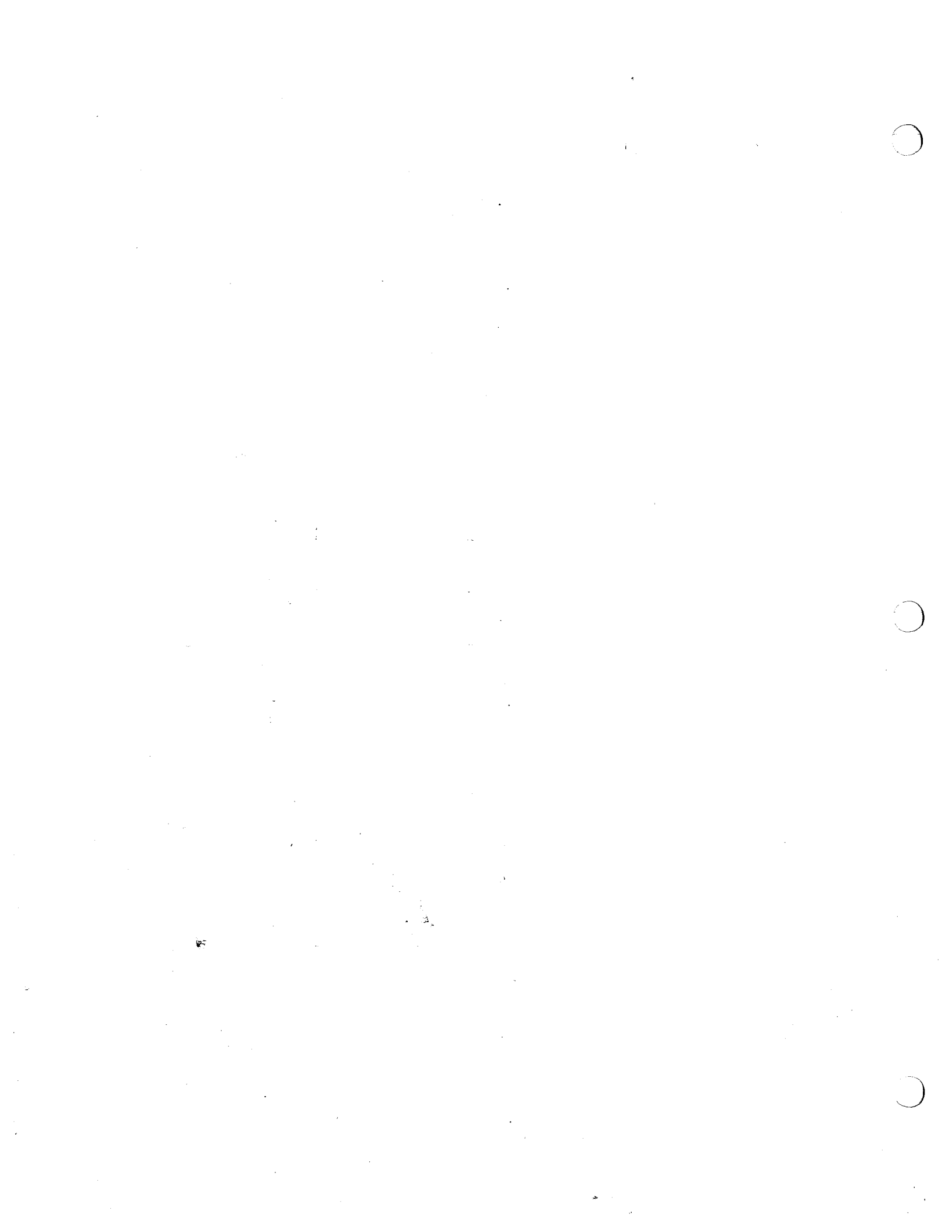
Station Comments

gps / data recorded on tablet

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
3	Net Over	0828	33° 44.657	-118° 14.759	5	-	
	Start Trawl	0830	33° 44.051	-118° 14.771	5	18	
	Intrvl. 1 (20%)	0833	33° 44.580	-118° 14.743	5	18	@ 2:30 min into trawl
	Intrvl. 2 (40%)	08	33° 44.497	-118° 14.716	5	18	@ 5 min into trawl
	Intrvl. 3 (60%)	0838	33° 44.411	-118° 14.693	5	18	@ 7:30 min into trawl
	Intrvl. 4 (80%)						
	End Trawl	0838	33° 44.411	-118° 14.693	5	18	end @ 7:30 into trawl
Net on Deck	0840	33° 44.382	-118° 14.689				
4	Net Over	0848	33° 44.360	-118° 14.690	5	-	
	Start Trawl	0854	33° 44.434	-118° 14.688	5.5	20	
	Intrvl. 1 (20%)	0856	33° 44.510	-118° 14.718	5.5	20	@ 2:30 into
	Intrvl. 2 (40%)	0859	33° 44.587	-118° 14.740	5.5	20	@ 5:00 into
	Intrvl. 3 (60%)	0901	33° 44.661	-118° 14.764	5.5	20	@ 7:30 into
	Intrvl. 4 (80%)						
	End Trawl	0902	33° 44.697	-118° 14.770	5.5	20	end @ 7:30 into trawl
Net on Deck	0900	33° 44.713	-118° 14.786	5.5	-		

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/11/14	07T1	diamond turbot	1
	07T1	ca. halibut	4
	07T1	guitar fish	1
	07T1	spotted turbot	2
	07T1	lizard fish	1
	07T1	anchovies (northern)	~20
	07T2	barred sandbass	4
	07T2	halibut	3
	07T2	lizard fish	3
	07T2	queen fish	1
	07T2	giant kelp fish	1
	07T2	guitar fish	1
	07T2	spotted turbot	1
	07T2	white perch	1
	07T2	white croaker	2
	07T3	skate	1
	07T3	butterfly ray	1
	07T3	giant kelp fish	1
	07T3	spotted turbot	1
	07T3	white croaker	6
	07T3	lizard fish	5
	07T3	white perch	2
	07T3	queen fish	4
	07T3	sandbass	12
	07T3	halibut	16
	07T4	guitar fish	2
	07T4	lobster	10
	07T4	ca. halibut	13
	07T4	anchovies (northern)	10
	07T4	round ray	1
	07T4	diamond turbot	1
	07T4	lizard fish	3
	07T4	octopus	20
	07T4	giant kelp fish	2
	07T4	queen fish	68
	07T4	white croaker	11
	07T4	spotted turbot	3
	07T4	kelpbass	5

P. Unneeded

T = trawl

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 07 (IA)

Page 1 of 1

Date: 10/1/14

Completed by: KGI RS/CCS/JR

Data from Short/Long Trawl @ >300 m Depth Yes No

(A)

Species	n	Total Length (cm)	Std Length Size Class (cm)	Weight (kg) g			Photos
				Gross	Tare	Net	Y/N
white surf perch	1	26	26	-	-	170	Y
	2	20	16	-	-	100	Y
	3	21	18	-	-	130	Y
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	n of fish						
White Croaker	1	27	23			250	Y
	2	22, 19	19, 16			140, 85	Y
	1	25	22			195	✓
	2	23, 22	20, 20			160, 135	✓
	2	21, 16	18, 14			110, 55	✓
	3	18, 18, 18	15, 15, 15			66, 65, 66	✓
	2	22, 18	19, 15			140, 80	✓
	2	20, 21	18, 19			110, 120	✓
	2	21, 20	18, 17			125, 110	✓
	2	22, 17	20, 15			170, 65	

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.
 Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

Station ID: 07 IA

Arrival Date/Time: 10/11/14 0758

Site Acceptable for Trawl Sampling? Y or N

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

Is site accessible?	Y
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and >25pt salinity).	Y
Vessel has conducted pre-trawl survey? Site acceptable?	Y
Station DGPS coordinates (± 3 m) recorded?	Y
Station occupation form completed?	Y

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	Y
Weighing scales calibrated?	Y
Vessel passed through 100 m radius of station?	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y
Trawl remained within 10% of target depth?	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y
Fish obtained in trawl?	Y
All fish positively identified (for specimens collected as samples)?	Y
Standard length of all bony fish measured?	Y
Total biomass of each invertebrate group retained as samples recorded?	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	
Proper persons have signed and dated all COCs?	
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	

4. Sample Storage and Delivery:

Fish scales samples collected?	✓
Tissue samples stored immediately on ice and frozen asap?	✓
Completed COC is included in plastic bag in cooler?	

Additional Notes: all samples collected

Signature of QA/QC Personnel: [Signature] Date/Time: 10/11/14 1600

Print Name/Company: AMEC

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code Weather Clear Rain
 Vessel Name Overcast Thunderstorm
 Arrival Time (hh:mm) Partly cloudy Fog
 Drizzle
 Sea State Calm X Chippy Rough
 Nav Type DGPS X GPS
 Station ID
 Date
 Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind Speed (kts)
 Direction (N/S/E/W)
 Swell Period (s)
 Height (ft)

Station Comments

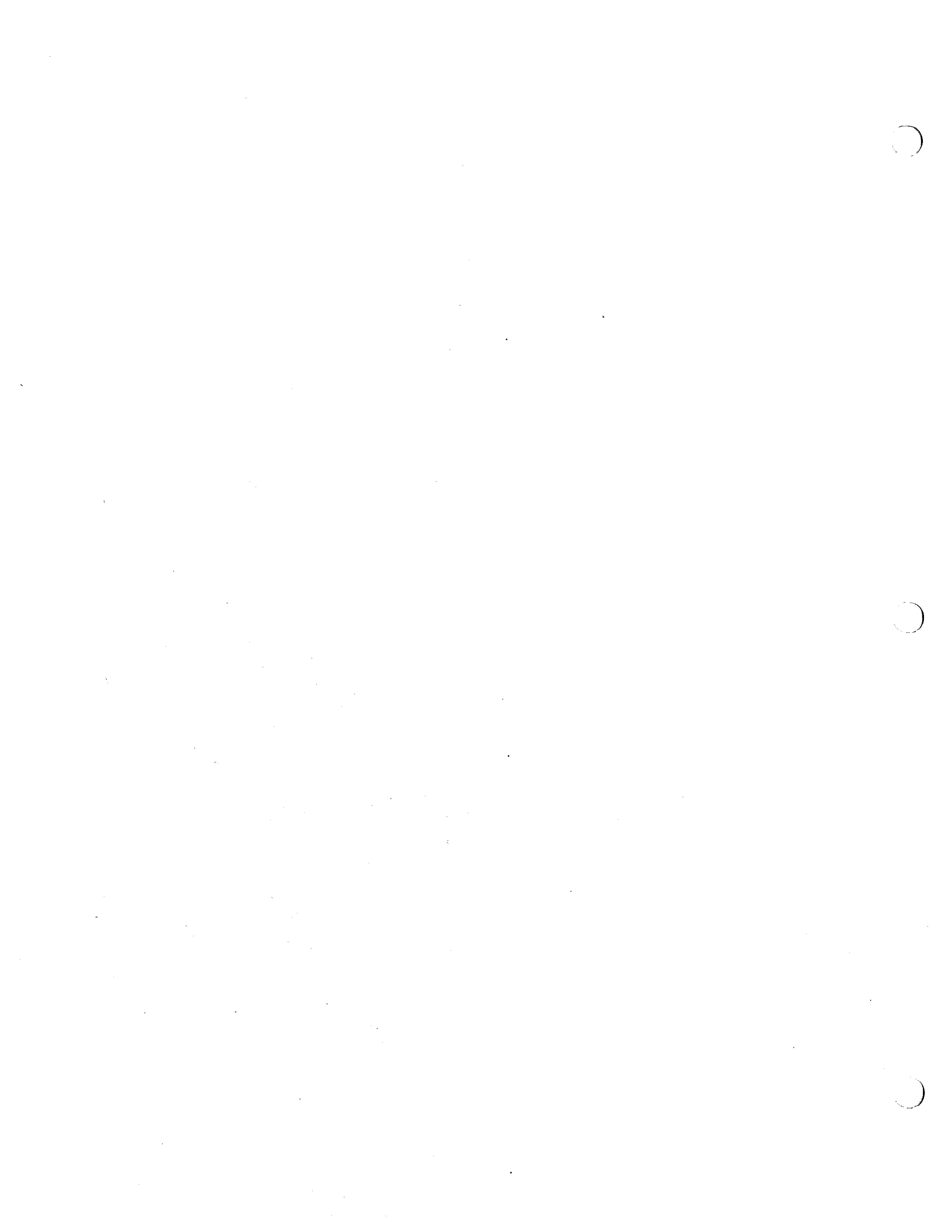
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
1	Net Over	1031	33°42.882	-118°15.255	24	-	
	Start Trawl	1036	33°42.974	-118°15.360	22	100	
	Intrvl. 1 (20%)	1038	33°43.034	-118°15.425	24	100	@ 2:30 into trawl
	Intrvl. 2 (40%)	1040	33°43.085	-118°15.491	24	100	@ 5:00 into trawl
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl	1042	33°43.117	-118°15.645	24	100	
	Net on Deck	1044	33°43.143	-118°15.574	24	-	
2	Net Over	1102	33°42.576	-118°15.654	6	-	
	Start Trawl	1104	33°42.587	-118°15.709	6	24	
	Intrvl. 1 (20%)	1106	33°42.577	-118°15.805	6	24	@ 2:30 into trawl
	Intrvl. 2 (40%)	1108	33°42.504	-118°15.900	6	24	@ 5:00 into trawl
	Intrvl. 3 (60%)	1110	33°42.552	-118°15.976	6	24	@ 7:30 into trawl
	Intrvl. 4 (80%)						
	End Trawl	1113	32°42.520	-118°16.052	6	24	
	Net on Deck	1119	33°42.506	-118°16.073	6	-	

data not saved to user error
 trawl tablet (ugh!)
 tons of shrimp in trawl

lots of kelp in 2nd trawl

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID 04/06

Vessel Name Edw 14 Bnd

Date 10/11/14

Arrival Time 1030
 (hh:mm)

Abandoned site?

Station Fail Code

Y or N (If Y explain in comments)

Wind

Speed (kts) 0.5

Direction (N/S/E/W) W

Swell

Period (s) 0

Height (ft) 0

Station Comments

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
3	Net Over	1138	33°42.086	-118°16.792	5	—	
	Start Trawl	1139	33°42.060	-118°16.734	5	20	
	Intrvl. 1 (20%)	1141	33°42.024	-118°16.653	5	20	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1143	33°42.575	-118°16.585	5	20	@ 5:00 min
	Intrvl. 3 (60%)	1145	33°42.538	-118°16.493	5	20	@ 7:30 min
	Intrvl. 4 (80%)						
	End Trawl	1147	33°42.529	-118°16.455	5	20	
	Net on Deck	1148	33°42.524	-118°16.429	5	—	
4	Net Over	1202	33°42.705	-118°16.816	4.5	—	
	Start Trawl	1204	33°42.694	-118°16.733	4.5	20	
	Intrvl. 1 (20%)	1207	33°42.645	-118°16.668	4.5	20	@ 2:30 min
	Intrvl. 2 (40%)	1209	33°42.592	-118°16.578	4.5	20	@ 5:00 min
	Intrvl. 3 (60%)	1212	33°42.541	-118°16.498	4.5	20	@ 7:30 min
	Intrvl. 4 (80%)						
	End Trawl	1214	33°42.513	-118°16.412	4.5	20	
	Net on Deck	1216	33°42.509	-118°16.386	4.5	—	

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)

15

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID

Vessel Name

Date

Arrival Time
(hh:mm)

Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind

Speed (kts) _____
 Direction (N/S/E/W) _____

Swell

Period (s)
 Height (ft)

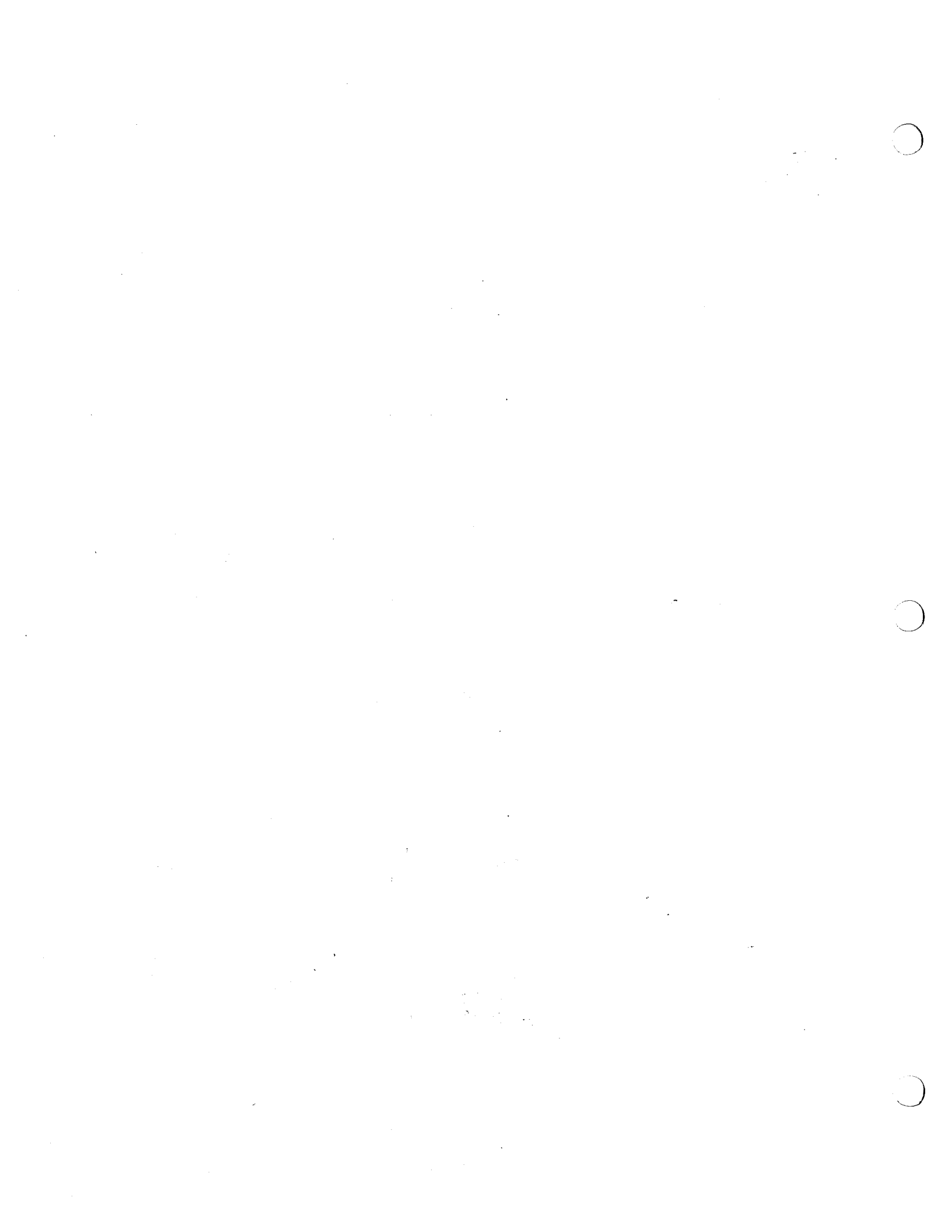
Station Comments

trawl 5 not on tablet/
 electronic log

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
5	Net Over	1327	33° 42.570	-118° 15.910	5.6	—	
	Start Trawl	1328	33° 42.570	-118° 15.910	5.6	20	
	Intrvl. 1 (20%)	1330	33° 42.608	-118° 15.849	5.6	20	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1332	33° 42.596	-118° 15.784	5.6	20	@ 5:00 min into trawl
	Intrvl. 3 (60%)	1334	33° 42.603	-118° 15.738	5.6	20	@ 7:30 min into trawl
	Intrvl. 4 (80%)						
	End Trawl	1334	33° 42.603	-118° 15.738	5.6	20	
	Net on Deck	1334	33° 42.606	-118° 15.722	5.6	20	
6	Net Over	1353	33° 42.567	-118° 15.611	6.5	24	
	Start Trawl	1354	33° 42.558	-118° 15.667	6.5	24	
	Intrvl. 1 (20%)	1357	33° 42.585	-118° 15.744	6.5	24	@ 2:30 min
	Intrvl. 2 (40%)	1359	33° 42.578	-118° 15.831	6.5	24	@ 5 min
	Intrvl. 3 (60%)	1402	33° 42.573	-118° 15.937	6.5	24	@ 7:30 min
	Intrvl. 4 (80%)	1404	33° 42.546	-118° 16.049	6.5	24	@ 10 min
	End Trawl	14	33° 42.520	-118° 16.095	6.5	24	
	Net on Deck	14	33° 42.509	-118° 16.101	6.5	—	

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID 04 (04)

Vessel Name EB II

Date 10/11/14

Arrival Time 1030
(hh:mm)

Abandoned site? Station Fail Code
Y or N (if Y explain in comments)

Wind

Speed (kts) 5-10 gusty
 Direction (N/S/E/W) W

Swell

Period (s) 0
 Height (ft) 0

Station Comments

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
7	Net Over	1436	33°42.557	-118°15.661	5	—	
	Start Trawl	1437	33°42.562	-118°15.704	5	20	
	Intrvl. 1 (20%)	1439	33°42.556	-118°15.784	5	20	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1442	33°42.553	-118°15.876	5	20	@ 5:00 min into trawl
	Intrvl. 3 (60%)	1444	33°42.544	-118°15.976	5	20	@ 7.5 min into trawl
	Intrvl. 4 (80%)	1447	33°42.514	-118°15.009	5	20	@ 10 min into trawl
	End Trawl	1448	33°42.495	-118°15.089	5	20	
	Net on Deck	1448	33°42.480	-118°16.078	5	—	

	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

Logged on new sheet

1 big new day

Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



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STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **OA(06)**

Vessel Name **EARLY BIRD**

Date **10/12/14**

Arrival Time **0730**
 (hh:mm)

Abandoned site? Station Fail Code

Y or N (If Y explain in comments)

Wind

Speed (kts) **0**

Direction (N/S/E/W)

Swell

Period (s) **0**

Height (ft) **0**

Station Comments

continuing station 06 on 10/12 to collect additional perch

TRAWL EVENTS

wind plus @ 0750 to 25 mph W

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
8	Net Over	0740	33° 42.668	-118° 16.723	4	-	
	Start Trawl	0741	33° 42.660	-118° 16.767	4	20	
	Intrvl. 1 (20%)	0743	33° 42.605	-118° 16.618	4	20	@ 2:30 min into trawl
	Intrvl. 2 (40%)	0746	33° 42.566	-118° 16.544	4	20	@ 5:00 min
	Intrvl. 3 (60%)	0748	33° 42.532	-118° 16.468	4	20	@ 7:30 min
	Intrvl. 4 (80%)						
	End Trawl	0749	33° 42.519	-118° 16.437	4	20	
	Net on Deck	0750	33° 42.505	-118° 16.412	4	-	
9	Net Over	0802	33° 42.588	-118° 16.756	5	-	
	Start Trawl	0803	33° 42.571	-118° 16.853	5	20	
	Intrvl. 1 (20%)	0806	33° 42.556	-118° 16.959	5	20	@ 2:30
	Intrvl. 2 (40%)	0809	33° 42.543	-118° 16.064	5	20	@ 5:00
	Intrvl. 3 (60%)						@ 7:30
	Intrvl. 4 (80%)						
	End Trawl	0811	33° 42.513	-118° 16.139	5	20	
	Net on Deck	0812	33° 42.510	-118° 16.149	5	-	

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC Weather Clear Rain
 Vessel Name early bird II Overcast Thunderstorm
 Arrival Time 0730 Partly cloudy Fog
 (hh:mm) Drizzle

Sea State Calm X
 Choppy
 Rough

Nav Type DGPS X
 GPS

Station ID 0A(06)
 Date 10/12/14

Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind Speed (kts) 2
 Direction (N/S/E/W) W

Swell Period (s) 0
 Height (ft) 0

Station Comments

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
10	Net Over	0829	33°42.469	-118°15.703	5.5	—	
	Start Trawl	0831	33°42.445	-118°15.775	5.5	22	
	Intrvl. 1 (20%)	0833	33°42.629	-118°15.862	5.5	22	@ 2:30 min into trawl
	Intrvl. 2 (40%)	0836	33°42.594	-118°15.953	5.5	22	@ 5:00
	Intrvl. 3 (60%)	0840	33°42.461	-118°16.021	5.5	22	@ 7:30
	Intrvl. 4 (80%)						
	End Trawl	0841	33°42.440	-118°16.035	5.5	22	
	Net on Deck	0843	33°42.419	-118°16.0102	5.5	—	
	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

next
 towl
 (11)
 on
 10/13/14
 P-2¹

Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

0A06

LA Outer Harbor
POLA/POLB Food Web Study

Agency Code FRUG

Weather

Clear Rain
 Overcast Thunderstorm
 Partly cloudy Fog
 Drizzle

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID 0A-06

Vessel Name S.V.

Date 10/13/14

Arrival Time 1445
(hh:mm)

Abandoned site?
Y or N (if Y explain in comments)

Station Fail Code N/A

Inside brackets

Wind

Speed (kts) _____
 Direction (N/S/E/W) _____

Swell

Period (s) 0
 Height (ft) 0

Station Comments

*Bump of log? ~1500.
 mid-trawl. Food web-06*

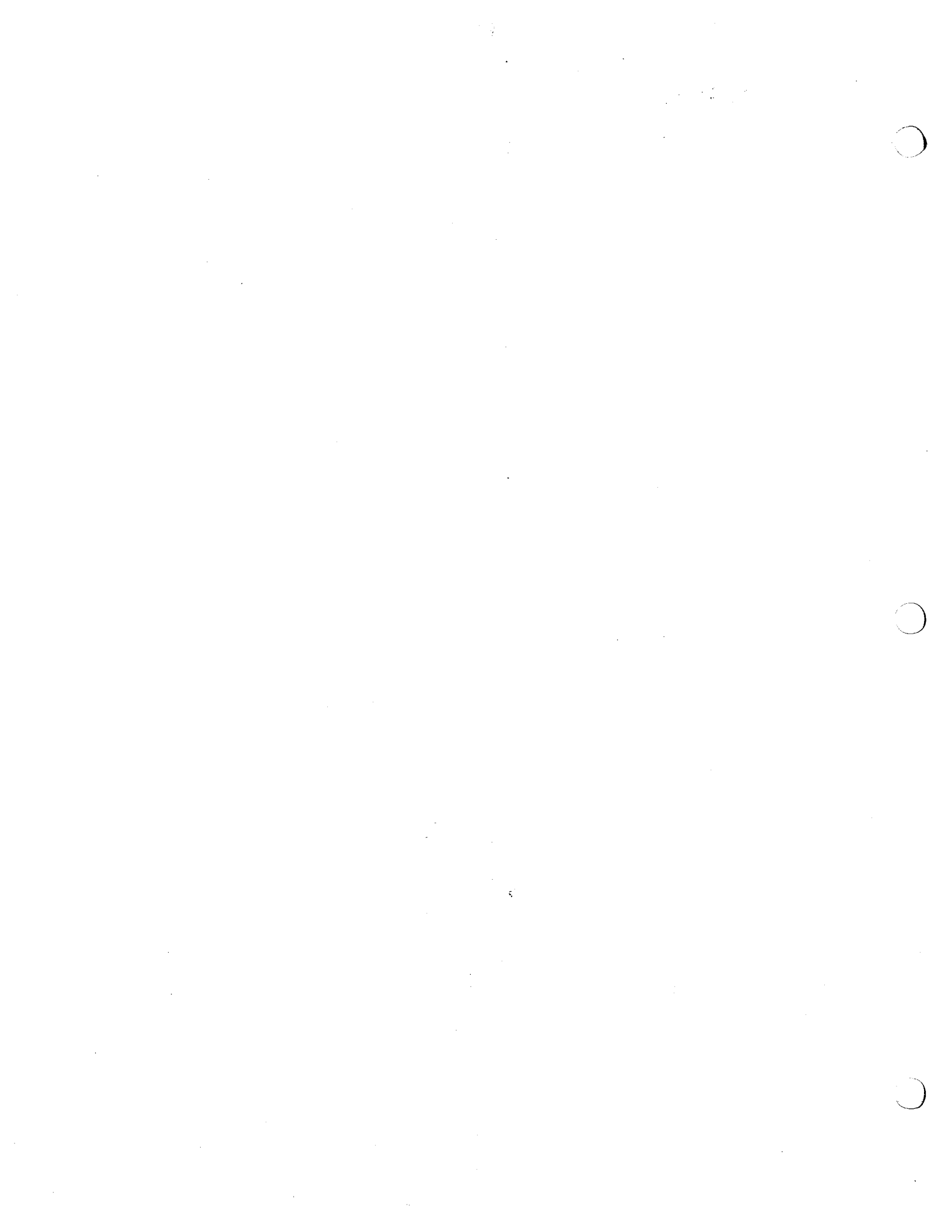
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out (m)	Trawl Fail Code (1)
11	Net Over	1455	32° 42.679	-118° 16.789	4.7	16	
	Start Trawl	1456	42.654	16.780			
	Intrvl. 1 (20%)	1500	42.591	16.615			
	Intrvl. 2 (40%)	1305	42.522	16.456			
	Intrvl. 3 (60%)	1315	42.508	16.439			
	Intrvl. 4 (80%)						
	End Trawl	1506	42.487	16.399	1		
Net on Deck							
			33° 42.689	-118° 16.795			
12	Net Over/ont	1524	33° 42.581	-118° 16.582	4		
	Start Trawl ?	1526	42.666	16.700	4.6(5)	18	Start trawl lat/long
	Intrvl. 1 (20%)	1527	42.643	16.664			
	Intrvl. 2 (40%)	1529	42.605	16.588			
	Intrvl. 3 (60%)	1531	42.560	16.485			
	Intrvl. 4 (80%)	1533	42.539	16.446			
	End Trawl	1535	42.496	16.372			
Net on Deck							

No tablet data for trawl #11. Tablet problem. (continued to number trawls from 10/12/14)

*(over only)
 D.B. entry erroneously
 Food web 01.
 need to change to 06.*

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEL

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID OA-06

Date 10/13/14

Vessel Name S.V.

Arrival Time (hh:mm)

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts) 05

Direction (N/NE/EW) 0

Swell

Period (s) 0

Height (ft) 0

Station Comments

Outer Harbor - LA, start @ Caballo Beach → night gear

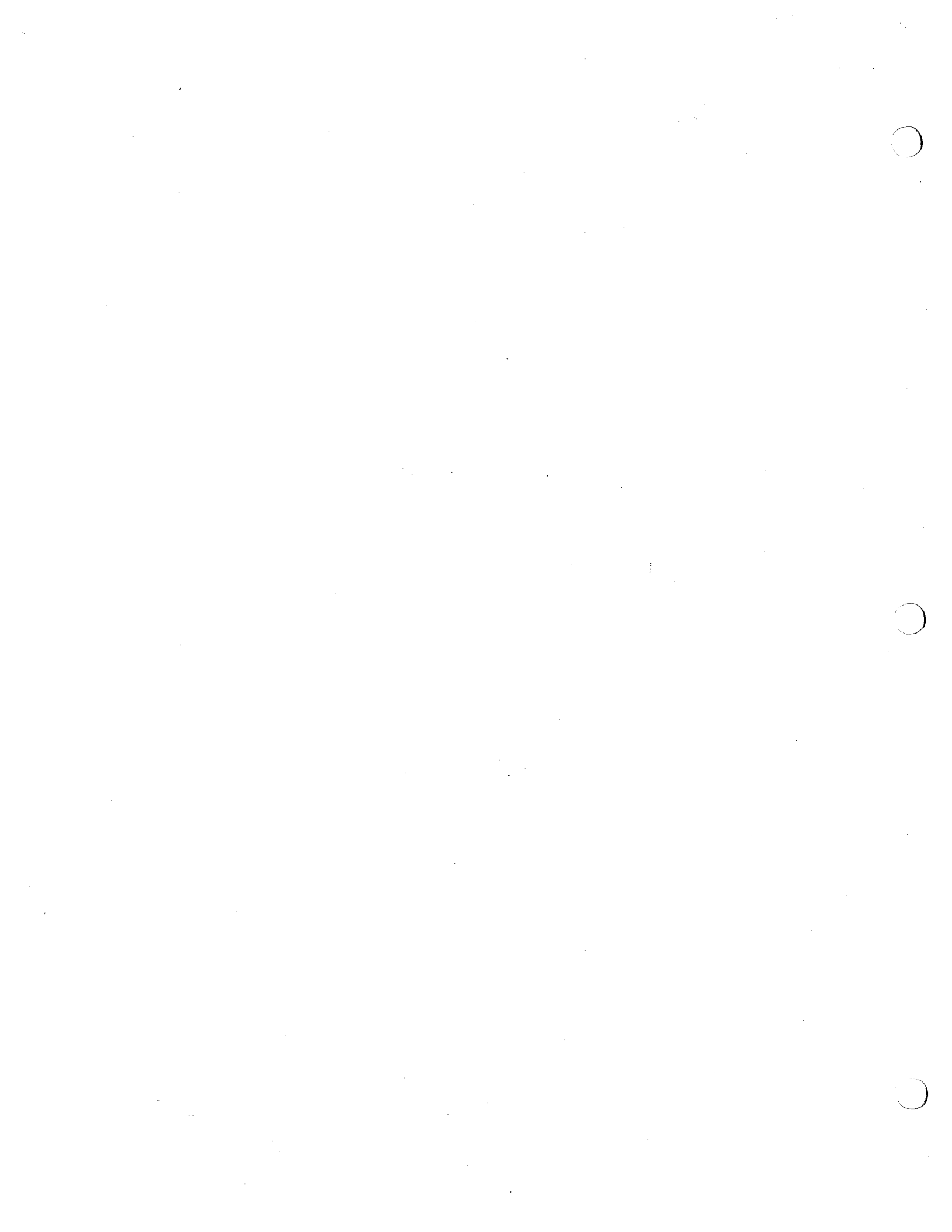
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
13	Net Over	1554	33° 42.653	118° 16.780	24	16	
	Start Trawl/Fix	1555	42.626	16.723			
	Intrvl. 1 (20%)	1558	42.598	16.642			
	Intrvl. 2 (40%)	1558	42.583	16.616			
	Intrvl. 3 (60%)	1600	42.513	16.404			
	Intrvl. 4 (80%)						
	End Trawl	1604	42.508	16.387			
	Net on Deck	1606	42.508	16.347			
14	Net Over						
	Start Trawl						
	Intrvl. 1 (20%)						
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl						
	Net on Deck						

600g scales
minus Hg.

100g + 2500g scales
re R344 05.

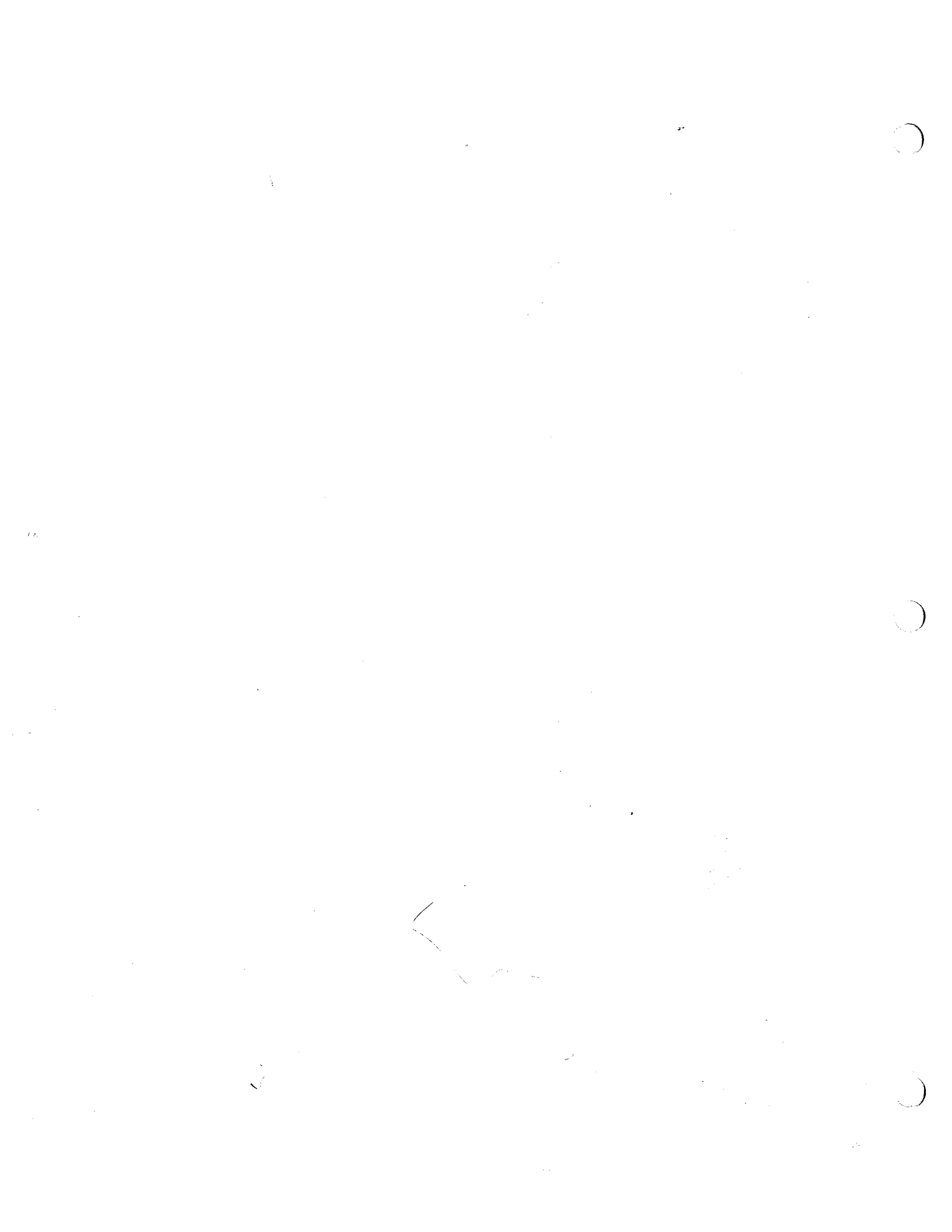
1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/11/14	06T1	white croaker	48
	06T1	lizardfish	11
	06T1	Hornyhead turbot	1
	06T1	Sarcastic fringehead	1
	06T1	speckletin midshipment	2
	06T1	queenfish	1
	06T1	tongue fish	1
	06T2	CA Halibut	11
	06T2	Shiner surfperch	1
	06T2	Black surfperch	4
	06T2	Spotted turbot	2
	06T2	diamond turbot	2
	06T2	Barred Sandbass	5
	06T2	white croaker	28
	06T3	scorpionfish	1
	06T3	round ray	1
	06T3	black croaker	1
	06T3	white surfperch	7
	06T3	shiner surfperch	1
	06T3	black surfperch	1
	06T3	barred Sandbass	1
	06T3	CA Halibut	7
	06T3	diamond turbot	1
	06T3	spotted turbot	1
	06T3	tonguefish	1
	06T3	Lizardfish	12
	06T3	white Croaker	23
	06T4	skate	3
	06T4	scorpionfish	1
	06T4	white Croaker	94
	06T4	Ca Halibut	17
	06T4	Lizardfish	14
	06T4	barred sandbass	1
	06T4	speckletin midshipment	1
	06T4	sand dab	1
	06T4	spotted turbot	3
	06T4	diamond turbot	3

T = trawl



2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/11/14	06T5	leopard shark	2
	06T5	smooth nose shark	1
	06T5	bat ray	11
	06T5	thorny back ray	1
	06T5	round ray	2
	06T5	CA Halibut	4
	06T5	Corpina	1
	06T5	lizardfish	1
	06T5	spotted turbot	5
	06T5	sanddab	3
	06T5	shiner surfperch	1
	06T5	white croaker	23
	06T5	queenfish	21
	06T6	lobster	30
	06T6	scorpionfish	1
	06T6	CA halibut	5
	06T6	barred sandbass	1
	06T6	sanddab	1
	06T6	white croaker	8
	06T6	kelp fish	1
	06T6	white surfperch	2
	06T6	shiner surfperch	1
	06T6	black surfperch	4
	06T6	rubber lipped surfperch	1
	06T7	bat ray	2
	06T7	scorpionfish	1
	06T7	spiny rays	2
	06T7	leopard shark	1
	06T7	spotted turbot	2
	06T7	diamond turbot	1
	06T7	CA Halibut	4
	06T7	shiner surfperch	14
	06T7	white surfperch	9
	06T7	barred sandbass	4
	06T7	giant kelp fish	4
	06T7	sanddab	2
	06T7	lizard fish	10
	06T7	white croaker	18

P
P
S
S
S
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P

+ = trawl

2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/12/14	06T8	lizardfish	2
	06T8	white croaker	4
	06T8	barred sandbass	1
	06T8	white surfperch	1
	06T8	ca Halibut	12
	06T9	bat rays	16
	06T9	round ray	4
	06T9	spinyback ray	2
	06T9	barred sandbass	4
	06T9	halibut	6
	06T9	queenfish	3
	06T9	white croaker	27
	06T9	sand crab	2
	06T9	spotted turbot	4
	06T9	diamond turbot	1
	06T10	lobster	2
	06T10	bat ray	3
	06T10	white croaker	75
	06T10	queenfish	115
	06T10	tonguefish	1
	06T10	anchovy	1
	06T10	spotted turbot	2
	06T10	halibut	2
	06T10	diamond turbot	1
	06T10	lizardfish	2
	06T10	white surfperch	1

T = trawl

2014 POLA/POLB Complex Food Web Model
 Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/13/14	OA-06T	Northern Anchovy	>500
	Trawl II	CA Halibut	5
		Giant Kelpfish	1
	all	Lizard fish	23
	OA-06	Tongue fish	1
	Trawl I	Queenfish	2
	II	Spotted Turbot	1
		Barred Sandbass	3
		White Croaker	27
	OA-06	Bat Ray	2
	Trawl II	Wall Eye Perch	
		Queen Fish	3
		White Croaker	5
		Barred Sandbass	1
		CA Halibut	6
		N. anchovies	>500
		Fantail Sole	1
		Lizard fish	6
	OA-06	Scorpion fish	1
	Trawl B	Bat Ray	2
		Lizard fish	16
		Giant Kelpfish	1
		Barred Sandbass	2
		Northern Anchovy	>300
		CA Halibut	5
		Queenfish	5
		White Croaker	51

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 06 (0A)

Page 1 of 1

Date: 10/11/14

Completed by: CCS

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N=	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	LIZARD FISH	2	29, 17	26, 15	155, 30			Y
2		2	25, 25	23, 23	90, 95			Y
3		2	25, 25	23, 22	115, 105			✓
4		2	25, 22	23, 20	100, 95			Y
5		2	26, 27	23, 24	115, 140			Y
6		3	14, 20, 25	13, 18, 23	78, 65, 110			Y
7		3	26, 21, 13	24, 19, 12	110, 55, 14			Y
8		3	26, 19, 19	24, 17, 17	110, 38, 36			Y
9		3	26, 19, 16	24, 17, 14	110, 42, 30			Y
10		3	23, 20, 19	21, 18, 17	75, 50, 44			Y
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

- 1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
- 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.)
- Juvenile Ca. halibut acceptable)
- 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

- 2nd - white surfperch *Phanerodon furcatus*
- 2nd - topsmelt *Atherinops affinis*
- 2nd - Northern anchovy *Engraulis mordax*
- 2nd - California lizardfish *Synodus lucioceph*
- 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: OA-06

Page 1 of 1

Date: 10/11/11

Completed by: RSIURICCS/KG

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos		
				Gross	Tare	Net	Y/N		
1	SHINER SURFPERCH	[8]	[6]	-	-	8] 4		
2				9	7	-		-	10
3				9	7	-		-	10
4	OA-XX-WP-D1 EW01			9	7	-		-	10
5	-06-			10	8	-		-	11
6	20141011			9	7	-		-	11
7				9	7	-		-	11
8	Rep 02	8, 9, 9, 10, 10	7, 7, 7, 7, 8, 8			9, 10, 9, 9, 14	13		
9	03								
10	04								
1									
2	ARCHIVED IN FREEZER	10	8			14			
3		10	8			14			
4		9	8			10			
5		9	7			9			
6		NO SCALES OR PHOTOS							
7	corrected								
8									
9									
10									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm). Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB - Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: OA (06)

Page 1 of 1

Date: 10/11/14

Completed by: RS / JR / CCS / KG

Data from Short/Long Trawl @ >300 m Depth Yes No

Species	N	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos Y/N
				Gross	Tare	Total Net	
1 WHITE	1	26	23	-	-	230	Y
2 CROAKER	1	25	21	-	-	195	Y
3	1	26	22	-	-	205	Y
4	1	23	20	-	-	160	Y
5	2	23, 19	21, 16	-	-	175, 85	Y
6	2	21, 21	18, 18	-	-	120, 120	Y
7	3	19, 19, 17	16, 16, 15	-	-	82, 81, 51	Y
8	3	19, 19, 19	16, 16, 16	-	-	95, 80, 85	Y
9	3	19, 19, 19	16, 16, 16	-	-	80, 90, 80	Y
10	3	22, 19, 19	19, 16, 16	-	-	135, 85, 80	Y
1 ARCHIVE							
2							
3							
4							
5							
6							
7							
8							
9	N	23	2			Total Weight	
10 California		27, 28, 28, 27, 25	24, 24, 24, 23, 22			230, 205, 230, 150, 21	
1 Halibut	1	34	29			405	Y
2	1	38	32			580	Y
3	1	310	30			435	Y
4	1	39	33			570	Y
5	1	36	33			480	Y
6	1	31	27			340	Y
7	1	32	27			330	Y
8	1	30	26			250	Y
9	1	37	33			546	Y
10	1	36	29			450	Y

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: OA-06

Page 1 of 1

Date: 10/11/14

Completed by: RS/JR/CS/KG

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N =	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	WHITE SURF	1	25	19	170			Y
2	PERCH	4	11, 11, 10, 10	9, 9, 8, 8	16, 15, 15, 13			Y
3		4	12, 11, 10, 11	9, 8, 8, 9	22, 15, 12, 14			Y
4		5	12, 9, 10, 10, 11	9, 7, 8, 8, 9	20, 9, 13, 15, 19			Y
5		4	11, 11, 11, 10	9, 9, 9, 8	24, 16, 15, 12			Y
6		2	9, 10	7, 8	9, 10			N - archive
7								
8								
9								
10								
1			9	7			8	
2	A) collected 2							
3	10/12/14, 5							
4								
5								
6								
7								
8								
9								
10								

NO PHOTOS OR SCALES

- 1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
- 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
- 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

- 2nd - white surfperch *Phanerodon furcatus*
- 2nd - topsmelt *Atherinops affinis*
- 2nd - Northern anchovy *Engraulis mordax*
- 2nd - California lizardfish *Synodus lucioceps*
- 2nd - barred sand bass *Paralabrax nebulifer*

Need ~ 240 g more of white/shiner

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 0A-06

Page _____ of _____

Date: 10/13/14

Completed by: ET MT

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N _c	Total Length (cm)	Std Length Size Class (cm)	Weight (kg) g			Photos Y/N
					Gross	Tare	Net	
1	White Surf Perch	1			87			Y
2								
3								
4								
5								
6								
7								
8		1	20	15	87			Y
9		1	23	18	155	-14	141	Y
10		1	27	22	240	-14	226	Y
1	Archive Shiner Perch	NES	9, 10, 11, 12	7, 7, 8, 8, 9	8, 12, 10, 17, 26			Y
2								
3								
4								
5								
6								
7								
8								
9								
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
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 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING 10/11 10/12

Station ID: OA (06)

Arrival Date/Time: 1030 / 0730

Site Acceptable for Trawl Sampling? Y or N

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

	10/11	10/12
Is site accessible?	Y	Y
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and ≥25ppt salinity).	Y	Y
Vessel has conducted pre-trawl survey? Site acceptable?	Y	Y
Station DGPS coordinates (± 3 m) recorded?	Y	Y
Station occupation form completed?	Y	Y

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	Y	Y
Weighing scales calibrated?	Y	Y
Vessel passed through 100 m radius of station?	Y	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y	Y
Trawl remained within 10% of target depth?	Y	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y	Y
Fish obtained in trawl?	Y	Y
All fish positively identified (for specimens collected as samples)?	Y	Y
Standard length of all bony fish measured?	Y	Y
Total biomass of each invertebrate group retained as samples recorded?	Y	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y	Y

Some (A)

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	
Proper persons have signed and dated all COCs?	
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	Y Y

4. Sample Storage and Delivery:

Fish scales samples collected?	Y Y
Tissue samples stored immediately on ice and frozen asap?	Y Y
Completed COC is included in plastic bag in cooler?	Y Y

Additional Notes: need more perch

Signature of QA/QC Personnel: [Signature] Date/Time: 10/12/14 0900

Print Name/Company: AMEC

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

Station ID: DA-06

Arrival Date/Time: 0758 10/12/14

Site Acceptable for Trawl Sampling? Y or N

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

Is site accessible?	Y
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and ≥25pt salinity).	Y
Vessel has conducted pre-trawl survey? Site acceptable?	Y
Station DGPS coordinates (± 3 m) recorded?	Y
Station occupation form completed?	Y

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	Y
Weighing scales calibrated?	Y
Vessel passed through 100 m radius of station?	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y
Trawl remained within 10% of target depth?	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y
Fish obtained in trawl?	Y
All fish positively identified (for specimens collected as samples)?	Y
Standard length of all bony fish measured?	Y
Total biomass of each invertebrate group retained as samples recorded?	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	
Proper persons have signed and dated all COCs?	
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	

4. Sample Storage and Delivery:

Fish scales samples collected?	Y
Tissue samples stored immediately on ice and frozen asap?	Y
Completed COC is included in plastic bag in cooler?	

Additional Notes: need perch! "

Signature of QA/QC Personnel: KLB Date/Time: 10/12/14

Print Name/Company: AMEC

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **05(JB)**

Vessel Name **C.B.2**

Date **10/12/14**

Arrival Time **0930**
(hh:mm)

Abandoned site? Station Fail Code

Y or N (if Y explain in comments)

Wind

Speed (kts) **1.5**
 Direction (N/S/E/W) **W/SW**

Swell

Period (s) **0**
 Height (ft) **0**

Station Comments

NO FISH FIRST TRAWL

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
1	Net Over	0938	33°45.178	-118°13.749	16	-	
	Start Trawl	0940	33°45.153	-118°13.802	16	64	
	Intrvl. 1 (20%)	0941	33°45.154	-118°13.816	16	64	@ 2:30 min into trawl
	Intrvl. 2 (40%)		33°	-118°			@ 5:00
	Intrvl. 3 (60%)						@ 7:30
	Intrvl. 4 (80%)						
	End Trawl	0941	33°45.158	-118°13.805	16	64	
	Net on Deck	0942	33°45.161	-118°13.844	16	-	
2	Net Over	0951	33°45.116	-118°13.694	17	-	
	Start Trawl	0952	33°45.093	-118°13.814	17	68	
	Intrvl. 1 (20%)	095	33°	-118°			@ 2:30
	Intrvl. 2 (40%)	095	33°	-118°			@ 5:00
	Intrvl. 3 (60%)						@ 7:30
	Intrvl. 4 (80%)						
	End Trawl	0955	33°45.088	-118°13.805	17	68	
	Net on Deck	09	33°45.092	-118°13.844	17	-	

trawl ended quickly
 b/c net hung up on rock

trawl fail - snag on J

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEL**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **B(05)**

Vessel Name **E.B.II**

Date **10/12/14**

Arrival Time **0930**
(hh:mm)

Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind

Speed (kts) 0.5
 Direction (N/S/E/W) W

Swell

Period (s) 0
 Height (ft) 0

Station Comments

photos for Trawl 3 say trawl 1x

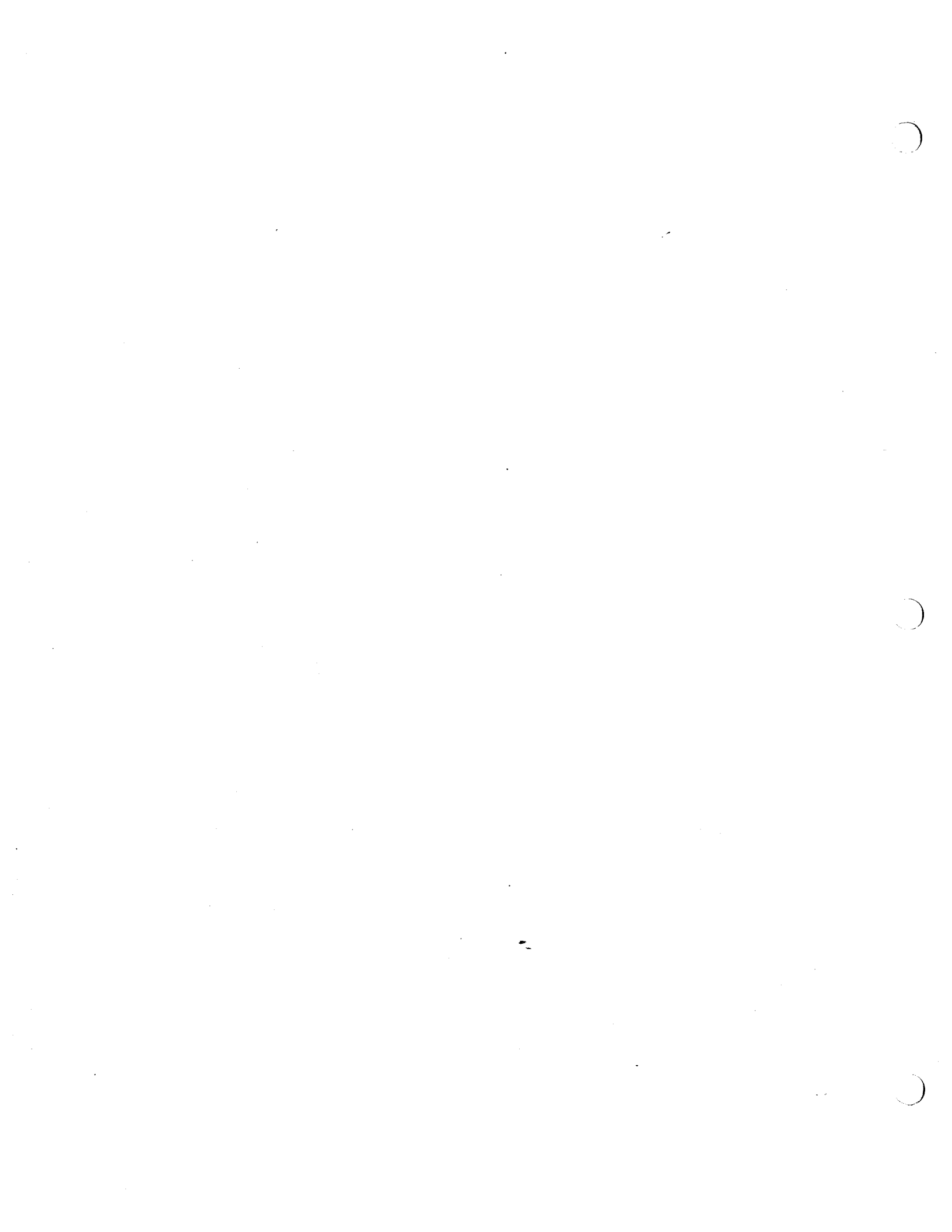
TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
3	Net Over	1001	33°45.069	-118°13.932	16	-	
	Start Trawl	1003	33°45.032	-118°14.077	16	64	
	Intrvl. 1 (20%)	1005	33°45.014	-118°14.161	16	64	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1008	33°44.986	-118°14.254	16	64	@ 5 min
	Intrvl. 3 (60%)	1010	33°44.967	-118°14.348	16	64	@ 7:30 min
	Intrvl. 4 (80%)						
	End Trawl	1012	33°44.953	-118°14.417	16	64	
Net on Deck	1013	33°44.954	-118°14.429	16	-		
4	Net Over	1030	33°44.992	-118°14.453	16	-	
	Start Trawl	1032	33°44.984	-118°14.803	16	64	
	Intrvl. 1 (20%)	1034	33°44.977	-118°14.218	16	64	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1037	33°44.973	-118°14.120	16	64	@ 5 min
	Intrvl. 3 (60%)	1039	33°44.969	-118°14.029	16	64	@ 7:30 min
	Intrvl. 4 (80%)	1042	33°44.967	-118°13.915	16	64	@ 10:00 min
	End Trawl	1043	33°44.966	-118°13.906	16	64	
Net on Deck	1044	33°44.962	-118°13.863	16	64		

! trawl data lost!
 • program shut down/
 errored out
 at end. :-)

@ 2:30 min into trawl

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **IB(06)**

Vessel Name **EBII**

Date **10/12/14**

Arrival Time **0930**
(hh:mm)

Abandoned site?
Y or N (if Y explain in comments)

Station Fail Code

Wind

Speed (kts) _____

Direction (N/S/E/W) _____

Swell

Period (s) 0

Height (ft) 0

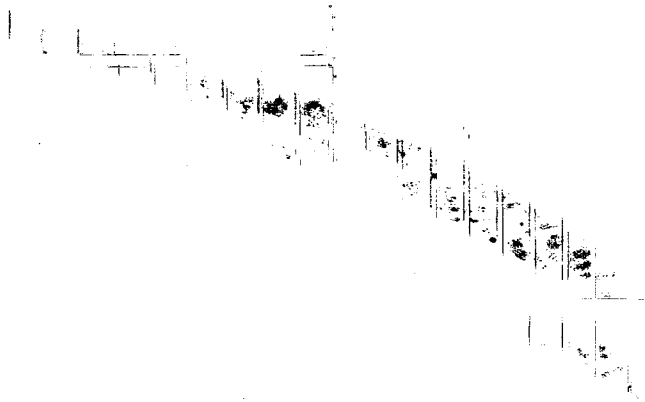
Station Comments

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
5	Net Over	1054	33° 44.916	-118° 13.822	15	—	
	Start Trawl	1056	33° 44.937	-118° 13.987	15	64	
	Intrvl. 1 (20%)	1058	33° 44.932	-118° 14.105	15	64	@ 2:30 min up to trawl
	Intrvl. 2 (40%)	1101	33° 44.925	-118° 14.169	15	64	@ 5 min
	Intrvl. 3 (60%)	1103	33° 44.916	-118° 14.250	13	59	@ 7:30
	Intrvl. 4 (80%)	1106	33° 44.916	-118° 14.355	13	59	@ 10
	End Trawl	1107	33° 44.916	-118° 14.385	13	59	
	Net on Deck	1109	33° 44.922	-118° 14.408	13	—	
6	Net Over	1117	33° 44.884	-118° 14.417	12	—	
	Start Trawl	1119	33° 44.885	-118° 14.290	12	50	
	Intrvl. 1 (20%)	1122	33° 44.889	-118° 14.136	12	50	@ 2:30 min
	Intrvl. 2 (40%)	1124	33° 44.895	-118° 14.055	12	50	@ 5
	Intrvl. 3 (60%)	1127	33° 44.907	-118° 13.943	12	50	@ 7:30
	Intrvl. 4 (80%)	1129	33° 44.917	-118° 13.869	12	50	@ 10
	End Trawl	1129	33° 44.919	-118° 13.847	12	50	
	Net on Deck	1131	33° 44.921	-118° 13.832	12	—	

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)

100



100

100

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Thunderstorm

Rain
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **IB(05)**

Vessel Name **eb II**

Date **10/12/14**

Arrival Time **0930**
(hh:mm)

Abandoned site?

Y or N (if Y explain in comments)

Station Fail Code

Wind

Speed (kts)

5 ~~MPA~~

Direction (N/S/E/W)

W/SW

Swell

Period (s)

0

Height (ft)

0

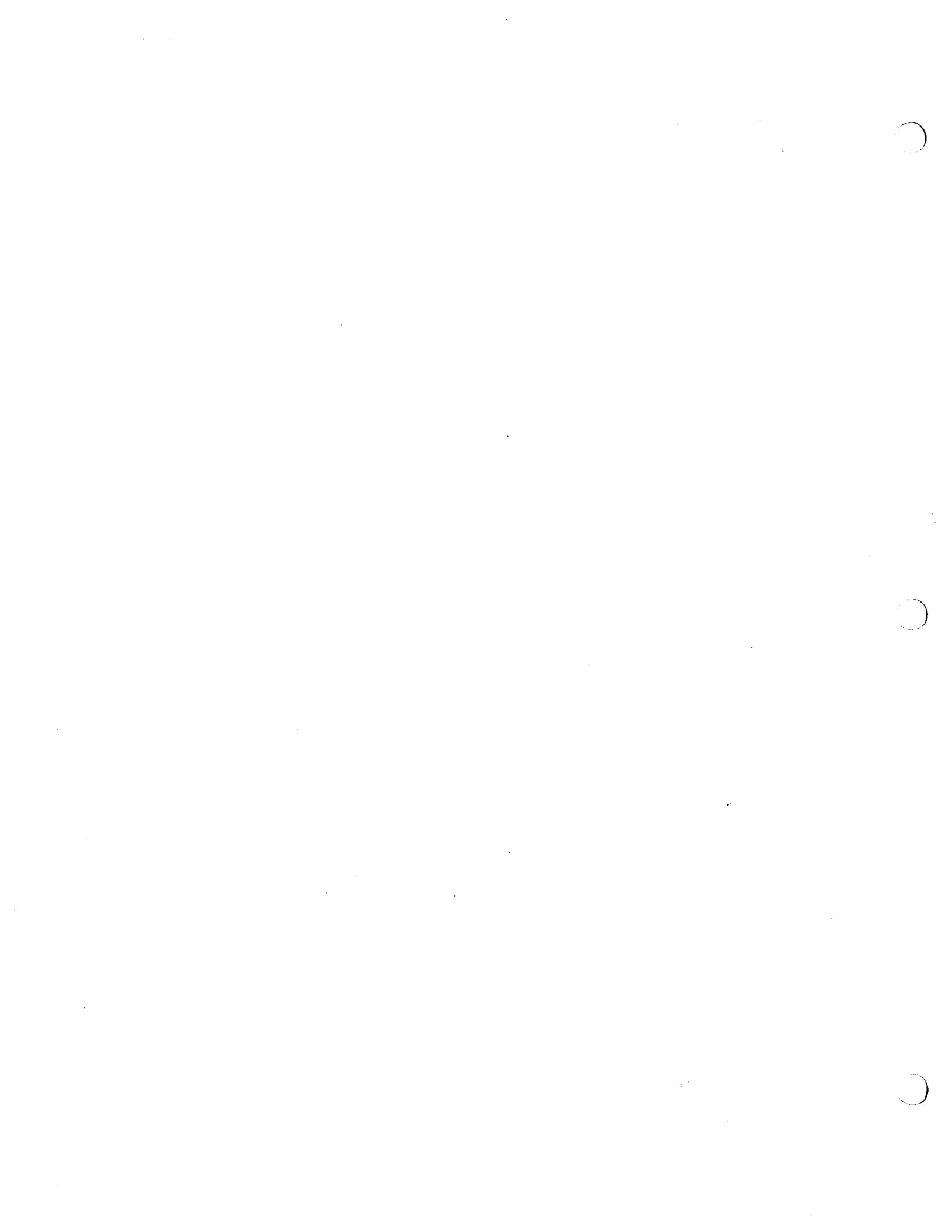
Station Comments

going back to trawl locations
 w/perch for #7

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
7	Net Over	1141	33°44.972	-118°13.841	15	—	
	Start Trawl	1143	33°44.974	-118°13.974	15	60	
	Intrvl. 1 (20%)	1145	33°44.976	-118°14.056	15	60	@ 2:30 min into trawl
	Intrvl. 2 (40%)	1147	33°44.969	-118°14.137	15	60	@ 5 min
	Intrvl. 3 (60%)	1150	33°44.961	-118°14.258	15	60	@ 7:30 min
	Intrvl. 4 (80%)	1153	33°44.961	-118°14.352	15	60	@ 10
	End Trawl	1154	33°44.957	-118°14.395	15	60	
	Net on Deck	1155	33°44.966	-118°14.432	15	—	
8	Net Over	1304	33°44.728	-118°14.518	11	—	
	Start Trawl	1307	33°44.862	-118°14.588	11	41	
	Intrvl. 1 (20%)	1309	33°44.962	-118°14.614	11	41	@ 2:30
	Intrvl. 2 (40%)	13	45.021	-118°14.647			@ 5:00
	Intrvl. 3 (60%)						@ 7:30
	Intrvl. 4 (80%)						@ 10
	End Trawl	1312	33°45.021	-118°14.641	11	41	
	Net on Deck	13	33°45.039	-118°14.626	11	—	

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **IB(06)**

Vessel Name **EBF**

Date **10/12/14**

Arrival Time **930**
(hh:mm)

Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind

Speed (kts) **5**
 Direction (N/S/E/W) **W**

Swell

Period (s) **0**
 Height (ft) **0**

Station Comments

trawl 9 failed. cut net to remove large rock.

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
9	Net Over	1323	33°44.975	-118°14.491	13	-	
	Start Trawl	1324	33°44.872	-118°14.590	13	49	
	Intrvl. 1 (20%)	1330	33°44.872	-118°14.590	13	49	
	Intrvl. 2 (40%)						
	Intrvl. 3 (60%)						
	Intrvl. 4 (80%)						
	End Trawl	1330	33°44.875	-118°14.590	13	49	trawl caught on large rock
	Net on Deck	1331	33°44.917	-118°14.567	13	49	
10	Net Over	1426	33°44.842	-118°14.545	11	-	
	Start Trawl	1427	33°44.842	-118°14.545	11	49	
	Intrvl. 1 (20%)	1430	33°44.930	-118°14.604	15	60	@ 2.5 min
	Intrvl. 2 (40%)	1436	33°44.930	-118°14.640			@ 5 min
	Intrvl. 3 (60%)	1442	33°44.942	-118°14.688			@ 7.5 min
	Intrvl. 4 (80%)						
	End Trawl	1432	33°45.009	-118°14.636	15	60	
	Net on Deck	1434	33°45.040	-118°14.573	15	-	

total fail. had to cut net.

trawl caught on large rock

tablet started 260 sec. after trawl

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



100

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code AMEC

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID IB05

Vessel Name FBI

Date 10/12/14

Arrival Time 0930
(hh:mm)

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

Wind

Speed (kts) 5-10

Direction (N/S/E/W) SW

Swell

Period (s) 0

Height (ft) 0

Station Comments

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DD°MM.mmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
11	Net Over	1450	33° 44.762	-118° 14.523	11	-	
	Start Trawl	1453	33° 44.851	-118° 14.573	11	44	
	Intrvl. 1 (20%)	1455	33° 44.924	-118° 14.598	15	60	2:30 min
	Intrvl. 2 (40%)	1457	33° 44.996	-118° 14.627	15	60	5:00 min
	Intrvl. 3 (60%)						7:30 min
	Intrvl. 4 (80%)						
	End Trawl	1458	33° 45.006	-118° 14.630	15	60	
	Net on Deck	1500	33° 45.029	-118° 14.613	15	-	
12	Net Over	1508	33° 44.931	-118° 14.415	16	-	
	Start Trawl	1510	33° 44.939	-118° 14.203	16	60	
	Intrvl. 1 (20%)	1513	33° 44.938	-118° 14.168	16	60	2:50 min
	Intrvl. 2 (40%)	1517	33° 44.938	-118° 13.980	16	60	5:00
	Intrvl. 3 (60%)	1517	33° 44.947	-118° 13.942	16	60	7:30
	Intrvl. 4 (80%)						10:00
	End Trawl	1520	33° 44.955	-118° 13.859	16	60	
	Net on Deck	1522	33° 44.970	-118° 13.839	16	-	

into trawl!

2:50 min

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)

C

C

C

17

STATION OCCUPATION

POLA/POLB Food Web Study

Agency Code **AMEC**

Weather

Clear
 Overcast
 Partly cloudy
 Drizzle

Rain
 Thunderstorm
 Fog

Sea State

Calm
 Choppy
 Rough

Nav Type

DGPS
 GPS

Station ID **013603 05**

Vessel Name **FBI**

Date **10/12/14**

Arrival Time **0930**
(hh:mm)

Abandoned site? Station Fail Code
Y or N (If Y explain in comments)

Wind

Speed (kts) S
 Direction (N/S/E/W) ESW

Swell

Period (s) 0
 Height (ft) 0

Station Comments

target : shiner perch
 barred sandbass.

TRAWL EVENTS

Trawl Number		Time (hh:mm)	Latitude (DD°MM.mmmm)	Longitude (DD°MM.mmmm)	Depth (m)	Wire Out	Trawl Fail Code (1)
13	Net Over	1529	33° 44.926	-118° 13.797	15	—	
	Start Trawl	1531	33° 44.926	-118° 13.946	15	60	
	Intrvl. 1 (20%)	1534	33° 44.937	-118° 14.036	15	60	2:30 mins into trawl
	Intrvl. 2 (40%)	1537	33° 44.935	-118° 14.150	15	60	5:00 min
	Intrvl. 3 (60%)	1539	33° 44.927	-118° 14.230	15	60	7:30
	Intrvl. 4 (80%)	1541	33° 44.931	-118° 14.330	15	60	10:00
	End Trawl	1541	33° 44.932	-118° 14.344	15	60	
	Net on Deck	1544	33° 44.960	-118° 14.387	15	—	
14	Net Over	1552	33° 44.920	-118° 14.483	12	—	
	Start Trawl	1555	33° 44.913	-118° 14.298	12	58	
	Intrvl. 1 (20%)	1557	33° 44.909	-118° 14.216	12	58	2:30 min
	Intrvl. 2 (40%)	1559	33° 44.912	-118° 14.110	15	60	5:00 min
	Intrvl. 3 (60%)	1602	33° 44.907	-118° 14.009	15	60	7:30
	Intrvl. 4 (80%)						
	End Trawl	1604	33° 44.907	-118° 13.931	15	60	
	Net on Deck	1606	33° 44.916	-118° 13.919	15	—	

gps seemed to jump a lot on trawl 14

1 Trawl Fail codes: None, Outside Radius Limit, Outside Target Depth, Fouled Net (comment req.), Open cod end (knot untied), Trawl hit unknown obstruction, Doors - No contact with bottom, Torn Net, Unusually low catch, Improper Deck Time, Improper Bottom Time, Inadequate trawl track, Other - Trawl Failure (comment req.)



2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/12/14	05T6	Bat ray	2
	05T6	Skate	2
	05T6	White croaker	18
	05T6	Lizard fish	70
	05T6	barred sandbass	10
	05T6	CA halibut	1
	05T6	spotted turbot	5
	05T6	fantail sole	1
	05T6	Sanddab	1
	05T7	lizardfish	65
	05T7	Skate	2
	05T7	white croaker	32
	05T7	barred sandbass	65
	05T7	giant kelp fish	1
	05T7	sanddab	2
	05T7	tonguefish	1
	05T7	spotted turbot	2
	05T7	fantailed sole	1
	05T7	tongue fish	2
	05T7	speckled midshipmen	2
	05T7	yellowfin sculpin	2
	05T7	pompano	1
	05T7	white surfperch	1
	05T8	white surfperch	11
	05T8	lobster	1
	05T8	barred sandbass	3
	05T8	white croaker	3
	05T8	lizardfish	11
	05T8	slough anchovies slough anchovies	2
	05T8	giant kelp fish	1 2
	05T8	stand kelp fish spotted kelp fish	1
	05T8	fantail sole	1
	05T8	spotted turbot	1
	05T8	shiner surfperch	12
		TRAWL 9 FAIL	

S

D

2014 POLA/POLB Complex Food Web Model
Bycatch Fish Collection Tally List

Date	Station ID	Species	Number Collec.
10/12/14	05T110	white croaker	1
	05T110	white surfperch	9
	05T110	lizardfish	12
	05T110	queenfish	15
	05T110	barred sandbass	3
	05T110	shiner surfperch	6
	05T111	lobster	1
	05T111	shiner surfperch	1
	05T111	white surfperch	4
	05T111	white croaker	6
	05T111	lizardfish	23
	05T111	spotted kelpfish	1
	05T112	lizardfish	70
	05T112	white croaker	20
	05T112	barred sandbass	3
	05T112	spotted turbot	1
	05T112	tonguefish	1
	05T113	bat ray	1
	05T113	lizardfish	66
	05T113	white croaker	12
	05T113	barred sandbass	1
	05T113	spotted ray guitarfish	1
	05T113	pompano	1
	05T113	spotted turbot	2
	05T113	sanddab	2
	05T113		
	05T113		
	05T114	bat ray	1
	05T114	Ca halibot	1
	05T114	lizardfish	111
	05T114	white croaker	11
	05T114	fantailed sole	1
	05T114	spotted turbot	1
	05T114	barred sandbass	1
	05T114	tonguefish	1

+ = trawl

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: B-5

Page of

Date: 10/12/14

Completed by: KT/CCS

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N=	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	Lizard Fish	1	26	23	130	-20	110	Y
2		1	30	26	205	-20	185	↓
3	[Archive]	1	26	23	119	-20	95	
4		1	25	22	120	-20	100	
5		1	25	22	110	-20	90	
6		1	29	26	180	-20	160	
7		1	26	23	130	-20	110	
8		1	22	20	85	-20	65	
9		1	24	22	125	-20	105	
10		1	19	17	50	-20	30	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

- 1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
- 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm. Juvenile Ca. halibut acceptable)
- 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

- 2nd - white surfperch *Phanerodon furcatus*
- 2nd - topsmelt *Atherinops affinis*
- 2nd - Northern anchovy *Engraulis mordax*
- 2nd - California lizardfish *Synodus lucioceps*
- 2nd - barred sand bass *Paralabrax nebulifer*

Comments:



POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 1B-05

Page of

Date: 10/12/2014

Completed by: JR KG KTCCP

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos
					Gross	Tare	Net	Y/N
1	Calif. Halibut	1	54	47	1650			Y
2	Calif. Halibut	1	30	25	250			Y
3	Barred sandbass	1	30	25	300			Y
4	Barred sandbass	1	26	22	200			Y
5	Barred sandbass	2	24, 17	19, 14	155, 60			Y
6								
7								
8								
9								
10		N						
1	Barred Sandbass	3	16, 17, 17	13, 14, 14			56, 62, 100	
2		3	16, 16, 16	13, 13, 13			50, 55, 55	Y
3		1	30	25			300	Y
4		1	26	22			200	Y
5		2	24, 17	19, 14			155, 60	Y
6		3	16, 15, 18	13, 13, 15			58, 50, 85	Y
7		3	13, 18, 19	10, 15, 15			27, 75, 95	Y
8		3	19, 16, 17	15, 13, 14			84, 48, 58	Y
2	photoed as 9 (#2)							
10								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.
 Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 18-05

Page ____ of ____

Date: 10/12/14

Completed by: _____

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N=	Total Length (cm)	Std Length Size Class (cm)	Weight (kg)			Photos Y/N
					Gross	Tare	Net	
1	Shiner Perch	2	14, 14	11, 11	31, 32	0		Y
2		2	13, 14	11, 11	30, 33	0		Y
3		5	10, 10, 10, 9, 9	8, 8, 8, 8, 7	11, 12, 14 12, 11	0		Y
4		2	13, 14	11, 12	31, 37	0		Y
5		5	13, 10, 9, 9, 9	11, 8, 7, 8, 8	28, 12, 12 11, 11	0		Y
6		3	14, 14, 10	12, 12, 18	33, 32, 12	0		Y
7								
8								
9								
10								
1	White Perch	1	23	19	145	-20	145	Y
2		1	22	18	140	-20	120	Y
3		1	24	19	190	-20	170	Y
4		1	22	18	150	-20	130	Y
5								
6								
7								
8								
9								
10								
1								
2	Archive				175, 135, 125, 145	-20		
3					135, 150	-20		
4								
5								
6								
7								
8								
9								
10								

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.
 Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

POLA/POLB – Food Web - DEMERSAL FISH IDENTIFICATION FORM

Station: 1B-05

Page of

Date: 10/12/2014

Completed by: CCS, KT, JR, KG

Data from Short/Long Trawl @ >300 m Depth Yes No

	Species	N=	Total Length (cm)	Std Length Size Class (cm)	Weight (g)			Photos Y/N
					Gross	Tare	Net	
1	WHITECROAKER	1	24	21	180	-20	160	Y
2		1	25	22	190	-20	170	Y
3		1	23	21	180	-20	160	Y
4		2	23, 18	21, 15	175, 75	-20	155, 55	Y
5		1	24	21	190	-20	170	Y
6		1	26	23	240	-20	220	Y
7		3	18, 21, 21	16, 19, 19	85, 125, 135	-20	105, 110	Y
8		2	24, 21	21, 18	155, 120	-20	135, 100	Y
9		3	22, 20, 20	20, 18, 17	140, 115, 95	-20	120, 95, 75	Y
10		3	17, 20, 22	15, 18, 20	80, 110, 135	-20	60, 90, 125	Y
1								
2	<u>Archive</u>							
3	White Croaker		17, 18, 20, 22, 22	14, 16, 17, 20, 20	65, 75,	-20	45, 55	Y
4	N=5				90, 140, 135	-20	70, 120, 115	
5								
6								
7								
8								
9								
10								

1st - White Croaker *Genyonemus lineatus* (REC: 160 mm)
 1st - Ca. Halibut *Paralichthys californicus* (REC: 22 inches / 559 mm.
 Juvenile Ca. halibut acceptable)
 1st - Adult Shiner Surfperch *Cymatogaster aggregata* (i.e. 2nd year age-class REC 88 mm)

2nd - white surfperch *Phanerodon furcatus*
 2nd - topsmelt *Atherinops affinis*
 2nd - Northern anchovy *Engraulis mordax*
 2nd - California lizardfish *Synodus lucioceps*
 2nd - barred sand bass *Paralabrax nebulifer*

Comments:

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

Station ID: 05 (IB)

Arrival Date/Time: 0930

Site Acceptable for Trawl Sampling? Y or N

10/12/14

if No, provide reason: _____

Mark each box with Y, N, or NA

Field Procedures

1. Upon arriving at the sampling location, the following site observations are recorded:

Is site accessible?	Y
Depth and benthic salinity recorded? Are these parameters within project and Bight '13 -acceptable limits? (<3m MLLW depth and ≥25pt salinity).	Y
Vessel has conducted pre-trawl survey? Site acceptable?	Y
Station DGPS coordinates (± 3 m) recorded?	Y
Station occupation form completed?	Y

2. Trawl Sampling Procedures:

Proper equipment used (Semi-balloon otter trawl)?	Y
Weighing scales calibrated?	Y
Vessel passed through 100 m radius of station?	Y
Trawl duration 10 minutes (or long as possible in confined areas)?	Y
Trawl log info recorded (depth, tow wire length, times, coordinates)?	Y
Trawl remained within 10% of target depth?	Y
Trawl acceptable (i.e. no fouling, bottom debris present, not torn, bottom time acceptable)?	Y
Fish obtained in trawl?	Y
All fish positively identified (for specimens collected as samples)?	Y
Standard length of all bony fish measured?	Y
Total biomass of each invertebrate group retained as samples recorded?	Y
Photo of each fish of each 1 st and 2 nd priority species collected?	Y
Fish specimens wrapped in pre-cleaned foil, bagged, and preserved on ice?	Y

FIELD SAMPLING QA CHECKLIST – TRAWL SAMPLING

3. Data Recording:

Samples properly logged and cross-checked by a second person on all COC forms?	
Proper persons have signed and dated all COCs?	
All field datasheets (hard copy and electronic) and associated notes/ photographs have been recorded for the site before moving to the next?	

4. Sample Storage and Delivery:

Fish scales samples collected?	4
Tissue samples stored immediately on ice and frozen asap?	4
Completed COC is included in plastic bag in cooler?	

Additional Notes: all fish collected

Signature of QA/QC Personnel: [Signature] Date/Time: 10/12/14

Print Name/Company: AMEC

N 33° 42.835'

W 118° 16.417

POLB/POLA Food Web Complex - Mussels Sampling:

LA Outer Harbor, (Inside Breakwater) - site #1

Site ID: OA-ST-MS-Comp1-01-2014-10-22

Date: 10/22/14 Time On-site: 1720 Time Off-Site: _____

Cleaned / Scrubbed Mussel? Y / N Photos of Source Area? Y / N

Measurements / Notes:

mussels all taken from outer harbor / tip of Cabrillo Pier.

Tide: +2.2' Rising

65°F, 32 feet

Replicate 1: Rough Count: 100 (5-8cm) (2-3.75 inch)

Replicate 2: Rough Count: 100 (5-8cm)

Replicate 3: Rough Count: 95 (5-8cm)

Replicate 4: Rough Count: 100 (5-8cm)

Replicate 5: Rough Count: 105 (5-8cm)

Consolidated Slip
rep 1 = 33 oysters
2 = 19 oysters
3 = 15 oyster

60-100 mussels, 5-8cm, optimal.

POLB/POLA Food Web Complex - Mussels Sampling:

@ B168/169
+ 2 in. box

Site ID: LA INNER Harbor - ^① ~~02~~ - B168/169 ^② GPS 33°45.243'N 118°16.069'W

Date: 10/22/14 Time On-site: 1300 Time Off-Site: 1515

Cleaned / Scrubbed Mussel? (Y) N Photos of Source Area? (Y) N

Measurements / Notes: Comp / 45 Large / 45 small, Ralf yellow bag

temp chrs and Boogie: 47 small 1-2" 18" Big ones

66°F water, 33 feet deep mussels

tide states: +0.4 @ end, lowest tide, start @ +1.5 tide, highest

rule of collection = +/- 1' (2 foot range)

all *M. galloprovincialis*,

Salinity: _____

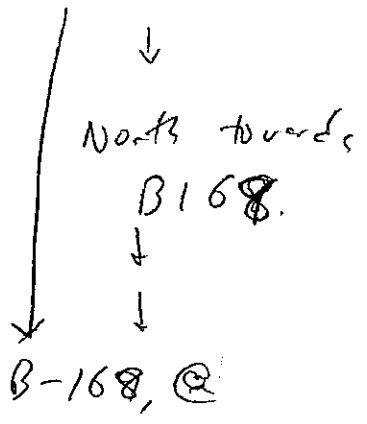
Replicate 1: Rough Count: 67 (4-8cm) tip of B169

Replicate 2: Rough Count: 67 (4-8cm)

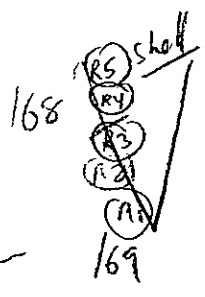
Replicate 3: Rough Count: 61 (5-8cm)

Replicate 4: Rough Count: 65 (5-8cm)

Replicate 5: Rough Count: 65 (5-8cm)



(A) Archive, (



Rep 4/5

POLB/POLA Food Web Complex - Mussels Sampling:

^{Rep 1, 2, 3}
33° 46.507' N / 33° 46.322' N
118° 14.807' W / 118° 14.984' W

Site ID: consolidated slip = 03

Date: 10/22/14 Time On-site: 1545

Time Off-Site: 1610
to C.S. Pier 1610

Cleaned / Scrubbed Mussel? Y N Photos of Source Area? Y N

Measurements / Notes: Oysters

2 oysters ≈ 17 grams, avg = 8 grams of tissue
collected @ +0.5 - +1.5' MLLW.

Reps 1 Furthest North, adjacent to Mazon Painted barge
Reps 1, 2, 3 by Mazon, Reps 4/5 by dock corner / farther south
tide @ +0.6, Rising / Post-slack

Replicate 1: Rough Count: 33

Replicate 2: Rough Count: 19

Replicate 3: Rough Count: 15

Replicate 4: Rough Count: 19 oysters 5-8"

Replicate 5: Rough Count: 19 oysters 5"

★ call POLB Pilots @ (562) 432-0664 for ship movements

POLB/POLA Food Web Complex - Mussels Sampling:

Long Beach Inner Harbor - Mussels - site # 4
Site ID: IB-ST-MS-Comp1-04-2014-10-27

Date: 10/27/2014 Time On-site: 1620 Time Off-Site: 1730

Cleaned / Scrubbed Mussel? Y / N Photos of Source Area? Y / N

Measurements / Notes: _____

Start of collection: 1625 tide: +1.3 ft ebb

mussels were collected at surface / 1 ft below surface

01: 1625

02: 1640

03: 1645

04: 1655

05: 1700

Comp 1
Replicate 1: Rough Count: ~~55~~ 110 → IB-ST-MS-Comp1-04-2014-10-27

Comp 2
Replicate 2: Rough Count: ~~100~~ 98 → IB-ST-MS-Comp2-04-2014-10-27

Comp 3
Replicate 3: Rough Count: ~~100~~ 100 → IB-ST-MS-Comp3-04-2014-10-27

Comp 4
Replicate 4: Rough Count: ~~100~~ 103 → IB-ST-MS-Comp4-04-2014-10-27

Comp 5
Replicate 5: Rough Count: _____ → IB-ST-MS-Comp5-04-2014-10-27

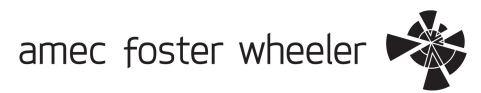
GPS of site: 33.75555° N 118.22428° W

GPS of 2nd site (if moved): _____

APPENDIX E

CHEMISTRY SUMMARY TABLES

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix E - Tissue Chemistry Summary Tables

Consolidated Slip (CS)					Total PCBs (ug/kg wet weight)		Organochlorine Pesticides (ug/kg wet weight)			
Species	Tissue	Sample ID	Percent Solids	Percent Lipids	Total PCBs (209 congeners)	Total PCBs (SQO congeners) ^a	Total DDDs ^a	Total DDEs ^a	Total DDTs ^a	4,4'-DDMU
California Halibut	Skin-off Fillet	CS-FF-CH-01-03-20141010	22.6	<0.0096	15.2	13.7	0.14	1.7	0.260	<0.120
		CS-FF-CH-02-03-20141010	20.7	0.0096	19.7	18.3	1.18	27.7	0.430	1.40
		CS-FF-CH-03-03-20141010	23.5	0.0099	4.8	4.53	1.3	19.3	<0.160	1.20
		CS-FF-CH-04-03-20141010	22.4	0.187	68.2	61.1	1.48	29.7	<0.160	1.50
		CS-FF-CH-05-03-20141010	22.9	0.0291	20.7	19.0	0.65	13.86	<0.150	0.790
		CS-FF-CH-06-03-20141010	22.5	<0.0096	12.9	11.9	<1.60	28.8	<0.160	1.50
		CS-FF-CH-07-03-20141010	22.9	<0.0096	15.9	14.4	0.43	7.44	<0.160	0.430
		CS-FF-CH-08-03-20141010	21.4	0.0096	35.9	34.5	2.18	49.2	0.18	2.00
		CS-FF-CH-09-03-20141010	23.2	0.0098	13.0	12.5	1.24	15.65	<0.160	0.880
		<i>Site Average:</i>	22.7	0.0487	22.9	21.1	1.30	21.2	0.205	1.13
California Halibut	Offal	CS-OF-CH-08-03-20141010	25.2	0.513	825	780	12.2	230	<1.60	11
Lizard Fish	Skin-off Fillet	CS-FF-LF-02-03-20141010	22.6	0.127	43.7	38.2	1.01	19.6	<0.160	1.40
White Surfperch	Skin-off Fillet	CS-FF-WS-04-03-20141010	21.8	0.316	53.3	49.7	0.87	5.00	0.170	0.200
White Surfperch	Offal	CS-OF-WS-04-03-20141010	29.3	8.67	1107	1012	56.3	437	3.8	33
White Surfperch	Whole Organism	CS-WO-WS-01-03-20141010	29.0	6.68	554	507	28.3	164	<1.60	8.70
		CS-WO-WS-02-03-20141010	28.6	4.10	869	866	70.5	546	8.10	25
		CS-WO-WS-03-03-20141010	30.6	7.62	715	659	42.9	174	<1.60	11
		CS-WO-WS-05-03-20141010	29.7	6.74	655	611	34.5	163	1.70	7.60
		CS-WO-WS-06-03-20141010	29.0	9.20	581	504	27.5	133	1.70	7.40
		CS-WO-WS-07-03-20141010	29.1	6.26	437	395	20.3	102	<1.60	6.40
		CS-WO-WS-08-03-20141010	28.2	6.00	488	446	62.0	263	<1.60	14.0
		CS-WO-WS-09-03-20141010	30.7	6.33	609	542	51.7	83.0	<1.60	6.10
		CS-WO-WS-10-03-20141010	28.8	7.04	623	579	38.4	152	<1.60	9.60
		<i>Site Average:</i>	29.3	6.66	614.6	568	41.8	198	2.34	10.6
Oyster	Soft Tissue	CS-ST-OY-COMP1-03-2014-10-22	13.0	1.23	149	110	8.60	25.6	3.20	1.90
		CS-ST-OY-COMP2-03-2014-10-22	12.5	1.21	159	116	14.4	34.6	4.18	3.60
		CS-ST-OY-COMP3-03-2014-10-22	12.3	0.956	122	89.0	16.6	41.4	5.10	4.60
		CS-ST-OY-COMP4-03-2014-10-22	13.2	0.588	106	77.7	10.1	28.7	3.16	2.20
		CS-ST-OY-COMP5-03-2014-10-22	12.6	1.08	150	109	13.0	35.7	4.12	2.60
				<i>Site Average:</i>	12.7	1.01	137	100	12.5	33.2

< Value Value is below minimum detection limit.

^a Summation for total PCBs and DDXs followed SQO guidelines (SCCWRP 2014). Includes SQO required 1.72 multiplier to compensate for abbrev. list

Note: values below MDL are used in site average calculations.

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix E - Tissue Chemistry Summary Tables

Fish Harbor (FH)					Total PCBs (ug/kg wet weight)		Organochlorine Pesticides (ug/kg wet weight)			
Species	Tissue	Sample ID	Percent Solids	Percent Lipids	Total PCBs (209 congeners)	Total PCBs (SQO congeners) ^a	Total DDDs ^a	Total DDEs ^a	Total DDTs ^a	4,4'-DDMU
California Halibut	Skin-off Fillet	FH-FF-CH-01-08-20141013	23.2	0.0774	24.7	23.3	<0.130	1.50	<0.160	<0.120
		FH-FF-CH-02-08-20141013	22.7	0.0196	29.3	26.7	<0.130	8.33	<0.150	0.460
		FH-FF-CH-03-08-20141013	22.5	0.0389	13.7	12.5	<0.130	1.10	<0.160	<0.120
		FH-FF-CH-04-08-20141013	22.7	0.0195	17.1	15.9	<0.130	1.80	<0.160	<0.120
		FH-FF-CH-05-08-20141013	22.7	<0.0096	5.16	4.81	<0.130	0.790	<0.160	<0.120
		FH-FF-CH-06-08-20141013	22.3	0.0580	18.5	17.2	<0.130	4.64	<0.160	0.220
		FH-FF-CH-07-08-20141013	21.1	0.0196	12.6	13.2	0.280	57.4	<0.160	1.80
		FH-FF-CH-08-08-20141013	21.8	0.0800	29.4	28.6	<0.130	1.50	<0.160	<0.120
		FH-FF-CH-09-08-20141013	21.9	0.2540	78.8	75.9	<0.130	8.24	<0.160	0.280
		FH-FF-CH-10-08-20141013	22.6	<0.0096	18.6	17.5	<0.130	2.60	<0.160	<0.120
		<i>Site Average:</i>	22.3	0.0709	24.8	23.6	0.145	8.79	<1.60	0.348
California Halibut	Offal	FH-OF-CH-07-08-20141013	24.1	1.20	541	546	3.00	730	<1.60	13.0
Shiner Surfperch	Whole Organism	FH-WO-SS-09-08-20141013	NA*	4.38	711	702	NA**	NA**	NA**	NA**
White Surfperch	Skin-off Fillet	FH-FF-WS-01-08-20141013	22.1	0.207	43.3	42.9	0.880	68.3	<0.160	3.40
White Surfperch	Offal	FH-OF-WS-01-08-20141013	27.1	6.31	587	564	8.90	795	<1.60	33.0
White Surfperch	Whole Organism	FH-WO-WS-02-08-20141013	26.8	5.12	398	368	<1.30	<56.0	<1.50	<1.20
		FH-WO-WS-03-08-20141013	23.7	3.17	335	322	<1.30	<56.0	<1.60	<1.20
		FH-WO-WS-04-08-20141013	23.5	2.08	264	261	<1.30	<56.0	<1.60	<1.20
		FH-WO-WS-05-08-20141013	24.6	2.65	244	234	<1.30	<56.0	<1.50	<1.20
		FH-WO-WS-06-08-20141013	23.4	3.52	314	302	<1.30	<56.0	<1.60	<1.20
		FH-WO-WS-07-08-20141013	30.3	9.00	353	326	<1.30	<57.0	<1.60	<1.20
		FH-WO-WS-08-08-20141013	29.6	6.72	732	706	<1.30	<56.0	<1.50	<1.20
		FH-WO-WS-10-08-20141013	29.3	5.70	770	714	<1.30	<56.0	<1.60	<1.20
		<i>Site Average:</i>	26.4	4.75	426	404	<1.30	<57.0	<1.60	<1.20
White Croaker	Skin-off Fillet	FH-FF-WC-01-08-20141013	22.1	0.995	136	116	0.300	28.9	<0.160	2.80
		FH-FF-WC-02-08-20141013	21.4	0.746	53.8	44.5	0.480	49.5	<0.160	2.20
		FH-FF-WC-03-08-20141013	22.7	1.44	160	137	2.11	189	0.230	10.0
		FH-FF-WC-04-08-20141013	23.1	2.85	76.1	63.2	1.68	105	0.220	11.0
		FH-FF-WC-05-08-20141013	23.4	3.35	261	222	3.44	371	0.260	21.0
		FH-FF-WC-06-08-20141013	23.0	3.48	222	194	4.64	443	0.530	38.0
		FH-FF-WC-07-08-20141013	24.0	3.79	307	258	3.46	437	0.440	21.0
		FH-FF-WC-08-08-20141013	24.6	2.54	82.5	69.3	3.19	197	0.280	17.0
		FH-FF-WC-09-08-20141013	23.1	2.42	167	143	3.19	261	0.210	17.0
		FH-FF-WC-10-08-20141013	23.6	2.19	140	118	3.30	201	<1.60	14.0
		<i>Site Average:</i>	23.1	2.38	161	137	2.58	228	0.409	15.4
White Croaker	Offal	FH-OF-WC-10-08-20141013	30.9	10.3	538	451	9.80	548	<1.60	48.0

< Value

Value is below minimum detection limit.

a

Summation for total PCBs and DDXs followed SQO guidelines (SCCWRP 2014). Includes SQO required 1.72 multiplier to compensate for abbrev. list

NA

Not analyzed.

*

Total solids not analyzed due to low sample volume.

**

DDXs analyses were not requested for this sample.

Note: values below MDL are used in site average calculations.

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix E - Tissue Chemistry Summary Tables

Inner Harbor - Port of Los Angeles (IA)					Total PCBs (ug/kg wet weight)		Organochlorine Pesticides (ug/kg wet weight)			
Species	Tissue	Sample ID	Percent Solids	Percent Lipids	Total PCBs (209 congeners)	Total PCBs (SQO congeners) ^a	Total DDDs ^a	Total DDEs ^a	Total DDTs ^a	4,4'-DDMU
White Croaker	Skin-off Fillet	IA-FF-WC-01-07-20141011	23.3	1.54	92.7	80.0	1.70	88.7	<1.60	8.50
		IA-FF-WC-02-07-20141011	23.8	1.48	87.3	77.7	0.940	39.5	<1.60	4.30
		IA-FF-WC-03-07-20141011	23.2	1.06	80.9	69.6	0.810	61.9	<0.160	4.00
		IA-FF-WC-04-07-20141011	21.6	1.27	81.4	70.5	0.870	59.8	0.190	3.90
		IA-FF-WC-05-07-20141011	23.7	2.14	127	106	2.30	102	<0.310	7.30
		IA-FF-WC-06-07-20141011	23.5	2.50	150	129	1.30	84.6	2.00	7.10
		IA-FF-WC-07-07-20141011	24.1	1.73	148	131	<0.150	17.1	0.230	0.79
		IA-FF-WC-08-07-20141011	22.3	0.39	86.4	77.7	5.30	298	1.80	12.00
		IA-FF-WC-09-07-20141011	22.3	1.38	157	140	3.00	102	0.720	8.20
		IA-FF-WC-10-07-20141011	23.8	1.55	186	161	2.90	781	<1.60	45.00
		<i>Site Average:</i>	23.2	1.50	120	104	1.93	163	1.02	10.1
White Croaker	Offal	IA-OF-WC-09-07-20141011	32.9	8.90	1084	926	0.400	35.5	<0.160	2.20
Mussel	Soft Tissue	IA-ST-MS-COMP1-02-2014-10-22	11.1	1.07	65.1	54.6	5.25	43.8	2.75	5.00
		IA-ST-MS-COMP2-02-2014-10-22	13.3	1.18	68.0	56.6	2.80	31.5	2.07	2.20
		IA-ST-MS-COMP3-02-2014-10-22	13.2	1.22	67.2	56.2	6.00	28.1	4.00	2.50
		IA-ST-MS-COMP4-02-2014-10-22	13.0	1.23	70.5	58.4	7.10	30.8	0.300	5.50
		IA-ST-MS-COMP5-02-2014-10-22	12.3	1.03	56.8	47.2	30.0	35.8	<1.60	2.70
				<i>Site Average:</i>	12.6	1.15	65.5	54.6	10.23	34.0

< Value Value is below minimum detection limit.

^a Summation for total PCBs and DDXs followed SQO guidelines (SCCWRP 2014). Includes SQO required 1.72 multiplier to compensate for abbrev. list

Note: values below MDL are used in site average calculations.

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix E - Tissue Chemistry Summary Tables

Inner Harbor - Port of Long Beach (IB)					Total PCBs (ug/kg wet weight)		Organochlorine Pesticides (ug/kg wet weight)			
Species	Tissue	Sample ID	Percent Solids	Percent Lipids	Total PCBs (209 congeners)	Total PCBs (SQO congeners) ^a	Total DDDs ^a	Total DDEs ^a	Total DDTs ^a	4,4'-DDMU
California Halibut	Skin-off Fillet	IB-FF-CH-01-05-20141012	23.1	0.0191	4.96	4.70	0.400	35.5	<0.160	2.20
		IB-FF-CH-02-05-20141012	23.7	0.00976	36.5	34.3	<0.660	3.20	<0.770	<0.590
		<i>Site Average:</i>	<i>23.4</i>	<i>0.0144</i>	<i>20.7</i>	<i>19.5</i>	<i>0.530</i>	<i>19.4</i>	<i>0.77</i>	<i>1.40</i>
California Halibut	Offal	IB-OF-CH-01-05-20141012	23.6	0.851	185	174	5.40	680	<1.50	27.0
Lizard Fish	Skin-off Fillet	IB-FF-LF-01-05-20141012	21.6	0.229	38.1	32.8	0.840	36.0	<0.160	2.60
		IB-FF-LF-02-05-20141012	21.3	0.279	39.1	33.1	<1.30	36.5	2.21	3.20
		IB-FF-LF-03-05-20141012	21.8	0.534	77.4	65.7	1.02	58.4	<0.160	3.80
		IB-FF-LF-04-05-20141012	22.7	0.215	27.2	23.6	0.560	27.2	0.600	2.40
		IB-FF-LF-05-05-20141012	22.2	0.279	47.3	40.8	0.520	20.7	<0.160	0.900
		<i>Site Average:</i>	<i>21.9</i>	<i>0.307</i>	<i>45.8</i>	<i>39.2</i>	<i>0.848</i>	<i>35.8</i>	<i>0.66</i>	<i>2.58</i>
Shiner Surfperch	Whole Organism	IB-WO-SS-01-05-20141012	24.5	3.04	268	252	<1.30	<57.0	<1.60	<1.20
		IB-WO-SS-02-05-20141012	26.8	4.31	349	343	<1.30	<56.0	<1.60	<1.20
		IB-WO-SS-03-05-20141012	23.3	1.89	313	315	<1.30	<57.0	<1.60	<1.20
		IB-WO-SS-04-05-20141012	26.2	4.84	361	359	3.80	477	<1.60	27.0
		IB-WO-SS-05-05-20141012	27.0	5.29	298	289	4.20	621	<1.60	46.0
		IB-WO-SS-06-05-20141012	26.1	4.03	415	409	6.40	538	<1.60	35.0
<i>Site Average:</i>	<i>25.6</i>	<i>3.90</i>	<i>334</i>	<i>328</i>	<i>3.05</i>	<i>301</i>	<i><1.60</i>	<i>18.6</i>		
White Surfperch	Skin-off Fillet	IB-FF-WS-10-05-20141012	21.8	ND	10.3	10.7	0.074	5.50	<0.160	0.190
White Surfperch	Offal	IB-OF-WS-10-05-20141012	30.6	6.74	689	673	8.60	639	2.4	26.0
White Surfperch	Whole Organism	IB-WO-WS-07-05-20141012	28.2	5.35	567	549	6.10	390	<1.60	23.0
		IB-WO-WS-08-05-20141012	28.8	4.36	705	733	6.10	478	<1.60	21.0
		IB-WO-WS-09-05-20141012	27.1	4.62	600	619	5.90	700	<1.60	27.0
		<i>Site Average:</i>	<i>28.1</i>	<i>4.78</i>	<i>624</i>	<i>633.5</i>	<i>6.03</i>	<i>523</i>	<i><1.60</i>	<i>23.7</i>
White Croaker	Skin-off Fillet	IB-FF-WC-01-05-20141012	22.6	1.09	115	99.2	2.06	75.8	<0.160	5.70
		IB-FF-WC-02-05-20141012	21.6	1.15	117	99.2	<1.30	51.2	<0.160	5.00
		IB-FF-WC-03-05-20141012	24.2	2.24	140	118	2.00	152	<0.620	11.0
		IB-FF-WC-04-05-20141012	22.4	1.86	271	232	2.77	85.0	<0.310	7.60
		IB-FF-WC-05-05-20141012	23.7	1.57	219	191	2.90	213	<0.620	13.0
		IB-FF-WC-06-05-20141012	22.9	0.895	193	167	2.30	108	2.00	8.80
		IB-FF-WC-07-05-20141012	22.8	1.33	94.5	78.9	<1.50	81.9	<0.160	6.30
		IB-FF-WC-08-05-20141012	20.9	2.02	316	276	1.42	87.6	0.39	4.80
		IB-FF-WC-09-05-20141012	22.8	1.28	415	351	2.30	158	<0.620	9.20
		IB-FF-WC-10-05-20141012	23.4	2.66	661	566	8.00	648	<1.50	22.0
<i>Site Average:</i>	<i>22.7</i>	<i>1.61</i>	<i>254</i>	<i>218</i>	<i>2.66</i>	<i>166</i>	<i>0.65</i>	<i>9.34</i>		
White Croaker	Offal	IB-OF-WC-10-05-20141012	32.5	10.8	2824	2407	10.6	<56.0	<1.60	36.0
Mussel	Soft Tissue	IB-ST-MS-COMP1-04-2014-10-27	14.6	1.44	59.2	49.6	2.93	39.6	1.41	5.20
		IB-ST-MS-COMP2-04-2014-10-27	14.0	1.5	66.3	55.4	2.90	40.8	4.50	5.10
		IB-ST-MS-COMP3-04-2014-10-27	15.5	1.81	72.9	61.4	2.64	39.7	0.910	7.70
		IB-ST-MS-COMP4-04-2014-10-27	16.1	1.78	71.7	59.9	3.60	46.9	1.06	6.60
		IB-ST-MS-COMP5-04-2014-10-27	12.9	0.808	44.0	36.9	2.41	26.8	0.770	5.20
		<i>Site Average:</i>	<i>14.6</i>	<i>1.47</i>	<i>62.8</i>	<i>52.6</i>	<i>2.90</i>	<i>38.8</i>	<i>1.73</i>	<i>5.96</i>

< Value

Value is below minimum detection limit (MDL).

a

Summation for total PCBs and DDXs followed SQO guidelines (SCCWRP 2014). Includes SQO required 1.72 multiplier to compensate for abbrev. list

Note: values below MDL are used in site average calculations.

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix E - Tissue Chemistry Summary Tables

Outer Harbor - Port of Los Angeles (OA)					Total PCBs (ug/kg wet weight)		Organochlorine Pesticides (ug/kg wet weight)			
Species	Tissue	Sample ID	Percent Solids	Percent Lipids	Total PCBs (209 congeners)	Total PCBs (SQO congeners) ^a	Total DDDs ^a	Total DDEs ^a	Total DDTs ^a	4,4'-DDMU
California Halibut	Skin-off Fillet	OA-FF-CH-01-06-20141011	23.3	0.146	14.3	13.3	<0.130	2.50	<0.160	0.170
		OA-FF-CH-02-06-20141011	22.0	0.200	12.6	11.9	<0.130	3.00	<0.150	0.190
		OA-FF-CH-03-06-20141011	24.8	0.115	7.53	7.04	<0.130	1.40	<0.150	<0.120
		OA-FF-CH-04-06-20141011	23.5	0.070	7.60	7.21	<0.130	2.40	<0.160	<0.160
		OA-FF-CH-05-06-20141011	22.9	0.040	16.3	14.8	<0.130	3.30	<0.160	0.190
		OA-FF-CH-06-06-20141011	22.3	0.069	12.2	11.0	0.810	49.4	<0.160	3.40
		OA-FF-CH-07-06-20141011	23.5	0.204	15.6	14.7	<0.130	4.88	<0.160	0.270
		OA-FF-CH-08-06-20141011	23.9	0.127	13.9	13.2	<0.130	5.31	<0.150	0.400
		OA-FF-CH-09-06-20141011	21.7	0.127	5.68	5.34	<0.130	6.65	<0.160	0.520
		OA-FF-CH-10-06-20141011	23.5	0.158	15.5	14.6	<0.130	5.99	<0.160	0.330
		Site Average:	23.1	0.126	12.1	11.3	0.198	8.48	<0.160	0.575
California Halibut	Offal	OA-OF-CH-06-06-20141011	27.5	2.70	241	220	1.90	127	<1.60	6.90
Lizard Fish	Skin-off Fillet	OA-FF-LF-01-06-20141011	22.1	0.291	15.4	13.6	<0.130	12.76	<0.150	0.870
		OA-FF-LF-02-06-20141011	22.7	0.106	18.5	16.2	<1.30	5.80	<1.60	<1.20
		Site Average:	22.4	0.2	16.9	14.9	<1.30	9.28	<1.60	1.04
Shiner Surfperch	Whole Organism	OA-WO-SS-08-06-20141013	22.5	1.95	86.8	84.5	<1.30	<56.0	<1.50	<1.20
		OA-WO-SS-09-06-20141011	24.1	2.08	114	110	<1.30	<57.0	<1.60	<1.20
		OA-WO-SS-10-06-20141011	23.4	1.88	107	105	<1.30	<56.0	<1.60	<1.20
		Site Average:	23.4	1.97	102.5	99.6	<1.30	<57.0	<1.60	<1.20
White Surfperch	Skin-off Fillet	OA-FF-WS-07-06-20141013	22.4	0.0702	5.30	5.27	<0.150	7.10	<0.150	0.350
White Surfperch	Offal	OA-OF-WS-07-06-20141013	30.2	9.39	191	184	5.80	377.4	<1.60	15.0
White Surfperch	Whole Organism	OA-WO-WS-01-06-20141011	25.4	2.67	94.7	94.1	<1.30	<57.0	<1.60	<1.20
		OA-WO-WS-02-06-20141011	25.2	1.52	93.5	96.5	<1.30	<57.0	<1.60	<1.20
		OA-WO-WS-03-06-20141011	23.3	2.14	93.0	94.2	<1.30	<56.0	<1.50	<1.20
		OA-WO-WS-04-06-20141011	25.8	2.22	94.6	93.7	<1.30	<56.0	<1.50	<1.20
		OA-WO-WS-05-06-20141011	23.0	1.91	108	109	<1.30	<56.0	<1.60	<1.20
		OA-WO-WS-06-06-20141013	28.9	7.28	444	420	<1.30	<57.0	<1.60	<1.20
		Site Average:	25.3	3.0	154.5	151.3	<1.30	<57.0	<1.60	<1.20
White Croaker	Skin-off Fillet	OA-FF-WC-01-06-20141011	22.2	2.41	59.8	51.4	0.710	115.6	<0.150	5.50
		OA-FF-WC-02-06-20141011	23.0	3.60	72.4	61.5	1.90	147.4	3.50	6.50
		OA-FF-WC-03-06-20141011	21.7	1.13	49.6	43.0	<0.680	33.8	<0.800	<1.60
		OA-FF-WC-04-06-20141011	24.1	1.81	34.2	29.2	0.530	18.6	0.380	<1.50
		OA-FF-WC-05-06-20141011	23.9	2.97	65.0	56.8	<1.50	86.1	<0.150	5.40
		OA-FF-WC-06-06-20141011	22.8	1.87	71.9	61.4	<1.30	63.2	<1.60	6.50
		OA-FF-WC-07-06-20141011	23.0	3.48	129	113	4.07	490	0.540	35.0
		OA-FF-WC-08-06-20141011	23.1	1.60	54.1	46.6	<1.30	74.9	<1.60	6.60
		OA-FF-WC-09-06-20141011	21.2	1.22	31.0	26.5	1.40	156.6	<1.60	7.30
		OA-FF-WC-10-06-20141011	22.5	2.25	102	89.4	1.88	137.5	0.280	13.00
		Site Average:	22.7	2.23	66.9	57.9	1.53	132.4	1.06	8.9
White Croaker	Offal	OA-OF-WC-02-06-20141011	33.3	11.6	232	197	2.30	211	<1.60	8.60
Mussel	Soft Tissue	OA-ST-MS-COMP1-01-2014-10-22	13.5	1.11	41.9	36.2	1.00	35.5	<1.60	3.60
		OA-ST-MS-COMP2-01-2014-10-22	14.1	1.43	51.0	43.5	1.47	44.5	0.670	4.20
		OA-ST-MS-COMP3-01-2014-10-22	14.7	1.28	45.1	38.1	<1.30	43.2	0.790	4.30
		OA-ST-MS-COMP4-01-2014-10-22	13.2	1.45	49.0	41.6	<1.20	36.4	0.560	3.30
		OA-ST-MS-COMP5-01-2014-10-22	11.4	0.745	33.3	28.9	<1.20	34.1	0.630	3.10
		Site Average:	13.4	1.20	44.0	37.7	1.23	38.7	0.850	3.70

< Value

Value is below minimum detection limit.

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Summation for total PCBs and DDXs followed SQO guidelines (SCCWRP 2014). Includes SQO required 1.72 multiplier to compensate for abbrev. list

Note: values below MDL are used in site average calculations.

Eurofins Calscience - EPA 8270C Total PCBs - "Low Resolution" - Trimmed to the SQO list of PCB congeners

Final Report Harbor Toxics TMDL Special Study: Food Web Sampling

High Resolution and Low Resolution - Total PCB Method Comparison														
Eurofins Calscience - EPA 8270C Total PCBs - "Low Resolution" - Trimmed to the SQO list of PCB congeners. Reporting Limit: 0.2-0.8 ug/kg	Units	FH-FF-CH-07-08-20141013	FH-FF-WC-10-08-20141013	FH-FF-WS-01-08-20141013	IA-FF-WC-09-07-20141011	IB-FF-CH-01-05-20141012	IB-FF-WC-10-05-20141012	IB-FF-WS-10-05-20141012	OA-FF-CH-06-06-20141011	OA-FF-WC-02-06-20141011	OA-FF-WS-07-06-20141013	CS-FF-CH-08-03-20141010	CS-FF-WS-04-03-20141010	
		PCB005/008	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB018	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB028	ug/kg	0.16	2.6	0.56	0.88	0.11	3.9	ND	0.13	0.7	0.12	0.18	ND	
PCB044	ug/kg	ND	2.9	0.35	1.4	ND	7.9	ND	ND	1.4	ND	ND	ND	
PCB052	ug/kg	0.99	4.3	1.8	2.8	0.68	16	ND	0.64	1.8	0.17	4	1.4	
PCB066	ug/kg	0.98	4.4	1.9	3.5	0.56	21	ND	0.66	1.7	0.15	1.4	0.57	
PCB101	ug/kg	3.7	11	4.6	12	2.2	92	0.25	2.7	4.8	0.25	11	1.5	
PCB105	ug/kg	1.3	3.2	1.8	3.9	0.64	26	0.13	0.73	1.6	0.12	2.6	0.53	
PCB110	ug/kg	1.9	7	1.8	6.8	1.3	50	ND	1.6	3.1	0.14	4	0.28	
PCB118	ug/kg	3.9	10	5.5	13	1.9	95	0.41	2.2	4.7	0.34	7.4	1.5	
PCB128	ug/kg	0.69	1.5	0.79	2.4	0.41	17	ND	0.47	0.79	0.068	1.6	0.21	
PCB132/153	ug/kg	7.2	20	7.4	32	4.8	230	0.76	5.1	9.1	0.44	33	3.9	
PCB138/158	ug/kg	4.7	11	5.3	19	3	140	0.51	3.1	5.9	0.29	15	2	
PCB180	ug/kg	1.7	5.7	1.9	8.6	1.4	71	0.2	1.1	2.4	0.11	9.8	1.3	
PCB187	ug/kg	1.1	4.7	1.3	7.5	1.3	57	0.17	1.1	1.9	0.093	8.6	1.1	
PCB195	ug/kg	ND	0.58	ND	0.68	ND	5.3	ND	ND	0.22	ND	0.83	ND	
SQO Sum of Eurofins Calscience PCB Method 8270C (ug/kg)	ug/kg	28	89	35	114	18	832	2	20	40	2	99	14	
SQO Sum of Eurofins Calscience PCB Method 8270C (ug/kg) (with x1.72 SQO correction factor)	ug/kg	48.7	153	60.2	197	31.5	1431	4.2	33.6	69.0	3.9	171	24.6	

Note: ND values were counted as 0 ug/kg.

The above list is the closest reported PCB congener list as described in the SCCWRP Sediment Quality Assessment Technical Support Manual (SCCWRP 2014).

This SQO manual lists the PCB congener list as: PCB-8, 18, 28, 44, 52, 66, 101, 105, 110, 118, 128, 138, 153, 180, 187, 195.

When two PCB congeners are reported together (PCB-5/8 for example), the lab cannot achieve separation of those PCB congener peaks because they overlap or are too close together.

The lab-standard is based on a summation of the two peaks, and the lab can't differentiate the concentrations of the two congeners.

Vista - Total PCBs - EPA 1668C - "High Resolution" - Trimmed to the SQO list of PCB congeners
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling

High Resolution and Low Resolution - Total PCB Method Comparison													
Vista - Total PCBs - EPA 1668C - "High Resolution" - Trimmed to the SQO list of PCB congeners. Reporting Limit: 0.434 – 9.93 pg/g (0.000434 – 0.00993 ug/kg)	Units	FH-FF-CH-07-08-20141013	FH-FF-WC-10-08-20141013	FH-FF-WS-01-08-20141013	IA-FF-WC-09-07-20141011	IB-FF-CH-01-05-20141012	IB-FF-WC-10-05-20141012	IB-FF-WS-10-05-20141012	OA-FF-CH-06-06-20141011	OA-FF-WC-02-06-20141011	OA-FF-WS-07-06-20141013	CS-FF-CH-08-03-20141010	CS-FF-WS-04-03-20141010
		PCB-5/8	pg/g	3.09	82.6	1.66	36.3	8.56	59.6	0.916	11.8	34.4	0.604
PCB-18	pg/g	17.4	392	36.1	120	17.9	444	11.7	27.7	177	9.02	18	41.8
PCB-28	pg/g	44.2	2190	463	775	51.7	1550	98.7	95.4	729	70.4	67.1	584
PCB-44	pg/g	7.03	2110	256	989	8.86	3130	26.2	30.4	1000	29.5	8.7	350
PCB-52/69	pg/g	287	3550	1270	1900	127	7600	244	332	1760	171	1000	3140
PCB-66/76	pg/g	279	3410	1390	2680	133	8940	210	276	1620	159	371	973
PCB-90/101	pg/g	1080	8420	3520	9240	362	38200	741	896	4400	412	2420	3380
PCB-105	pg/g	341	2130	1130	2580	99.9	9000	204	189	1240	123	533	901
PCB-106/118	pg/g	1090	7220	3620	8920	332	39600	775	709	4010	430	1570	2610
PCB-110	pg/g	592	6030	1480	5400	249	20400	189	555	3150	139	956	672
PCB-128/162	pg/g	186	1100	535	1510	40.8	7130	121	137	692	60.5	314	345
PCB-138/163/164	pg/g	1280	9180	3850	13600	420	54300	1100	992	5450	488	3040	4000
PCB-153	pg/g	1670	12700	4680	18900	547	77600	1490	1350	6590	624	5740	6690
PCB-180	pg/g	511	5450	1580	7740	174	33400	532	399	2700	201	2250	2690
PCB-182/187	pg/g	286	4560	1040	6650	155	25200	442	386	2030	139	1630	2390
PCB-195	pg/g	20.2	345	67.1	278	7.9	2340	24.2	19.4	147	8.34	114	154
SQO Sum of Vista PCB Method 1668C (pg/g)	pg/g	7700	68900	24900	81300	2700	328000	6200	6400	35700	3100	20000	28900
SQO Sum of Vista PCB Method 1668C (ug/kg)	ug/kg	7.7	68.9	24.9	81.3	2.7	329	6.2	6.4	35.7	3.1	20.0	28.9
SQO Sum of Vista PCB Method 1668C (ug/kg) (with x1.72 SQO correction factor)	ug/kg	13.2	118	42.9	140	4.7	566	10.7	11.0	61.5	5.3	34.5	49.7

Note: The above list is the closest reported PCB congener list as described in the SCCWRP Sediment Quality Assessment Technical Support Manual (SCCWRP 2014).

This SQO manual lists the PCB congener list as: PCB-8, 18, 28, 44, 52, 66, 101, 105, 110, 118, 128, 138, 153, 180, 187, 195.

When two PCB congeners are reported together (PCB-5/8 for example), the lab cannot achieve separation of those PCB congener peaks because they overlap or are too close together.

The lab-standard is based on a summation of the two peaks, and the lab can't differentiate the concentrations of the two congeners.

**Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling**

High Resolution and Low Resolution - Total PCB Method Comparison													
Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory. Reporting Limit: 0.434 – 9.93 pg/g (0.000434 – 0.00993 ug/kg)	Units	FH-FF-CH-07-08-20141013	FH-FF-WC-10-08-20141013	FH-FF-WS-01-08-20141013	IA-FF-WC-09-07-20141011	IB-FF-CH-01-05-20141012	IB-FF-WC-10-05-20141012	IB-FF-WS-10-05-20141012	OA-FF-CH-06-06-20141011	OA-FF-WC-02-06-20141011	OA-FF-WS-07-06-20141013	CS-FF-CH-08-03-20141010	CS-FF-WS-04-03-20141010
		PCB-1	pg/g	ND	3.35	ND	4.47	0.266	3.25	0.221	0.222	1.42	ND
PCB-2	pg/g	ND	0.807	ND	0.334	ND	0.242	ND	ND	0.878	ND	ND	ND
PCB-3	pg/g	ND	0.698	ND	0.535	ND	ND	ND	ND	0.256	ND	ND	ND
PCB-4/10	pg/g	0.96	17.9	0.959	14.4	1.3	29.1	0.422	1.54	17.9	ND	0.9778	ND
PCB-5/8	pg/g	3.09	82.6	1.66	36.3	8.56	59.6	0.916	11.8	34.4	0.604	3.08	1.45
PCB-6	pg/g	0.85	13.1	0.851	6.96	1.41	20.5	0.415	1.56	6.31	ND	0.649	0.738
PCB-7/9	pg/g	ND	5.56	0.524	2.87	ND	5.39	0.306	ND	2.42	ND	ND	0.746
PCB-11	pg/g	0.821	26.7	4.3	7.23	0.594	5.89	1.78	1.77	17.4	5.83	1.77	4.96
PCB-12/13	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	0.328	ND	ND	ND
PCB-14	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-15	pg/g	ND	12.8	6	4.66	ND	3.07	1.58	ND	9.77	2.43	ND	4.99
PCB-16/32	pg/g	13.3	311	33.3	94.7	17.1	384	10.3	22.4	125	7.61	25.4	44.6
PCB-17	pg/g	8.48	156	4.48	45.9	9.88	163	1.58	15.3	54.2	1.2	8.36	4.63
PCB-18	pg/g	17.4	392	36.1	120	17.9	444	11.7	27.7	177	9.02	18	41.8
PCB-19	pg/g	1.68	25.8	1.74	11.4	1.49	62.3	0.571	1.97	21.1	0.563	1.9	2.96
PCB-20/21/33	pg/g	6.21	235	8.79	47.3	10.2	126	2.57	19.4	58.6	2.08	9.89	5.88
PCB-22	pg/g	7.56	360	14.9	69.5	15	143	3.72	20	94.5	3.33	18.5	23.2
PCB-23	pg/g	ND	ND	ND	0.268	ND	0.229	ND	ND	ND	ND	ND	ND
PCB-24/27	pg/g	1.36	31.8	2.42	10.7	1.68	71.7	0.864	2.11	15.6	0.615	1.91	4.99
PCB-25	pg/g	1.32	144	22.5	26.6	1.92	80.4	4.51	4.63	37.6	3.46	1.73	23.2
PCB-26	pg/g	5.19	274	45.3	63.3	5.53	196	8.2	9.22	66.9	4.94	14.1	107
PCB-28	pg/g	44.2	2190	463	775	51.7	1550	98.7	95.4	729	70.4	67.1	584
PCB-29	pg/g	ND	1.93	0.384	0.558	ND	1.24	ND	0.305	0.484	ND	ND	0.427
PCB-30	pg/g	ND	ND	ND	0.104	ND	ND	ND	ND	0.188	ND	ND	ND
PCB-31	pg/g	16.1	1140	158	188	18.6	372	27.5	34.1	314	29.9	23.6	177
PCB-34	pg/g	0.315	8.6	1.22	2.17	0.291	5.89	0.268	0.545	1.9	ND	0.567	ND
PCB-35	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-36	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	0.582	ND	ND	ND
PCB-37	pg/g	0.18	46.8	25.6	11.1	ND	10.9	5.13	0.321	22.6	6.11	ND	51.8
PCB-38	pg/g	2.37	35.9	6.85	33.8	1.44	139	1.26	2.92	18.8	0.935	7.37	6.96
PCB-39	pg/g	ND	0.993	0.312	ND	ND	0.288	ND	ND	0.63	ND	ND	ND
PCB-40	pg/g	ND	303	10.1	133	ND	436	ND	1.22	143	1.91	0.685	8.35
PCB-41/64/71/72	pg/g	133	1660	429	829	67.4	2840	53	157	710	48.7	262	377
PCB-42/59	pg/g	19.2	764	71.8	391	14.9	1260	8.55	48.3	335	8.94	23.5	55.4
PCB-43/49	pg/g	223	3070	942	1860	110	7470	153	277	1320	113	672	1900
PCB-44	pg/g	7.03	2110	256	989	8.86	3130	26.2	30.4	1000	29.5	8.7	350
PCB-45	pg/g	3.92	162	8.67	73.2	3.09	262	1.71	7.94	97.6	1.93	4	8.02
PCB-46	pg/g	ND	30.2	3.07	11.1	ND	46.2	0.634	0.284	18.9	ND	0.296	7.72
PCB-47	pg/g	116	1390	298	1100	51.4	3790	44.7	121	669	36	288	245
PCB-48/75	pg/g	27.4	269	69.3	134	13.4	446	10.5	38.2	93.7	7.11	30.5	52.4
PCB-50	pg/g	ND	6.68	0.556	3.33	ND	18.6	ND	0.7	3.72	ND	1.09	0.666
PCB-51	pg/g	6.78	52.8	15.4	15.3	4.2	111	3.03	13.7	29.7	3.57	183	230
PCB-52/69	pg/g	287	3550	1270	1900	127	7600	244	332	1760	171	1000	3140
PCB-53	pg/g	13.1	86.3	29.9	28.1	8.33	184	7.54	24.2	47.9	5.59	58.5	179
PCB-54	pg/g	0.755	6.94	1.66	2.86	0.423	25.3	0.369	1.22	7.66	0.523	13.8	32.7
PCB-55	pg/g	1.73	46.7	9.3	33.8	1.05	163	1.26	3.65	24.1	1.34	5	11.9
PCB-56/60	pg/g	49.2	1250	267	596	28.7	1530	31	68.2	574	31.3	78.6	283
PCB-57	pg/g	0.554	18.6	6.74	12.5	0.413	50.6	1.36	1.94	8.13	0.849	4.53	21.3
PCB-58	pg/g	ND	12.1	5.01	6.44	ND	26.5	0.817	0.92	4.47	ND	ND	9.23
PCB-61/70	pg/g	53.1	3220	981	1110	43.2	2590	109	133	1390	141	57	703
PCB-62	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-63	pg/g	10.1	152	63.8	124	4.19	395	10.4	10.2	65.3	7.17	13	58
PCB-65	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-66/76	pg/g	279	3410	1390	2680	133	8940	210	276	1620	159	371	973
PCB-67	pg/g	ND	74.4	27.9	24.1	0.713	79.6	3.52	3.38	31.7	3.32	6.02	24.1
PCB-68	pg/g	2.34	34.7	16.2	30.3	1.12	92.2	3.29	2.58	12.4	1.91	3.85	15.3
PCB-73	pg/g	ND	ND	ND	3.33	ND	ND	ND	1.07	ND	ND	5.72	8.45
PCB-74	pg/g	130	1790	830	1420	51.1	4250	121	99.7	869	94.3	175	838
PCB-77	pg/g	ND	133	91.5	53.3	0.718	72.7	9.89	3.36	73.7	9.93	0.91	99.2
PCB-78	pg/g	ND	14.1	1.88	13.6	ND	ND	ND	ND	8.46	ND	ND	1.55
PCB-79	pg/g	15.5	122	58.7	155	5.98	698	13.2	14.9	71.9	6.38	45	79.1
PCB-80	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-81	pg/g	ND	8.11	3.28	18.3	ND	65.3	0.912	1.27	3.02	ND	3.29	5.98

Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling

High Resolution and Low Resolution - Total PCB Method Comparison													
Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory. Reporting Limit: 0.434 – 9.93 pg/g (0.000434 – 0.00993 ug/kg)	Units	FH-FF-CH-07-08-20141013	FH-FF-WC-10-08-20141013	FH-FF-WS-01-08-20141013	IA-FF-WC-09-07-20141011	IB-FF-CH-01-05-20141012	IB-FF-WC-10-05-20141012	IB-FF-WS-10-05-20141012	OA-FF-CH-06-06-20141011	OA-FF-WC-02-06-20141011	OA-FF-WS-07-06-20141013	CS-FF-CH-08-03-20141010	CS-FF-WS-04-03-20141010
		PCB-82	pg/g	3.31	574	27.3	432	4.25	1730	2.6	13.7	292	2.84
PCB-83	pg/g	0.375	1.96	0.901	2.55	ND	2.33	ND	ND	0.947	ND	ND	1.08
PCB-84/92	pg/g	135	2240	479	2110	57.8	9600	95.4	159	1200	57.1	341	499
PCB-85/116	pg/g	143	1080	181	1170	43.7	2230	19.9	122	562	17.3	164	35.3
PCB-86	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND
PCB-87/117/125	pg/g	200	1990	738	1910	80.4	8070	121	187	1090	84.7	346	493
PCB-88/91	pg/g	53.9	995	234	829	29.9	3710	33.2	88.4	496	24.5	176	311
PCB-89	pg/g	0.375	17.1	1.11	6.26	ND	21.5	ND	ND	5.77	ND	ND	1.46
PCB-90/101	pg/g	1080	8420	3520	9240	362	38200	741	896	4400	412	2420	3380
PCB-93	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-94	pg/g	0.366	10.7	ND	3.99	0.348	19.9	ND	1.43	4.98	ND	2.15	5.28
PCB-95/98/102	pg/g	96.7	3480	526	2620	83.2	11200	108	276	2060	76	398	749
PCB-96	pg/g	0.558	19.7	6.33	8.15	ND	41.1	1.27	1.52	11.1	ND	2.98	31.7
PCB-97	pg/g	85.7	2030	586	1660	51.7	7380	89.8	158	999	56.2	123	260
PCB-99	pg/g	781	5310	2550	6270	245	26400	562	535	2790	291	1880	2970
PCB-100	pg/g	8.06	83	39.9	96.8	2.94	352	5.47	10	41.7	4.62	185	300
PCB-103	pg/g	8.47	121	43.1	131	4.93	549	8.06	15.8	60.3	5.24	134	281
PCB-104	pg/g	0.229	2.18	1.09	1.28	ND	3.72	ND	0.9	2	ND	12.1	25.8
PCB-105	pg/g	341	2130	1130	2580	99.9	9000	204	189	1240	123	533	901
PCB-106/118	pg/g	1090	7220	3620	8920	332	39600	775	709	4010	430	1570	2610
PCB-107/109	pg/g	86.5	634	306	786	28.5	2800	63.6	74.9	358	36.2	140	207
PCB-108/112	pg/g	1.86	266	34.4	224	1.17	891	5.8	3.71	147	4.48	3.15	19.8
PCB-110	pg/g	592	6030	1480	5400	249	20400	189	555	3150	139	956	672
PCB-111/115	pg/g	18.8	113	67.9	129	4.45	443	10.1	13.3	68.5	7.04	28.6	55.3
PCB-113	pg/g	ND	ND	ND	ND	ND	79	ND	ND	ND	ND	ND	ND
PCB-114	pg/g	10.4	140	58.8	161	3.26	613	9.51	4.85	71.8	7.02	14.9	52.1
PCB-119	pg/g	27.8	259	97.7	283	10.8	1200	20.1	26.7	118	10.6	133	210
PCB-120	pg/g	4.31	35.7	15.2	55.6	1.49	161	3.71	4.2	19.1	1.82	10.2	18
PCB-121	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-122	pg/g	1.12	27.9	12	5.9	0.401	32.4	1.67	0.925	11.8	1.57	ND	4.71
PCB-123	pg/g	9.17	130	64.6	111	3.01	486	13.3	6.05	61.9	6.92	12.6	44.2
PCB-124	pg/g	4.32	260	87.4	180	3.26	727	14.9	8.59	129	11.7	7.62	51.9
PCB-126	pg/g	2.61	26.3	11.4	30.5	1.07	109	1.82	1.96	17.3	1.57	5.11	11.8
PCB-127	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.206	ND	ND
PCB-128/162	pg/g	186	1100	535	1510	40.8	7130	121	137	692	60.5	314	345
PCB-129	pg/g	7.58	213	21.8	246	4.72	1470	2.91	19.1	136	2.72	15.8	10.1
PCB-130	pg/g	54.5	516	208	789	21.5	3450	46.9	74.7	341	22.9	113	135
PCB-131	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-132/161	pg/g	42.2	1330	125	1770	27.6	10800	19	61.1	829	12.6	133	94.4
PCB-133/142	pg/g	16.8	221	65.5	345	7.56	2020	17.6	27.7	140	8.51	62	85.2
PCB-134/143	pg/g	2.66	286	50.8	331	3.61	2340	11.4	15.3	176	6.66	7.08	43.6
PCB-135	pg/g	13.8	811	81.4	1080	12.7	5160	19.5	39.2	508	9.14	43.3	100
PCB-136	pg/g	10.2	646	101	832	13.2	3990	27.4	36.9	411	13.9	37.2	169
PCB-137	pg/g	53	366	176	540	13.1	2340	31.3	37.9	227	21	121	154
PCB-138/163/164	pg/g	1280	9180	3850	13600	420	54300	1100	992	5450	488	3040	4000
PCB-139/149	pg/g	315	5740	802	7910	217	27600	209	620	3430	94.6	1310	1140
PCB-140	pg/g	3.85	38.7	15	67.9	1.86	289	4.68	4.35	22.7	2.15	7.85	11.2
PCB-141	pg/g	121	1190	279	1610	46.1	8150	54.7	130	658	32.9	451	336
PCB-144	pg/g	27.9	298	105	448	13.8	2290	29.5	39.9	195	13.5	111	132
PCB-145	pg/g	ND	ND	0.418	ND	ND	1.39	ND	ND	ND	ND	ND	ND
PCB-146/165	pg/g	232	1710	647	2690	77.2	15200	203	230	991	85.5	766	894
PCB-147	pg/g	21.4	265	131	427	11.2	1590	28.5	35.7	173	13.6	259	445
PCB-148	pg/g	1.82	ND	9.58	25.3	ND	55.3	2.61	2.19	ND	ND	26.3	53.4
PCB-150	pg/g	1.08	27.1	7.25	31.3	0.859	129	1.25	2.78	14	0.687	17.1	38.5
PCB-151	pg/g	115	1800	543	2750	84.1	12000	203	195	1030	75.4	796	1290
PCB-152	pg/g	0.265	4.39	1.61	1.66	0.232	7.88	0.194	ND	1.93	ND	6	17.2
PCB-153	pg/g	1670	12700	4680	18900	547	77600	1490	1350	6590	624	5740	6690
PCB-154	pg/g	39	330	160	495	12.6	1620	36.5	37.2	167	15.9	494	840
PCB-155	pg/g	ND	8.27	2.89	9.68	0.28	27	0.702	0.85	3.34	ND	7.84	15.3
PCB-156	pg/g	100	720	328	1040	25	4490	66.5	59.2	434	40.2	198	295
PCB-157	pg/g	23.3	159	72.3	254	5.49	962	13.9	16	112	8.47	34.6	45.9
PCB-158/160	pg/g	116	825	374	1230	31.3	6800	83.1	85.9	523	44.2	288	386
PCB-159	pg/g	ND	ND	ND	217	5.03	ND	ND	ND	ND	ND	ND	ND
PCB-166	pg/g	4.19	27.4	12.9	36.2	ND	182	2.47	3.39	15.6	1.67	6.46	7.67

**Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling**

High Resolution and Low Resolution - Total PCB Method Comparison													
Vista - Total PCBs - EPA 1668C - "High Resolution" - Full PCB Congener list reported by laboratory. Reporting Limit: 0.434 – 9.93 pg/g (0.000434 – 0.00993 ug/kg)	Units	FH-FF-CH-07-08-20141013	FH-FF-WC-10-08-20141013	FH-FF-WS-01-08-20141013	IA-FF-WC-09-07-20141011	IB-FF-CH-01-05-20141012	IB-FF-WC-10-05-20141012	IB-FF-WS-10-05-20141012	OA-FF-CH-06-06-20141011	OA-FF-WC-02-06-20141011	OA-FF-WS-07-06-20141013	CS-FF-CH-08-03-20141010	CS-FF-WS-04-03-20141010
		PCB-167	pg/g	41.2	406	173	490	11.9	2290	39.4	32.6	219	19.7
PCB-168	pg/g	1.94	14.9	6.7	22.6	0.655	147	1.64	2.08	8.61	1.01	14.7	18.9
PCB-169	pg/g	ND	ND	0.587	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-170	pg/g	171	1660	546	2610	58.5	12000	175	140	886	64.3	677	822
PCB-171	pg/g	48.7	482	159	847	15.7	4400	57.9	42.6	260	19.8	191	245
PCB-172	pg/g	29.1	314	79.2	489	10.9	2700	26.7	33.1	177	10.4	121	121
PCB-173	pg/g	0.878	21.7	0.976	26.9	0.705	214	0.289	2.06	11.8	ND	3.41	1.33
PCB-174	pg/g	47.9	1630	66.9	2320	35.4	13500	13.9	111	817	7.76	207	101
PCB-175	pg/g	6.64	94.5	26.2	161	3.14	767	10.3	9.1	48.6	3.81	32.8	49.3
PCB-176	pg/g	4.46	202	12.9	274	4.35	1550	3.72	14.2	106	1.94	23.5	20.7
PCB-177	pg/g	40.4	1340	232	2140	41.8	11400	98.7	107	657	30.6	258	306
PCB-178	pg/g	36.9	585	136	990	20.3	4220	54.8	59.1	293	17.4	211	290
PCB-179	pg/g	11.9	917	105	1380	13.5	7020	32.9	34.3	420	13.2	76.2	207
PCB-180	pg/g	511	5450	1580	7740	174	33400	532	399	2700	201	2250	2690
PCB-181	pg/g	ND	ND	ND	ND	ND	59.2	0.942	ND	ND	0.845	5.38	ND
PCB-182/187	pg/g	286	4560	1040	6650	155	25200	442	386	2030	139	1630	2390
PCB-183	pg/g	136	1510	422	2210	48.9	10300	174	127	730	58.8	570	826
PCB-184	pg/g	0.505	5.35	1.66	8.84	ND	28.4	0.423	ND	3.24	0.281	1.39	3.24
PCB-185	pg/g	11.3	184	21.6	246	5.51	1750	6.06	15.9	85	3.17	66.4	39.1
PCB-186	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-188	pg/g	2.33	22.3	9.45	27.5	0.635	92.3	1.74	2.2	7.6	0.747	19.8	27
PCB-189	pg/g	5.88	42.9	19.1	42.9	1.8	221	5.88	4.81	24.3	2.52	21	27.6
PCB-190	pg/g	31	377	103	535	11.2	2830	33.7	28.4	171	13.4	151	188
PCB-191	pg/g	6.14	69.3	18.9	110	2.3	605	5.87	6.09	35.5	2.64	30.3	36.8
PCB-192	pg/g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-193	pg/g	23	268	65.2	419	9.12	2020	20.5	25.1	136	9.04	124	134
PCB-194	pg/g	64.4	997	228	1270	21.1	4680	74.6	51.7	454	22.4	299	410
PCB-195	pg/g	20.2	345	67.1	278	7.9	2340	24.2	19.4	147	8.34	114	154
PCB-196/203	pg/g	104	1630	347	1880	35.7	9140	113	92.2	752	39.6	499	549
PCB-197	pg/g	3.13	42.5	10	60.5	1.02	331	4	3.44	21.4	1.39	12.8	17.7
PCB-198	pg/g	3.05	42.8	6.81	53.9	1.22	279	2.4	3.68	20.7	1.04	13.3	10.7
PCB-199	pg/g	78.2	1540	243	1850	37.1	9130	81.1	105	744	26.9	384	309
PCB-200	pg/g	2.82	106	3.09	129	2.27	803	0.589	7.43	48.8	0.413	14.5	4.5
PCB-201	pg/g	12.1	181	35.4	256	4.27	1260	14.1	13	86	4.42	48.8	51.8
PCB-202	pg/g	24.5	438	71.9	625	9.76	2620	27.2	31.9	220	8.99	89	90.6
PCB-204	pg/g	ND	0.987	ND	1.44	ND	4.57	0.102	ND	0.636	ND	0.254	ND
PCB-205	pg/g	2.4	38	8.25	44.7	0.911	189	2.65	2.33	15.7	0.953	12	17.5
PCB-206	pg/g	36.3	751	125	743	10.8	2800	38.2	29.5	284	9.65	84.8	132
PCB-207	pg/g	4.59	69.7	13.1	83	1.23	339	3.89	4.2	33	1.3	11.7	15.8
PCB-208	pg/g	10.8	223	23	252	4.16	1060	7.79	11.8	99.8	2.4	21	16.1
PCB-209	pg/g	13.8	268	33.9	235	6.09	1020	18.4	11.9	109	3.57	20.6	25.4
Total of all reported PCB Congeners - Method 1668C (pg/g)	pg/g	12600	140000	43300	157000	4960	661000	10300	12200	72400	5300	35900	53300
Total of all reported PCB Congeners - Method 1668C (ug/kg)	ug/kg	12.6	140	43.3	157	4.96	661	10.3	12.2	72.4	5.3	35.9	53.3

Note: ND values were counted as 0 ug/kg.

Laboratory PCB Method Comparison - Full PCB Congener lists reported by laboratories

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High Resolution and Low Resolution - Total PCB Method Comparison				
Laboratory PCB Method Comparison - Full PCB Congener lists reported by laboratories	Units	Vista - Total PCBs - EPA 1668C - "High Resolution"	Eurofins Calscience - EPA 8270C Total PCBs - "Low Resolution"	Relative Percent Difference
Method Reporting Limit	ug/kg	0.000434 – 0.00993	0.2 - 0.8	%
FH-FF-CH-07-08-20141013	ug/kg	12.6	41.3	106
FH-FF-WC-10-08-20141013	ug/kg	140	146	4
FH-FF-WS-01-08-20141013	ug/kg	43.3	51.7	18
IA-FF-WC-09-07-20141011	ug/kg	157	176	12
IB-FF-CH-01-05-20141012	ug/kg	5.0	27.1	138
IB-FF-WC-10-05-20141012	ug/kg	661	1299	65
IB-FF-WS-10-05-20141012	ug/kg	10.3	2.8	113
OA-FF-CH-06-06-20141011	ug/kg	12.2	30.1	85
OA-FF-WC-02-06-20141011	ug/kg	72.4	65.5	10
OA-FF-WS-07-06-20141013	ug/kg	5.3	3.7	34
CS-FF-CH-08-03-20141010	ug/kg	35.9	147	122
CS-FF-WS-04-03-20141010	ug/kg	53.3	21	87

Note: ND values were counted as 0 ug/kg.

The Vista EPA 1668C PCB full output consisted of 168 PCB congener groupings.

The Eurofins Calscience EPA 8270C PCB full output consisted of 59 PCB congener groupings.

Laboratory PCB Method Comparison - SQO List with the SQO Manual required 1.72 multiplier correction factor

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High Resolution and Low Resolution - Total PCB Method Comparison				
Laboratory PCB Method Comparison - SQO List with the SQO Manual required 1.72 multiplier correction factor	Units	Vista - Total PCBs - EPA 1668C - "High Resolution"	Eurofins Calscience - EPA 8270C Total PCBs - "Low Resolution"	Relative Percent Difference
Method Reporting Limit	ug/kg	0.000434 – 0.00993	0.2 - 0.8	%
FH-FF-CH-07-08-20141013	ug/kg	13.2	48.7	115
FH-FF-WC-10-08-20141013	ug/kg	118.5	152.9	25
FH-FF-WS-01-08-20141013	ug/kg	42.9	60.2	34
IA-FF-WC-09-07-20141011	ug/kg	139.9	196.9	34
IB-FF-CH-01-05-20141012	ug/kg	4.7	31.5	148
IB-FF-WC-10-05-20141012	ug/kg	565.7	1431.2	87
IB-FF-WS-10-05-20141012	ug/kg	10.7	4.2	87
OA-FF-CH-06-06-20141011	ug/kg	11.0	33.6	101
OA-FF-WC-02-06-20141011	ug/kg	61.5	69.0	12
OA-FF-WS-07-06-20141013	ug/kg	5.3	3.9	29
CS-FF-CH-08-03-20141010	ug/kg	34.5	171.0	133
CS-FF-WS-04-03-20141010	ug/kg	49.7	24.6	68

Note: ND values were counted as 0 ug/kg. This comparison table includes the 1.72 multiplier correction factor as required by the SQO manual.

In order to have a more apples to apples comparison, Vista Analytical Lab's more detailed EPA 1668C method PCB congener list was trimmed down to the SQO PCB congener list.

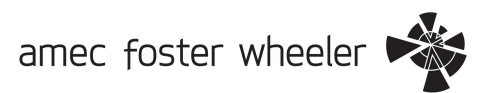
The same was done with Eurofins Calscience's 8270C method output. An exact match is not possible because of differences in how each laboratory's machinery outputs specific PCB congener groupings, but all 16 SQO PCB congeners are represented.

The PCB congener list referred was as described in the SCCWRP Sediment Quality Assessment Technical Support Manual (SCCWRP 2014).

This SQO manual lists the PCB congener list as: PCB-8, 18, 28, 44, 52, 66, 101, 105, 110, 118, 128, 138, 153, 180, 187, 195.

When two PCB congeners are reported together (PCB-5/8 for example), the lab cannot achieve separation of those PCB congener peaks because they overlap or are too close together. The lab-standard is based on a summation of the two peaks, and the lab can't differentiate the concentrations of the two congeners.

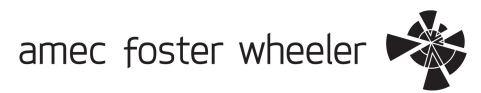
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Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



APPENDIX F

RAW CHEMISTRY REPORTS

POLA and POLB
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Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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December 29, 2014

Vista Project I.D.: 1400892

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 24, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '120711-01.07 Task 1'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400892

Case Narrative

Sample Condition on Receipt:

Twenty tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

As requested, scales were removed from sample "OA-WO-WS-01-06-20141011" and "OA-WO-SS-10-06-20141011". The physical measurements of each scaled fish are included in the report.

The replicates for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

EPA Method 1668C

The samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The method holding time criteria was met for these samples.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

The recoveries of 13C-PCB-206, 13C-PCB-208 and 13C-PCB-209 in sample "FH-WO-WS-07-08-20141013" were 148%, 156% and 194%, respectively, which are above the method limit of 145%. The recoveries of all other labeled standards in the QC and field samples were within method acceptance criteria.

As requested, an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400892-01	FH-WO-WS-02-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-02	FH-WO-WS-03-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-03	FH-WO-WS-04-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-04	FH-WO-WS-05-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-05	FH-WO-WS-06-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-06	FH-WO-WS-07-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-07	FH-WO-WS-08-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-08	FH-WO-WS-10-08-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-09	OA-WO-WS-01-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-10	OA-WO-WS-02-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-11	OA-WO-WS-03-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-12	OA-WO-WS-04-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-13	OA-WO-WS-05-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-14	OA-WO-WS-06-06-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-15	OA-WO-SS-08-06-20141013	13-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-16	OA-WO-SS-09-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-17	OA-WO-SS-10-06-20141011	11-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-18	IB-WO-SS-01-05-20141012	12-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-19	IB-WO-SS-02-05-20141012	12-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-20	IB-WO-SS-03-05-20141012	12-Oct-14 00:00	24-Nov-14 13:28	Tissue in Foil
1400892-21	SRM 1946	23-Nov-14 00:00	24-Nov-14 13:28	Glass Jar, 120mL

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0053	Lab Sample: B4L0053-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Dec-2014 10:52	Date Analyzed: 11-Dec-14 11:22 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.183			PCB-43/49	ND	0.221		
PCB-2	ND	0.207			PCB-44	ND	0.236		
PCB-3	ND	0.200			PCB-45	ND	0.255		
PCB-4/10	ND	0.268			PCB-46	ND	0.258		
PCB-5/8	ND	0.218			PCB-47	ND	0.196		
PCB-6	ND	0.213			PCB-48/75	ND	0.170		
PCB-7/9	ND	0.212			PCB-50	ND	0.208		
PCB-11	ND	0.198			PCB-51	ND	0.213		
PCB-12/13	ND	0.208			PCB-52/69	ND	0.192		
PCB-14	ND	0.186			PCB-53	ND	0.207		
PCB-15	ND	0.190			PCB-54	ND	0.168		
PCB-16/32	ND	0.113			PCB-55	ND	0.155		
PCB-17	ND	0.129			PCB-56/60	ND	0.158		
PCB-18	ND	0.135			PCB-57	ND	0.157		
PCB-19	ND	0.141			PCB-58	ND	0.159		
PCB-20/21/33	ND	1.10			PCB-61/70	ND	0.162		
PCB-22	ND	0.109			PCB-62	ND	0.172		
PCB-23	ND	0.110			PCB-63	ND	0.157		
PCB-24/27	ND	0.0986			PCB-65	ND	0.166		
PCB-25	ND	0.108			PCB-66/76	ND	0.154		
PCB-26	ND	0.112			PCB-67	ND	0.163		
PCB-28	ND	0.105			PCB-68	ND	0.149		
PCB-29	ND	0.109			PCB-73	ND	0.179		
PCB-30	ND	0.100			PCB-74	ND	0.145		
PCB-31	ND	0.102			PCB-77	ND	0.156		
PCB-34	ND	0.115			PCB-78	ND	0.157		
PCB-35	ND	0.114			PCB-79	ND	0.153		
PCB-36	ND	0.114			PCB-80	ND	0.135		
PCB-37	ND	0.112			PCB-81	ND	0.140		
PCB-38	ND	0.116			PCB-82	ND	0.282		
PCB-39	ND	0.110			PCB-83	ND	0.182		
PCB-40	ND	0.271			PCB-84/92	ND	0.239		
PCB-41/64/71/72	ND	0.169			PCB-85/116	ND	0.213		
PCB-42/59	ND	0.182			PCB-86	ND	0.271		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0053	Lab Sample: B4L0053-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Dec-2014 10:52	Date Analyzed: 11-Dec-14 11:22 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.178			PCB-133/142	ND	0.149		
PCB-88/91	ND	0.279			PCB-134/143	ND	0.152		
PCB-89	ND	0.247			PCB-135	ND	0.244		
PCB-90/101	ND	0.211			PCB-136	ND	0.175		
PCB-93	ND	0.252			PCB-137	ND	0.144		
PCB-94	ND	0.257			PCB-138/163/164	ND	0.125		
PCB-95/98/102	ND	0.234			PCB-139/149	ND	0.225		
PCB-96	ND	0.188			PCB-140	ND	0.242		
PCB-97	ND	0.222			PCB-141	ND	0.158		
PCB-99	ND	0.195			PCB-144	ND	0.232		
PCB-100	ND	0.205			PCB-145	ND	0.174		
PCB-103	ND	0.220			PCB-146/165	ND	0.122		
PCB-104	ND	0.163			PCB-147	ND	0.229		
PCB-105	ND		0.0961		PCB-148	ND	0.257		
PCB-106/118	ND	0.158			PCB-150	ND	0.179		
PCB-107/109	ND	0.171			PCB-151	ND	0.235		
PCB-108/112	ND	0.215			PCB-152	ND	0.173		
PCB-110	ND		0.171		PCB-153	ND	0.120		
PCB-111/115	ND	0.158			PCB-154	ND	0.215		
PCB-113	ND	0.186			PCB-155	ND	0.168		
PCB-114	ND	0.0825			PCB-156	ND	0.111		
PCB-119	ND	0.161			PCB-157	ND	0.117		
PCB-120	ND	0.156			PCB-158/160	ND	0.119		
PCB-121	ND	0.150			PCB-159	ND	0.115		
PCB-122	ND	0.0904			PCB-166	ND	0.120		
PCB-123	ND	0.171			PCB-167	ND	0.109		
PCB-124	ND	0.158			PCB-168	ND	0.103		
PCB-126	ND	0.0923			PCB-169	ND	0.123		
PCB-127	ND	0.0900			PCB-170	ND	0.121		
PCB-128/162	ND	0.132			PCB-171	ND	0.122		
PCB-129	ND	0.165			PCB-172	ND	0.131		
PCB-130	ND	0.182			PCB-173	ND	0.138		
PCB-131	ND	0.154			PCB-174	ND	0.120		
PCB-132/161	ND	0.127			PCB-175	ND	0.117		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0053	Lab Sample: B4L0053-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Dec-2014 10:52	Date Analyzed: 11-Dec-14 11:22 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.0829			Total triCB	ND	0.141		
PCB-177	ND	0.129			Total tetraCB	ND	0.271		
PCB-178	ND	0.121			Total pentaCB	ND		0.267	
PCB-179	ND	0.0866			Total hexaCB	ND	0.257		
PCB-180	ND	0.112			Total heptaCB	ND	0.138		
PCB-181	ND	0.118			Total octaCB	ND	0.211		
PCB-182/187	ND	0.111			Total nonaCB	ND	0.153		
PCB-183	ND	0.104			DecaCB	ND	0.275		
PCB-184	ND	0.0913			Total PCB	ND			
PCB-185	ND	0.119							
PCB-186	ND	0.0886							
PCB-188	ND	0.0804							
PCB-189	ND	0.0928							
PCB-190	ND	0.0902							
PCB-191	ND	0.0958							
PCB-192	ND	0.105							
PCB-193	ND	0.0969							
PCB-194	ND	0.174							
PCB-195	ND	0.181							
PCB-196/203	ND	0.199							
PCB-197	ND	0.144							
PCB-198	ND	0.207							
PCB-199	ND	0.211							
PCB-200	ND	0.151							
PCB-201	ND	0.140							
PCB-202	ND	0.148							
PCB-204	ND	0.155							
PCB-205	ND	0.154							
PCB-206	ND	0.153							
PCB-207	ND	0.0652							
PCB-208	ND	0.0621							
PCB-209	ND	0.275							
Total monoCB	ND	0.207							
Total diCB	ND	0.268							

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0053	Lab Sample: B4L0053-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Dec-2014 10:52	Date Analyzed: 11-Dec-14 11:22 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	73.2	5 - 145		13C-PCB-157	98.4	10 - 145	
13C-PCB-3	70.7	5 - 145		13C-PCB-159	96.8	10 - 145	
13C-PCB-4	70.3	5 - 145		13C-PCB-167	99.1	10 - 145	
13C-PCB-11	79.1	5 - 145		13C-PCB-169	96.1	10 - 145	
13C-PCB-9	72.3	5 - 145		13C-PCB-170	97.5	10 - 145	
13C-PCB-19	64.9	5 - 145		13C-PCB-180	98.1	10 - 145	
13C-PCB-28	83.0	5 - 145		13C-PCB-188	92.7	10 - 145	
13C-PCB-32	69.7	5 - 145		13C-PCB-189	99.6	10 - 145	
13C-PCB-37	89.7	5 - 145		13C-PCB-194	92.7	10 - 145	
13C-PCB-47	84.2	5 - 145		13C-PCB-202	91.3	10 - 145	
13C-PCB-52	83.4	5 - 145		13C-PCB-206	100	10 - 145	
13C-PCB-54	84.1	5 - 145		13C-PCB-208	106	10 - 145	
13C-PCB-70	87.8	5 - 145		13C-PCB-209	105	10 - 145	
13C-PCB-77	92.9	10 - 145		CRS 13C-PCB-79	88.5	10 - 145	
13C-PCB-80	91.2	10 - 145		13C-PCB-178	92.6	10 - 145	
13C-PCB-81	92.5	10 - 145					
13C-PCB-95	85.3	10 - 145					
13C-PCB-97	93.9	10 - 145					
13C-PCB-101	90.9	10 - 145					
13C-PCB-104	86.0	10 - 145					
13C-PCB-105	76.3	10 - 145					
13C-PCB-114	80.9	10 - 145					
13C-PCB-118	94.7	10 - 145					
13C-PCB-123	93.2	10 - 145					
13C-PCB-126	77.5	10 - 145					
13C-PCB-127	79.0	10 - 145					
13C-PCB-138	96.5	10 - 145					
13C-PCB-141	95.4	10 - 145					
13C-PCB-153	97.1	10 - 145					
13C-PCB-155	83.2	10 - 145					
13C-PCB-156	96.5	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B4L0053
Date Extracted: 08-Dec-2014 10:52Lab Sample: B4L0053-BS1
Date Analyzed: 11-Dec-14 09:14 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	109	100	109	60 - 135	IS 13C-PCB-1	75.3	15 - 145
PCB-3	106	100	106	60 - 135	IS 13C-PCB-3	76.3	15 - 145
PCB-4/10	441	400	110	60 - 135	IS 13C-PCB-4	79.1	15 - 145
PCB-15	211	200	106	60 - 135	IS 13C-PCB-11	88.2	15 - 145
PCB-19	126	100	126	60 - 135	IS 13C-PCB-9	82.2	15 - 145
PCB-37	86.5	100	86.5	60 - 135	IS 13C-PCB-19	68.3	15 - 145
PCB-54	94.9	100	94.9	60 - 135	IS 13C-PCB-28	82.8	15 - 145
PCB-77	97.9	100	97.9	60 - 135	IS 13C-PCB-32	72.3	15 - 145
PCB-81	93.1	100	93.1	60 - 135	IS 13C-PCB-37	93.4	15 - 145
PCB-104	106	100	106	60 - 135	IS 13C-PCB-47	87.8	15 - 145
PCB-105	108	100	108	60 - 135	IS 13C-PCB-52	85.6	15 - 145
PCB-106/118	217	200	108	60 - 135	IS 13C-PCB-54	86.3	15 - 145
PCB-114	104	100	104	60 - 135	IS 13C-PCB-70	93.8	15 - 145
PCB-123	110	100	110	60 - 135	IS 13C-PCB-77	96.8	40 - 145
PCB-126	108	100	108	60 - 135	IS 13C-PCB-80	95.4	40 - 145
PCB-155	116	100	116	60 - 135	IS 13C-PCB-81	99.4	40 - 145
PCB-156	104	100	104	60 - 135	IS 13C-PCB-95	88.1	40 - 145
PCB-157	108	100	108	60 - 135	IS 13C-PCB-97	97.9	40 - 145
PCB-167	107	100	107	60 - 135	IS 13C-PCB-101	94.3	40 - 145
PCB-169	107	100	107	60 - 135	IS 13C-PCB-104	84.9	40 - 145
PCB-188	112	100	112	60 - 135	IS 13C-PCB-105	86.9	40 - 145
PCB-189	123	100	123	60 - 135	IS 13C-PCB-114	88.1	40 - 145
PCB-202	114	100	114	60 - 135	IS 13C-PCB-118	97.4	40 - 145
PCB-205	103	100	103	60 - 135	IS 13C-PCB-123	97.3	40 - 145
PCB-206	105	100	105	60 - 135	IS 13C-PCB-126	85.5	40 - 145
PCB-208	110	100	110	60 - 135	IS 13C-PCB-127	86.7	40 - 145
PCB-209	110	100	110	60 - 135	IS 13C-PCB-138	104	40 - 145
					IS 13C-PCB-141	103	40 - 145
					IS 13C-PCB-153	104	40 - 145
					IS 13C-PCB-155	81.8	40 - 145
					IS 13C-PCB-156	105	40 - 145
					IS 13C-PCB-157	105	40 - 145
					IS 13C-PCB-159	104	40 - 145
					IS 13C-PCB-167	104	40 - 145
					IS 13C-PCB-169	105	40 - 145
					IS 13C-PCB-170	106	40 - 145
					IS 13C-PCB-180	105	40 - 145
					IS 13C-PCB-188	98.3	40 - 145
					IS 13C-PCB-189	104	40 - 145
					IS 13C-PCB-194	102	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0053
Date Extracted: 08-Dec-2014 10:52

Lab Sample: B4L0053-BS1
Date Analyzed: 11-Dec-14 09:14 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	96.3	40 - 145
					IS 13C-PCB-206	102	40 - 145
					IS 13C-PCB-208	105	40 - 145
					IS 13C-PCB-209	109	40 - 145
					CRS 13C-PCB-79	89.9	40 - 145
					CRS 13C-PCB-178	97.5	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: FH-WO-WS-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-01
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.12	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 12:27
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.97				PCB-44	2890			E
PCB-2	0.881				PCB-45	172			
PCB-3	0.909				PCB-46	85.6			
PCB-4/10	44.5				PCB-47	2950			E
PCB-5/8	52.8				PCB-48/75	531			
PCB-6	35.5				PCB-50	7.54			
PCB-7/9	18.3				PCB-51	270			
PCB-11	56.6				PCB-52/69	10300			E
PCB-12/13	3.29				PCB-53	545			
PCB-14	ND	0.819			PCB-54	26.4			
PCB-15	138				PCB-55	127			
PCB-16/32	748				PCB-56/60	2270			
PCB-17	165				PCB-57	67.6			
PCB-18	1060				PCB-58	40.9			
PCB-19	81.9				PCB-61/70	8340			E
PCB-20/21/33	174				PCB-62	ND	2.19		
PCB-22	218				PCB-63	482			
PCB-23	ND	1.54			PCB-65	ND	2.12		
PCB-24/27	91.3				PCB-66/76	11000			E
PCB-25	354				PCB-67	268			
PCB-26	735				PCB-68	153			
PCB-28	3930			E	PCB-73	ND	2.21		
PCB-29	5.15				PCB-74	5980			E
PCB-30	1.02				PCB-77	1120			
PCB-31	1910			E	PCB-78	38.9			
PCB-34	13.8				PCB-79	551			
PCB-35	ND	1.56			PCB-80	ND	1.55		
PCB-36	2.02				PCB-81	88.9			
PCB-37	391				PCB-82	384			
PCB-38	130				PCB-83	11.6			
PCB-39	4.27				PCB-84/92	5990			E
PCB-40	165				PCB-85/116	1060			
PCB-41/64/71/72	4380				PCB-86	ND	0.401		
PCB-42/59	891				PCB-87/117/125	7210			E
PCB-43/49	8020			E	PCB-88/91	3080			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-01
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.12	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 12:27
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	28.6				PCB-136	1230			
PCB-90/101	31100			E	PCB-137	1400			
PCB-93	ND	0.381			PCB-138/163/164	32000			E
PCB-94	16.2				PCB-139/149	13000			E
PCB-95/98/102	6650			E	PCB-140	167			
PCB-96	88.9				PCB-141	2950			E
PCB-97	6550			E	PCB-144	1070			
PCB-99	21000			E	PCB-145	4.04			
PCB-100	330				PCB-146/165	6000			E
PCB-103	460				PCB-147	1190			
PCB-104	12.3				PCB-148	95.0			
PCB-105	10400			E	PCB-150	92.7			
PCB-106/118	33800			E	PCB-151	4270			E
PCB-107/109	2820				PCB-152	15.3			
PCB-108/112	639				PCB-153	35100			E
PCB-110	14100			E	PCB-154	1160			
PCB-111/115	619				PCB-155	23.9			
PCB-113	ND	0.302			PCB-156	2650			E
PCB-114	520				PCB-157	699			
PCB-119	996				PCB-158/160	3350			E
PCB-120	149				PCB-159	303			
PCB-121	ND	0.226			PCB-166	119			
PCB-122	143				PCB-167	1590			E
PCB-123	609				PCB-168	64.5			
PCB-124	840				PCB-169	6.92			
PCB-126	174				PCB-170	4830			E
PCB-127	ND	3.80			PCB-171	1380			
PCB-128/162	4320			E	PCB-172	933			
PCB-129	339				PCB-173	17.4			
PCB-130	2110			E	PCB-174	1160			
PCB-131	ND	5.56			PCB-175	273			
PCB-132/161	2170				PCB-176	259			
PCB-133/142	786				PCB-177	2500			E
PCB-134/143	755				PCB-178	1620			E
PCB-135	1180				PCB-179	1320			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-01
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.12	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 12:27
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	12400			E	Total octaCB	10300			
PCB-181	38.6				Total nonaCB	1490			
PCB-182/187	10800			E	DecaCB	238			
PCB-183	4010			E	Total PCB	398000			
PCB-184	19.1								
PCB-185	274								
PCB-186	ND	3.65							
PCB-188	86.3								
PCB-189	207								
PCB-190	970								
PCB-191	195								
PCB-192	ND	3.74							
PCB-193	662								
PCB-194	2000			E					
PCB-195	557								
PCB-196/203	3280			E					
PCB-197	110								
PCB-198	77.1								
PCB-199	2900			E					
PCB-200	61.2								
PCB-201	374								
PCB-202	861								
PCB-204	3.20								
PCB-205	78.8								
PCB-206	1090								
PCB-207	116								
PCB-208	279								
PCB-209	238								
Total monoCB	5.76								
Total diCB	349								
Total triCB	10000								
Total tetraCB	61800								
Total pentaCB	150000								
Total hexaCB	120000								
Total heptaCB	43900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-01
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.12	QC Batch:	B4L0053
				Date Analyzed :	11-Dec-14 12:27
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	83.1	5 -145		13C-PCB-170	99.5	10 -145	
13C-PCB-3	84.3	5 -145		13C-PCB-180	98.1	10 -145	
13C-PCB-4	73.0	5 -145		13C-PCB-188	85.4	10 -145	
13C-PCB-11	78.7	5 -145		13C-PCB-189	97.8	10 -145	
13C-PCB-9	79.4	5 -145		13C-PCB-194	85.3	10 -145	
13C-PCB-19	65.2	5 -145		13C-PCB-202	87.9	10 -145	
13C-PCB-28	74.1	5 -145		13C-PCB-206	93.5	10 -145	
13C-PCB-32	72.8	5 -145		13C-PCB-208	94.4	10 -145	
13C-PCB-37	82.7	5 -145		13C-PCB-209	102	10 -145	
13C-PCB-47	71.2	5 -145		CRS 13C-PCB-79	83.8	10 -145	
13C-PCB-52	70.3	5 -145		13C-PCB-178	92.7	10 -145	
13C-PCB-54	64.5	5 -145					
13C-PCB-70	82.0	5 -145					
13C-PCB-77	88.7	10 -145					
13C-PCB-80	83.7	10 -145					
13C-PCB-81	95.5	10 -145					
13C-PCB-95	71.4	10 -145					
13C-PCB-97	84.1	10 -145					
13C-PCB-101	76.1	10 -145					
13C-PCB-104	67.1	10 -145					
13C-PCB-105	65.6	10 -145					
13C-PCB-114	66.0	10 -145					
13C-PCB-118	79.7	10 -145					
13C-PCB-123	85.5	10 -145					
13C-PCB-126	65.0	10 -145					
13C-PCB-127	69.6	10 -145					
13C-PCB-138	84.5	10 -145					
13C-PCB-141	86.1	10 -145					
13C-PCB-153	78.6	10 -145					
13C-PCB-155	76.7	10 -145					
13C-PCB-156	91.0	10 -145					
13C-PCB-157	90.0	10 -145					
13C-PCB-159	91.1	10 -145					
13C-PCB-167	87.4	10 -145					
13C-PCB-169	89.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-02
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.17	Date Received:	24-Nov-2014 13:28
				Date Extracted:	08-Dec-2014 10:52
				Date Analyzed :	17-Dec-14 11:56
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.65				PCB-44	1410			
PCB-2	0.565				PCB-45	55.8			
PCB-3	0.548				PCB-46	28.7			
PCB-4/10	16.7				PCB-47	1200			
PCB-5/8	22.8				PCB-48/75	368			
PCB-6	12.4				PCB-50	2.92			
PCB-7/9	7.58				PCB-51	112			
PCB-11	39.9				PCB-52/69	6730			E
PCB-12/13	ND		1.56		PCB-53	253			
PCB-14	ND	0.0518			PCB-54	15.1			
PCB-15	58.8				PCB-55	74.5			
PCB-16/32	262				PCB-56/60	1290			
PCB-17	41.5				PCB-57	51.1			
PCB-18	318				PCB-58	29.4			
PCB-19	21.9				PCB-61/70	5350			E
PCB-20/21/33	61.5				PCB-62	ND	0.687		
PCB-22	69.2				PCB-63	442			
PCB-23	ND	0.653			PCB-65	ND	0.666		
PCB-24/27	31.9				PCB-66/76	7140			E
PCB-25	185				PCB-67	180			
PCB-26	364				PCB-68	130			
PCB-28	2420			E	PCB-73	ND	0.720		
PCB-29	2.83				PCB-74	4870			E
PCB-30	0.401			J	PCB-77	759			
PCB-31	1180				PCB-78	22.4			
PCB-34	8.26				PCB-79	456			
PCB-35	0.657				PCB-80	ND	0.463		
PCB-36	1.38				PCB-81	68.4			
PCB-37	196				PCB-82	149			
PCB-38	56.7				PCB-83	8.01			
PCB-39	2.19				PCB-84/92	5120			E
PCB-40	49.2				PCB-85/116	366			
PCB-41/64/71/72	2240				PCB-86	ND	0.967		
PCB-42/59	364				PCB-87/117/125	5440			E
PCB-43/49	5210			E	PCB-88/91	2080			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-02
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.17	QC Batch:	B4L0053
				Date Analyzed:	17-Dec-14 11:56
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	14.8				PCB-136	824			
PCB-90/101	29200			E	PCB-137	1430			
PCB-93	ND	0.883			PCB-138/163/164	29400			E
PCB-94	8.38				PCB-139/149	6860			E
PCB-95/98/102	4630			E	PCB-140	120			
PCB-96	56.7				PCB-141	2350			E
PCB-97	4130			E	PCB-144	911			
PCB-99	21100			E	PCB-145	2.31			
PCB-100	296				PCB-146/165	6760			E
PCB-103	397				PCB-147	988			
PCB-104	9.24				PCB-148	90.4			
PCB-105	9420			E	PCB-150	71.2			
PCB-106/118	31900			E	PCB-151	3910			E
PCB-107/109	2830				PCB-152	10.4			
PCB-108/112	393				PCB-153	33700			E
PCB-110	7840			E	PCB-154	1150			
PCB-111/115	564				PCB-155	25.7			
PCB-113	ND	0.786			PCB-156	2770			E
PCB-114	478				PCB-157	695			
PCB-119	838				PCB-158/160	3410			E
PCB-120	162				PCB-159	313			
PCB-121	ND	0.525			PCB-166	118			
PCB-122	84.3				PCB-167	1570			E
PCB-123	614				PCB-168	57.5			
PCB-124	754				PCB-169	6.23			
PCB-126	153				PCB-170	4920			E
PCB-127	ND	0.918			PCB-171	1570			E
PCB-128/162	3660			E	PCB-172	1010			
PCB-129	205				PCB-173	10.9			
PCB-130	1760			E	PCB-174	808			
PCB-131	ND	2.81			PCB-175	315			
PCB-132/161	1180				PCB-176	176			
PCB-133/142	781				PCB-177	2470			E
PCB-134/143	580				PCB-178	1630			E
PCB-135	811				PCB-179	1120			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-02
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.17	QC Batch:	B4L0053
				Date Analyzed:	17-Dec-14 11:56
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	12700			E	Total octaCB	9320			
PCB-181	47.4				Total nonaCB	1330			
PCB-182/187	10500			E	DecaCB	229			
PCB-183	4250			E	Total PCB	335000			
PCB-184	20.2								
PCB-185	258								
PCB-186	0.303			J					
PCB-188	94.9								
PCB-189	214								
PCB-190	1060								
PCB-191	229								
PCB-192	ND	0.256							
PCB-193	784								
PCB-194	2050			E					
PCB-195	594								
PCB-196/203	2880								
PCB-197	106								
PCB-198	71.8								
PCB-199	2340			E					
PCB-200	33.7								
PCB-201	347								
PCB-202	810								
PCB-204	4.51								
PCB-205	87.6								
PCB-206	965								
PCB-207	124								
PCB-208	245								
PCB-209	229								
Total monoCB	2.77								
Total diCB	158		160						
Total triCB	5220								
Total tetraCB	38900								
Total pentaCB	129000								
Total hexaCB	107000								
Total heptaCB	44200								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-02
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.17	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 11:56
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.6	5 -145		13C-PCB-170	81.1	10 -145	
13C-PCB-3	72.9	5 -145		13C-PCB-180	73.9	10 -145	
13C-PCB-4	66.6	5 -145		13C-PCB-188	74.4	10 -145	
13C-PCB-11	78.6	5 -145		13C-PCB-189	76.4	10 -145	
13C-PCB-9	75.8	5 -145		13C-PCB-194	86.6	10 -145	
13C-PCB-19	63.9	5 -145		13C-PCB-202	75.2	10 -145	
13C-PCB-28	60.6	5 -145		13C-PCB-206	88.0	10 -145	
13C-PCB-32	69.7	5 -145		13C-PCB-208	79.4	10 -145	
13C-PCB-37	70.8	5 -145		13C-PCB-209	108	10 -145	
13C-PCB-47	71.0	5 -145		CRS 13C-PCB-79	78.3	10 -145	
13C-PCB-52	67.0	5 -145		13C-PCB-178	82.0	10 -145	
13C-PCB-54	64.3	5 -145					
13C-PCB-70	81.1	5 -145					
13C-PCB-77	81.6	10 -145					
13C-PCB-80	84.5	10 -145					
13C-PCB-81	88.0	10 -145					
13C-PCB-95	80.2	10 -145					
13C-PCB-97	88.0	10 -145					
13C-PCB-101	76.5	10 -145					
13C-PCB-104	74.1	10 -145					
13C-PCB-105	80.2	10 -145					
13C-PCB-114	85.5	10 -145					
13C-PCB-118	71.8	10 -145					
13C-PCB-123	91.4	10 -145					
13C-PCB-126	88.9	10 -145					
13C-PCB-127	86.0	10 -145					
13C-PCB-138	77.4	10 -145					
13C-PCB-141	87.6	10 -145					
13C-PCB-153	71.1	10 -145					
13C-PCB-155	83.2	10 -145					
13C-PCB-156	87.3	10 -145					
13C-PCB-157	88.7	10 -145					
13C-PCB-159	89.7	10 -145					
13C-PCB-167	82.8	10 -145					
13C-PCB-169	84.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-03
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 14:35
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.05				PCB-44	1060			
PCB-2	0.443			J	PCB-45	35.4			
PCB-3	0.363			J	PCB-46	19.0			
PCB-4/10	9.82				PCB-47	938			
PCB-5/8	14.0				PCB-48/75	246			
PCB-6	7.26				PCB-50	2.54			
PCB-7/9	4.86				PCB-51	98.3			
PCB-11	22.3				PCB-52/69	5150			E
PCB-12/13	ND	0.258			PCB-53	191			
PCB-14	ND	0.230			PCB-54	13.8			
PCB-15	36.3				PCB-55	68.2			
PCB-16/32	228				PCB-56/60	949			
PCB-17	33.9				PCB-57	38.9			
PCB-18	244				PCB-58	24.3			
PCB-19	18.8				PCB-61/70	3650			E
PCB-20/21/33	46.6				PCB-62	ND	0.391		
PCB-22	41.7				PCB-63	293			
PCB-23	ND	0.746			PCB-65	ND	0.379		
PCB-24/27	29.1				PCB-66/76	4730			E
PCB-25	94.3				PCB-67	125			
PCB-26	209				PCB-68	93.3			
PCB-28	1700			E	PCB-73	ND	0.389		
PCB-29	1.56				PCB-74	3150			E
PCB-30	ND		0.300		PCB-77	529			
PCB-31	562				PCB-78	17.9			
PCB-34	4.63				PCB-79	379			
PCB-35	ND	0.853			PCB-80	ND	1.83		
PCB-36	1.05				PCB-81	55.5			
PCB-37	140				PCB-82	119			
PCB-38	46.1				PCB-83	5.75			
PCB-39	0.920				PCB-84/92	3190			E
PCB-40	43.8				PCB-85/116	291			
PCB-41/64/71/72	1740				PCB-86	ND	0.325		
PCB-42/59	282				PCB-87/117/125	3790			
PCB-43/49	3740			E	PCB-88/91	1570			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-03
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	QC Batch:	B4L0053
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.08	Date Received:	24-Nov-2014 13:28
				Date Analyzed:	11-Dec-14 14:35
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.65				PCB-136	677			
PCB-90/101	20400			E	PCB-137	922			
PCB-93	ND	0.299			PCB-138/163/164	24600			E
PCB-94	4.83				PCB-139/149	6460			E
PCB-95/98/102	3200				PCB-140	97.0			
PCB-96	36.6				PCB-141	1690			E
PCB-97	2830			E	PCB-144	735			
PCB-99	14700			E	PCB-145	1.76			
PCB-100	269				PCB-146/165	4980			E
PCB-103	315				PCB-147	948			
PCB-104	10.0				PCB-148	95.9			
PCB-105	6710			E	PCB-150	70.6			
PCB-106/118	23800			E	PCB-151	3420			E
PCB-107/109	2070				PCB-152	8.18			
PCB-108/112	271				PCB-153	32400			E
PCB-110	5930			E	PCB-154	1240			
PCB-111/115	378				PCB-155	28.3			
PCB-113	ND	0.246			PCB-156	2110			E
PCB-114	347				PCB-157	531			
PCB-119	566				PCB-158/160	2570			
PCB-120	116				PCB-159	265			
PCB-121	ND	0.178			PCB-166	78.2			
PCB-122	62.2				PCB-167	1230			
PCB-123	455				PCB-168	50.4			
PCB-124	534				PCB-169	4.68			
PCB-126	99.7				PCB-170	4400			E
PCB-127	ND	0.907			PCB-171	1230			
PCB-128/162	2670				PCB-172	762			
PCB-129	130				PCB-173	6.59			
PCB-130	1330				PCB-174	544			
PCB-131	ND	4.51			PCB-175	261			
PCB-132/161	912				PCB-176	123			
PCB-133/142	506				PCB-177	1750			E
PCB-134/143	373				PCB-178	1440			
PCB-135	649				PCB-179	859			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-03	Date Received:	24-Nov-2014 13:28		
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52		
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.08	Date Analyzed :	11-Dec-14 14:35	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	11300			E	Total octaCB	8780			
PCB-181	30.6				Total nonaCB	996			
PCB-182/187	10200			E	DecaCB	175			
PCB-183	4080			E	Total PCB	264000			
PCB-184	18.1								
PCB-185	162								
PCB-186	ND	0.389							
PCB-188	77.1								
PCB-189	182								
PCB-190	935								
PCB-191	193								
PCB-192	ND	0.410							
PCB-193	662								
PCB-194	1790			E					
PCB-195	557								
PCB-196/203	3000			E					
PCB-197	105								
PCB-198	51.7								
PCB-199	2100			E					
PCB-200	24.5								
PCB-201	309								
PCB-202	755								
PCB-204	3.81								
PCB-205	81.3								
PCB-206	751								
PCB-207	85.7								
PCB-208	159								
PCB-209	175								
Total monoCB	1.86								
Total diCB	94.5								
Total triCB	3400								
Total tetraCB	27700								
Total pentaCB	92100								
Total hexaCB	91700								
Total heptaCB	39200								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-03
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed :	11-Dec-14 14:35
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	89.8	5 -145		13C-PCB-170	106	10 -145	
13C-PCB-3	84.6	5 -145		13C-PCB-180	103	10 -145	
13C-PCB-4	79.7	5 -145		13C-PCB-188	85.6	10 -145	
13C-PCB-11	84.2	5 -145		13C-PCB-189	104	10 -145	
13C-PCB-9	81.1	5 -145		13C-PCB-194	93.4	10 -145	
13C-PCB-19	68.9	5 -145		13C-PCB-202	92.1	10 -145	
13C-PCB-28	85.4	5 -145		13C-PCB-206	99.9	10 -145	
13C-PCB-32	76.7	5 -145		13C-PCB-208	103	10 -145	
13C-PCB-37	82.7	5 -145		13C-PCB-209	118	10 -145	
13C-PCB-47	69.9	5 -145		CRS 13C-PCB-79	85.1	10 -145	
13C-PCB-52	70.5	5 -145		13C-PCB-178	95.1	10 -145	
13C-PCB-54	68.7	5 -145					
13C-PCB-70	81.6	5 -145					
13C-PCB-77	86.0	10 -145					
13C-PCB-80	87.6	10 -145					
13C-PCB-81	91.5	10 -145					
13C-PCB-95	80.1	10 -145					
13C-PCB-97	91.7	10 -145					
13C-PCB-101	83.0	10 -145					
13C-PCB-104	73.1	10 -145					
13C-PCB-105	64.7	10 -145					
13C-PCB-114	60.9	10 -145					
13C-PCB-118	77.6	10 -145					
13C-PCB-123	87.4	10 -145					
13C-PCB-126	66.4	10 -145					
13C-PCB-127	59.9	10 -145					
13C-PCB-138	81.5	10 -145					
13C-PCB-141	86.0	10 -145					
13C-PCB-153	75.9	10 -145					
13C-PCB-155	78.6	10 -145					
13C-PCB-156	94.2	10 -145					
13C-PCB-157	94.3	10 -145					
13C-PCB-159	90.8	10 -145					
13C-PCB-167	88.6	10 -145					
13C-PCB-169	93.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-04
Project:	120711-01.07 Task 1	Sample Size:	10.5 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.65	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 15:40
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.35				PCB-44	965			
PCB-2	0.562				PCB-45	68.6			
PCB-3	0.475			J	PCB-46	30.2			
PCB-4/10	18.3				PCB-47	1340			
PCB-5/8	20.0				PCB-48/75	294			
PCB-6	13.6				PCB-50	4.30			
PCB-7/9	5.79				PCB-51	90.0			
PCB-11	29.4				PCB-52/69	4090			E
PCB-12/13	1.46			J	PCB-53	181			
PCB-14	ND	1.50			PCB-54	10.8			
PCB-15	42.7				PCB-55	58.1			
PCB-16/32	311				PCB-56/60	1040			
PCB-17	81.0				PCB-57	28.7			
PCB-18	360				PCB-58	17.2			
PCB-19	34.3				PCB-61/70	3070			E
PCB-20/21/33	69.3				PCB-62	ND	0.934		
PCB-22	72.9				PCB-63	220			
PCB-23	ND	0.998			PCB-65	ND	0.904		
PCB-24/27	38.9				PCB-66/76	4660			E
PCB-25	70.1				PCB-67	98.1			
PCB-26	137				PCB-68	70.4			
PCB-28	1160				PCB-73	ND	0.893		
PCB-29	2.12				PCB-74	2340			E
PCB-30	0.483				PCB-77	433			
PCB-31	391				PCB-78	15.3			
PCB-34	4.89				PCB-79	330			
PCB-35	ND	1.04			PCB-80	ND	0.619		
PCB-36	ND	1.04			PCB-81	34.4			
PCB-37	107				PCB-82	410			
PCB-38	66.0				PCB-83	3.66			
PCB-39	1.26				PCB-84/92	3040			E
PCB-40	105				PCB-85/116	952			
PCB-41/64/71/72	1680				PCB-86	ND	1.18		
PCB-42/59	415				PCB-87/117/125	3560			
PCB-43/49	2860			E	PCB-88/91	1460			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-04
Project:	120711-01.07 Task 1	Sample Size:	10.5 g	QC Batch:	B4L0053
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.65	Date Received:	24-Nov-2014 13:28
				Date Analyzed:	11-Dec-14 15:40
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.4				PCB-136	780			
PCB-90/101	17600			E	PCB-137	897			
PCB-93	ND	1.08			PCB-138/163/164	22900			E
PCB-94	8.59				PCB-139/149	6670			E
PCB-95/98/102	3430				PCB-140	129			
PCB-96	41.0				PCB-141	1690			E
PCB-97	3040			E	PCB-144	700			
PCB-99	12700			E	PCB-145	2.44			
PCB-100	194				PCB-146/165	4620			E
PCB-103	242				PCB-147	788			
PCB-104	5.86				PCB-148	67.2			
PCB-105	5830			E	PCB-150	57.5			
PCB-106/118	20100			E	PCB-151	3530			E
PCB-107/109	1890				PCB-152	11.1			
PCB-108/112	266				PCB-153	28100			E
PCB-110	7360			E	PCB-154	895			
PCB-111/115	319				PCB-155	20.4			
PCB-113	ND	0.870			PCB-156	1960			E
PCB-114	303				PCB-157	497			
PCB-119	589				PCB-158/160	2290			
PCB-120	119				PCB-159	256			
PCB-121	ND	0.644			PCB-166	83.4			
PCB-122	76.8				PCB-167	1130			
PCB-123	367				PCB-168	42.3			
PCB-124	481				PCB-169	4.21			
PCB-126	98.7				PCB-170	4150			E
PCB-127	ND	1.30			PCB-171	1200			
PCB-128/162	2900			E	PCB-172	737			
PCB-129	170				PCB-173	9.60			
PCB-130	1330				PCB-174	642			
PCB-131	ND	4.86			PCB-175	230			
PCB-132/161	873				PCB-176	153			
PCB-133/142	502				PCB-177	1900			E
PCB-134/143	408				PCB-178	1310			
PCB-135	780				PCB-179	994			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-04
Project:	120711-01.07 Task 1	Sample Size:	10.5 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.65	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 15:40
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	10700			E	Total octaCB	8830			
PCB-181	36.8				Total nonaCB	1060			
PCB-182/187	9050			E	DecaCB	185			
PCB-183	3670			E	Total PCB	244000			
PCB-184	17.2								
PCB-185	193								
PCB-186	ND	0.689							
PCB-188	61.4								
PCB-189	184								
PCB-190	891								
PCB-191	179								
PCB-192	ND	0.713							
PCB-193	624								
PCB-194	1660			E					
PCB-195	518								
PCB-196/203	3100			E					
PCB-197	109								
PCB-198	54.4								
PCB-199	2210			E					
PCB-200	38.1								
PCB-201	328								
PCB-202	729								
PCB-204	3.56								
PCB-205	77.4								
PCB-206	772								
PCB-207	101								
PCB-208	186								
PCB-209	185								
Total monoCB	2.39								
Total diCB	131								
Total triCB	2900								
Total tetraCB	24500								
Total pentaCB	84400								
Total hexaCB	85100								
Total heptaCB	36900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-04
Project:	120711-01.07 Task 1	Sample Size:	10.5 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.65	QC Batch:	B4L0053
				Date Analyzed :	11-Dec-14 15:40
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	89.2	5 -145		13C-PCB-170	101	10 -145	
13C-PCB-3	81.0	5 -145		13C-PCB-180	97.5	10 -145	
13C-PCB-4	79.0	5 -145		13C-PCB-188	85.5	10 -145	
13C-PCB-11	83.6	5 -145		13C-PCB-189	91.3	10 -145	
13C-PCB-9	81.4	5 -145		13C-PCB-194	88.6	10 -145	
13C-PCB-19	60.8	5 -145		13C-PCB-202	87.1	10 -145	
13C-PCB-28	85.1	5 -145		13C-PCB-206	93.8	10 -145	
13C-PCB-32	71.0	5 -145		13C-PCB-208	91.4	10 -145	
13C-PCB-37	89.4	5 -145		13C-PCB-209	107	10 -145	
13C-PCB-47	71.3	5 -145		CRS 13C-PCB-79	88.6	10 -145	
13C-PCB-52	75.8	5 -145		13C-PCB-178	94.2	10 -145	
13C-PCB-54	72.6	5 -145					
13C-PCB-70	82.6	5 -145					
13C-PCB-77	88.3	10 -145					
13C-PCB-80	87.7	10 -145					
13C-PCB-81	92.1	10 -145					
13C-PCB-95	78.8	10 -145					
13C-PCB-97	88.4	10 -145					
13C-PCB-101	82.0	10 -145					
13C-PCB-104	73.6	10 -145					
13C-PCB-105	60.4	10 -145					
13C-PCB-114	59.1	10 -145					
13C-PCB-118	85.8	10 -145					
13C-PCB-123	89.1	10 -145					
13C-PCB-126	65.9	10 -145					
13C-PCB-127	63.7	10 -145					
13C-PCB-138	82.9	10 -145					
13C-PCB-141	86.7	10 -145					
13C-PCB-153	75.1	10 -145					
13C-PCB-155	79.0	10 -145					
13C-PCB-156	90.5	10 -145					
13C-PCB-157	88.8	10 -145					
13C-PCB-159	88.7	10 -145					
13C-PCB-167	85.3	10 -145					
13C-PCB-169	89.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-05
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.52	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 16:44
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.58				PCB-44	1260			
PCB-2	0.661				PCB-45	48.7			
PCB-3	0.536				PCB-46	24.4			
PCB-4/10	13.0				PCB-47	1060			
PCB-5/8	20.3				PCB-48/75	305			
PCB-6	9.84				PCB-50	2.59			
PCB-7/9	7.65				PCB-51	101			
PCB-11	38.5				PCB-52/69	6920			E
PCB-12/13	ND	0.245			PCB-53	221			
PCB-14	ND	0.218			PCB-54	12.6			
PCB-15	71.4				PCB-55	77.8			
PCB-16/32	274				PCB-56/60	1150			
PCB-17	50.0				PCB-57	49.4			
PCB-18	322				PCB-58	32.6			
PCB-19	24.2				PCB-61/70	6110			E
PCB-20/21/33	51.7				PCB-62	ND	0.374		
PCB-22	53.0				PCB-63	404			
PCB-23	ND	0.393			PCB-65	ND	0.362		
PCB-24/27	32.8				PCB-66/76	6270			E
PCB-25	127				PCB-67	171			
PCB-26	258				PCB-68	116			
PCB-28	2010			E	PCB-73	ND	0.417		
PCB-29	1.95				PCB-74	4300			E
PCB-30	0.494				PCB-77	711			
PCB-31	913				PCB-78	25.1			
PCB-34	5.93				PCB-79	458			
PCB-35	ND	0.424			PCB-80	ND	0.256		
PCB-36	1.26				PCB-81	72.5			
PCB-37	185				PCB-82	142			
PCB-38	56.5				PCB-83	ND		6.67	
PCB-39	1.83				PCB-84/92	4550			E
PCB-40	50.7				PCB-85/116	343			
PCB-41/64/71/72	2170				PCB-86	ND	0.287		
PCB-42/59	338				PCB-87/117/125	5390			E
PCB-43/49	5130			E	PCB-88/91	2070			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-05
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.52	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 16:44
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	12.1				PCB-136	875			
PCB-90/101	27300			E	PCB-137	1360			
PCB-93	ND	0.255			PCB-138/163/164	27200			E
PCB-94	7.44				PCB-139/149	8580			E
PCB-95/98/102	4490			E	PCB-140	126			
PCB-96	49.1				PCB-141	2160			E
PCB-97	3950			E	PCB-144	908			
PCB-99	19500			E	PCB-145	2.15			
PCB-100	281				PCB-146/165	5890			E
PCB-103	391				PCB-147	1160			
PCB-104	8.67				PCB-148	98.6			
PCB-105	8940			E	PCB-150	82.4			
PCB-106/118	30000			E	PCB-151	3900			E
PCB-107/109	2770				PCB-152	11.0			
PCB-108/112	377				PCB-153	33900			E
PCB-110	7470			E	PCB-154	1280			
PCB-111/115	487				PCB-155	27.7			
PCB-113	ND	0.226			PCB-156	2570			E
PCB-114	449				PCB-157	642			
PCB-119	746				PCB-158/160	2970			E
PCB-120	165				PCB-159	293			
PCB-121	ND	0.152			PCB-166	107			
PCB-122	68.3				PCB-167	1380			
PCB-123	596				PCB-168	65.5			
PCB-124	820				PCB-169	4.58			
PCB-126	125				PCB-170	4230			E
PCB-127	ND	1.80			PCB-171	1180			
PCB-128/162	3370			E	PCB-172	719			
PCB-129	170				PCB-173	8.66			
PCB-130	1650			E	PCB-174	639			
PCB-131	ND	3.57			PCB-175	254			
PCB-132/161	974				PCB-176	145			
PCB-133/142	633				PCB-177	2060			E
PCB-134/143	516				PCB-178	1350			
PCB-135	860				PCB-179	941			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-05
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.52	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 16:44
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	10100			E	Total octaCB	7800			
PCB-181	34.0				Total nonaCB	898			
PCB-182/187	9780			E	DecaCB	156			
PCB-183	3660			E	Total PCB	314000			
PCB-184	17.2								
PCB-185	179								
PCB-186	ND	0.0715							
PCB-188	83.7								
PCB-189	175								
PCB-190	913								
PCB-191	179								
PCB-192	ND	0.0788							
PCB-193	644								
PCB-194	1360								
PCB-195	481								
PCB-196/203	2560								
PCB-197	92.2								
PCB-198	55.6								
PCB-199	2100			E					
PCB-200	28.0								
PCB-201	307								
PCB-202	744								
PCB-204	3.23								
PCB-205	66.0								
PCB-206	656								
PCB-207	74.5								
PCB-208	168								
PCB-209	156								
Total monoCB	2.77								
Total diCB	161								
Total triCB	4370								
Total tetraCB	37600								
Total pentaCB	122000								
Total hexaCB	104000								
Total heptaCB	37300								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-05
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.52	QC Batch:	B4L0053
				Date Analyzed :	11-Dec-14 16:44
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	92.6	5 -145		13C-PCB-170	110	10 -145	
13C-PCB-3	88.4	5 -145		13C-PCB-180	108	10 -145	
13C-PCB-4	80.4	5 -145		13C-PCB-188	93.2	10 -145	
13C-PCB-11	86.7	5 -145		13C-PCB-189	106	10 -145	
13C-PCB-9	82.3	5 -145		13C-PCB-194	95.5	10 -145	
13C-PCB-19	67.4	5 -145		13C-PCB-202	96.3	10 -145	
13C-PCB-28	80.5	5 -145		13C-PCB-206	111	10 -145	
13C-PCB-32	71.7	5 -145		13C-PCB-208	114	10 -145	
13C-PCB-37	78.9	5 -145		13C-PCB-209	129	10 -145	
13C-PCB-47	79.8	5 -145		CRS 13C-PCB-79	91.7	10 -145	
13C-PCB-52	75.3	5 -145		13C-PCB-178	102	10 -145	
13C-PCB-54	72.0	5 -145					
13C-PCB-70	89.2	5 -145					
13C-PCB-77	96.7	10 -145					
13C-PCB-80	96.2	10 -145					
13C-PCB-81	96.8	10 -145					
13C-PCB-95	85.5	10 -145					
13C-PCB-97	96.1	10 -145					
13C-PCB-101	83.9	10 -145					
13C-PCB-104	78.9	10 -145					
13C-PCB-105	67.8	10 -145					
13C-PCB-114	67.3	10 -145					
13C-PCB-118	86.8	10 -145					
13C-PCB-123	98.1	10 -145					
13C-PCB-126	74.5	10 -145					
13C-PCB-127	69.3	10 -145					
13C-PCB-138	86.9	10 -145					
13C-PCB-141	90.3	10 -145					
13C-PCB-153	78.5	10 -145					
13C-PCB-155	86.3	10 -145					
13C-PCB-156	97.0	10 -145					
13C-PCB-157	96.5	10 -145					
13C-PCB-159	94.9	10 -145					
13C-PCB-167	94.9	10 -145					
13C-PCB-169	99.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-06	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.00	Date Analyzed :	11-Dec-14 17:48	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.81				PCB-44	1320			
PCB-2	1.36				PCB-45	143			
PCB-3	0.764				PCB-46	42.8			
PCB-4/10	31.8				PCB-47	2330			E
PCB-5/8	44.1				PCB-48/75	556			
PCB-6	29.0				PCB-50	9.55			
PCB-7/9	12.9				PCB-51	157			
PCB-11	85.0				PCB-52/69	6100			E
PCB-12/13	2.86				PCB-53	265			
PCB-14	ND	0.384			PCB-54	16.5			
PCB-15	78.0				PCB-55	99.1			
PCB-16/32	703				PCB-56/60	1940			
PCB-17	195				PCB-57	46.1			
PCB-18	702				PCB-58	28.9			
PCB-19	44.1				PCB-61/70	5690			E
PCB-20/21/33	144				PCB-62	ND	0.721		
PCB-22	172				PCB-63	329			
PCB-23	ND	0.248			PCB-65	ND	0.698		
PCB-24/27	54.3				PCB-66/76	7340			E
PCB-25	138				PCB-67	178			
PCB-26	214				PCB-68	96.3			
PCB-28	2450			E	PCB-73	ND	0.737		
PCB-29	4.64				PCB-74	3550			E
PCB-30	1.06				PCB-77	624			
PCB-31	870				PCB-78	25.9			
PCB-34	10.4				PCB-79	423			
PCB-35	1.76				PCB-80	ND	0.544		
PCB-36	2.50				PCB-81	ND		52.7	
PCB-37	241				PCB-82	717			
PCB-38	125				PCB-83	7.27			
PCB-39	2.56				PCB-84/92	4640			E
PCB-40	213				PCB-85/116	1380			
PCB-41/64/71/72	2790				PCB-86	ND	1.47		
PCB-42/59	759				PCB-87/117/125	5180			E
PCB-43/49	4980			E	PCB-88/91	2210			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-06
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.00	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 17:48
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	43.3				PCB-136	1360			
PCB-90/101	24800			E	PCB-137	1230			
PCB-93	ND	1.47			PCB-138/163/164	30500			E
PCB-94	10.1				PCB-139/149	10800			E
PCB-95/98/102	5280			E	PCB-140	203			
PCB-96	70.3				PCB-141	2990			E
PCB-97	4840			E	PCB-144	1140			
PCB-99	15800			E	PCB-145	4.34			
PCB-100	237				PCB-146/165	6170			E
PCB-103	363				PCB-147	973			
PCB-104	6.78				PCB-148	98.4			
PCB-105	7350			E	PCB-150	75.0			
PCB-106/118	24800			E	PCB-151	5860			E
PCB-107/109	2260				PCB-152	16.7			
PCB-108/112	422				PCB-153	37000			E
PCB-110	13400			E	PCB-154	1040			
PCB-111/115	395				PCB-155	20.7			
PCB-113	ND	1.18			PCB-156	2630			E
PCB-114	421				PCB-157	624			
PCB-119	827				PCB-158/160	3180			E
PCB-120	105				PCB-159	384			
PCB-121	ND	0.873			PCB-166	106			
PCB-122	153				PCB-167	1400			
PCB-123	415				PCB-168	47.9			
PCB-124	689				PCB-169	5.47			
PCB-126	116				PCB-170	6240			E
PCB-127	ND	2.43			PCB-171	1980			E
PCB-128/162	3990			E	PCB-172	1290			
PCB-129	371				PCB-173	22.1			
PCB-130	1940			E	PCB-174	1270			
PCB-131	ND	6.30			PCB-175	378			
PCB-132/161	1650				PCB-176	291			
PCB-133/142	750				PCB-177	3580			E
PCB-134/143	774				PCB-178	2010			E
PCB-135	1390				PCB-179	1780			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-06
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.00	QC Batch:	B4L0053
				Date Analyzed:	11-Dec-14 17:48
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	15300			E	Total octaCB	13000			
PCB-181	51.4				Total nonaCB	1610			
PCB-182/187	13000			E	DecaCB	352			
PCB-183	5310			E	Total PCB	353000			
PCB-184	21.7								
PCB-185	400								
PCB-186	ND	0.298							
PCB-188	61.8								
PCB-189	264								
PCB-190	1350								
PCB-191	274								
PCB-192	ND	0.341							
PCB-193	1010								
PCB-194	2720			E					
PCB-195	1190								
PCB-196/203	3760			E					
PCB-197	157								
PCB-198	87.7								
PCB-199	3330			E					
PCB-200	79.5								
PCB-201	482								
PCB-202	1030								
PCB-204	5.09								
PCB-205	116								
PCB-206	1160								
PCB-207	132								
PCB-208	315								
PCB-209	352								
Total monoCB	5.94								
Total diCB	284								
Total triCB	6080								
Total tetraCB	40100								
Total pentaCB	117000								
Total hexaCB	119000								
Total heptaCB	55900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-06
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.00	QC Batch:	B4L0053
				Date Analyzed :	11-Dec-14 17:48
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	95.3	5 -145		13C-PCB-170	103	10 -145	
13C-PCB-3	85.4	5 -145		13C-PCB-180	98.8	10 -145	
13C-PCB-4	84.7	5 -145		13C-PCB-188	90.1	10 -145	
13C-PCB-11	85.9	5 -145		13C-PCB-189	78.0	10 -145	
13C-PCB-9	84.6	5 -145		13C-PCB-194	111	10 -145	
13C-PCB-19	64.6	5 -145		13C-PCB-202	94.9	10 -145	
13C-PCB-28	84.7	5 -145		13C-PCB-206	148	10 -145	H
13C-PCB-32	70.1	5 -145		13C-PCB-208	156	10 -145	H
13C-PCB-37	82.6	5 -145		13C-PCB-209	194	10 -145	H
13C-PCB-47	80.1	5 -145		CRS 13C-PCB-79	87.8	10 -145	
13C-PCB-52	74.9	5 -145		13C-PCB-178	96.9	10 -145	
13C-PCB-54	70.9	5 -145					
13C-PCB-70	87.2	5 -145					
13C-PCB-77	89.6	10 -145					
13C-PCB-80	85.0	10 -145					
13C-PCB-81	96.7	10 -145					
13C-PCB-95	81.8	10 -145					
13C-PCB-97	93.8	10 -145					
13C-PCB-101	83.3	10 -145					
13C-PCB-104	74.1	10 -145					
13C-PCB-105	60.6	10 -145					
13C-PCB-114	64.1	10 -145					
13C-PCB-118	84.7	10 -145					
13C-PCB-123	96.6	10 -145					
13C-PCB-126	63.5	10 -145					
13C-PCB-127	63.1	10 -145					
13C-PCB-138	82.2	10 -145					
13C-PCB-141	88.0	10 -145					
13C-PCB-153	75.7	10 -145					
13C-PCB-155	84.4	10 -145					
13C-PCB-156	93.6	10 -145					
13C-PCB-157	95.4	10 -145					
13C-PCB-159	91.1	10 -145					
13C-PCB-167	81.5	10 -145					
13C-PCB-169	90.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-07	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.72	Date Analyzed :	20-Dec-14 00:19	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		1.96	D	PCB-44	2950			D
PCB-2	ND		1.08	D	PCB-45	335			D
PCB-3	ND		0.614	D	PCB-46	57.6			D
PCB-4/10	28.3			D	PCB-47	7340			D
PCB-5/8	26.2			D	PCB-48/75	1770			D
PCB-6	30.2			D	PCB-50	28.8			D
PCB-7/9	11.1			D	PCB-51	363			D
PCB-11	60.5			D	PCB-52/69	14800			D
PCB-12/13	ND	0.335		D	PCB-53	438			D
PCB-14	ND	0.299		D	PCB-54	22.3			D
PCB-15	85.2			D	PCB-55	249			D
PCB-16/32	1150			D	PCB-56/60	6260			D
PCB-17	294			D	PCB-57	101			D
PCB-18	1110			D	PCB-58	87.8			D
PCB-19	37.3			D	PCB-61/70	10800			D
PCB-20/21/33	263			D	PCB-62	ND	1.48		D
PCB-22	492			D	PCB-63	828			D
PCB-23	ND	0.986		D	PCB-65	ND	1.43		D
PCB-24/27	61.8			D	PCB-66/76	20900			E, D
PCB-25	253			D	PCB-67	363			D
PCB-26	545			D	PCB-68	246			D
PCB-28	5140			D	PCB-73	ND	1.46		D
PCB-29	6.05			D	PCB-74	9380			E, D
PCB-30	ND		1.27	D	PCB-77	1440			D
PCB-31	1330			D	PCB-78	61.8			D
PCB-34	19.7			D	PCB-79	1200			D
PCB-35	ND	1.04		D	PCB-80	ND	1.20		D
PCB-36	2.16			J, D	PCB-81	222			D
PCB-37	427			D	PCB-82	2630			D
PCB-38	384			D	PCB-83	15.2			D
PCB-39	4.06			D	PCB-84/92	9310			D
PCB-40	590			D	PCB-85/116	7450			D
PCB-41/64/71/72	7370			D	PCB-86	ND	5.19		D
PCB-42/59	2120			D	PCB-87/117/125	12500			D
PCB-43/49	11300			D	PCB-88/91	5330			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-07	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.72	Date Analyzed :	20-Dec-14 00:19	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	76.5			D	PCB-136	1910			D
PCB-90/101	58700			E, D	PCB-137	2750			D
PCB-93	ND	4.65		D	PCB-138/163/164	62000			E, D
PCB-94	12.4			D	PCB-139/149	16500			E, D
PCB-95/98/102	10600			D	PCB-140	356			D
PCB-96	152			D	PCB-141	4890			D
PCB-97	12400			E, D	PCB-144	1900			D
PCB-99	40600			E, D	PCB-145	8.61			D
PCB-100	703			D	PCB-146/165	10900			D
PCB-103	807			D	PCB-147	2130			D
PCB-104	19.5			D	PCB-148	220			D
PCB-105	19800			E, D	PCB-150	155			D
PCB-106/118	65900			E, D	PCB-151	8670			E, D
PCB-107/109	5920			D	PCB-152	31.0			D
PCB-108/112	887			D	PCB-153	72700			E, D
PCB-110	34500			E, D	PCB-154	2260			D
PCB-111/115	897			D	PCB-155	44.8			D
PCB-113	ND	3.61		D	PCB-156	5610			D
PCB-114	930			D	PCB-157	1340			D
PCB-119	2180			D	PCB-158/160	6060			D
PCB-120	281			D	PCB-159	678			D
PCB-121	ND	2.76		D	PCB-166	232			D
PCB-122	353			D	PCB-167	3130			D
PCB-123	1250			D	PCB-168	101			D
PCB-124	1500			D	PCB-169	7.89			D
PCB-126	242			D	PCB-170	9140			E, D
PCB-127	ND	3.83		D	PCB-171	2710			D
PCB-128/162	9390			D	PCB-172	1550			D
PCB-129	598			D	PCB-173	19.9			D
PCB-130	3760			D	PCB-174	1230			D
PCB-131	ND	8.38		D	PCB-175	473			D
PCB-132/161	2710			D	PCB-176	306			D
PCB-133/142	1300			D	PCB-177	4420			D
PCB-134/143	1070			D	PCB-178	2770			D
PCB-135	1650			D	PCB-179	1990			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-07
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.72	QC Batch:	B4L0053
				Date Analyzed:	20-Dec-14 00:19
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	21800			E, D	Total octaCB	17600			
PCB-181	88.3			D	Total nonaCB	2210			
PCB-182/187	19700			E, D	DecaCB	428			
PCB-183	7180			D	Total PCB	732000			
PCB-184	33.3			D					
PCB-185	424			D					
PCB-186	ND	0.638		D					
PCB-188	168			D					
PCB-189	376			D					
PCB-190	1810			D					
PCB-191	349			D					
PCB-192	ND	0.696		D					
PCB-193	1220			D					
PCB-194	3700			D					
PCB-195	1150			D					
PCB-196/203	5450			D					
PCB-197	205			D					
PCB-198	136			D					
PCB-199	4600			D					
PCB-200	66.2			D					
PCB-201	654			D					
PCB-202	1480			D					
PCB-204	ND		5.66	D					
PCB-205	161			D					
PCB-206	1610			D					
PCB-207	199			D					
PCB-208	405			D					
PCB-209	428			D					
Total monoCB	ND		3.66						
Total diCB	242								
Total triCB	11500								
Total tetraCB	102000								
Total pentaCB	296000								
Total hexaCB	225000								
Total heptaCB	77800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-07
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.72	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 00:19
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.7	5 -145	D	13C-PCB-170	68.4	10 -145	D
13C-PCB-3	72.6	5 -145	D	13C-PCB-180	71.9	10 -145	D
13C-PCB-4	79.4	5 -145	D	13C-PCB-188	66.9	10 -145	D
13C-PCB-11	88.1	5 -145	D	13C-PCB-189	61.5	10 -145	D
13C-PCB-9	84.3	5 -145	D	13C-PCB-194	95.9	10 -145	D
13C-PCB-19	59.1	5 -145	D	13C-PCB-202	48.8	10 -145	D
13C-PCB-28	92.3	5 -145	D	13C-PCB-206	81.8	10 -145	D
13C-PCB-32	61.5	5 -145	D	13C-PCB-208	82.5	10 -145	D
13C-PCB-37	92.6	5 -145	D	13C-PCB-209	72.4	10 -145	D
13C-PCB-47	87.5	5 -145	D	CRS 13C-PCB-79	88.9	10 -145	D
13C-PCB-52	87.1	5 -145	D	13C-PCB-178	73.5	10 -145	D
13C-PCB-54	81.4	5 -145	D				
13C-PCB-70	91.0	5 -145	D				
13C-PCB-77	91.5	10 -145	D				
13C-PCB-80	90.1	10 -145	D				
13C-PCB-81	91.1	10 -145	D				
13C-PCB-95	84.5	10 -145	D				
13C-PCB-97	90.6	10 -145	D				
13C-PCB-101	88.1	10 -145	D				
13C-PCB-104	80.2	10 -145	D				
13C-PCB-105	105	10 -145	D				
13C-PCB-114	98.6	10 -145	D				
13C-PCB-118	87.8	10 -145	D				
13C-PCB-123	82.7	10 -145	D				
13C-PCB-126	103	10 -145	D				
13C-PCB-127	101	10 -145	D				
13C-PCB-138	91.0	10 -145	D				
13C-PCB-141	86.2	10 -145	D				
13C-PCB-153	87.0	10 -145	D				
13C-PCB-155	62.6	10 -145	D				
13C-PCB-156	85.1	10 -145	D				
13C-PCB-157	81.9	10 -145	D				
13C-PCB-159	86.0	10 -145	D				
13C-PCB-167	83.1	10 -145	D				
13C-PCB-169	80.4	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-08	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.70	Date Analyzed :	12-Dec-14 09:42	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.10				PCB-44	7560			E
PCB-2	0.912				PCB-45	154			
PCB-3	0.517				PCB-46	90.4			
PCB-4/10	18.6				PCB-47	5690			E
PCB-5/8	29.6				PCB-48/75	1030			
PCB-6	14.6				PCB-50	7.90			
PCB-7/9	20.2				PCB-51	330			
PCB-11	48.7				PCB-52/69	28100			E
PCB-12/13	2.33				PCB-53	776			
PCB-14	ND	1.92			PCB-54	28.9			
PCB-15	131				PCB-55	200			
PCB-16/32	543				PCB-56/60	5790			E
PCB-17	62.8				PCB-57	162			
PCB-18	807				PCB-58	75.0			
PCB-19	37.5				PCB-61/70	20600			E
PCB-20/21/33	159				PCB-62	ND	3.05		
PCB-22	172				PCB-63	1520			E
PCB-23	ND	0.726			PCB-65	ND	2.95		
PCB-24/27	65.5				PCB-66/76	29100			E
PCB-25	608				PCB-67	679			
PCB-26	1670			E	PCB-68	312			
PCB-28	13200			E	PCB-73	ND	3.41		
PCB-29	10.6				PCB-74	17600			E
PCB-30	1.29				PCB-77	2210			E
PCB-31	3710			E	PCB-78	ND	2.18		
PCB-34	20.1				PCB-79	788			
PCB-35	1.24				PCB-80	ND	1.89		
PCB-36	1.53				PCB-81	122			
PCB-37	693				PCB-82	314			
PCB-38	118				PCB-83	19.3			
PCB-39	4.25				PCB-84/92	10800			E
PCB-40	110				PCB-85/116	1090			
PCB-41/64/71/72	9400			E	PCB-86	ND	1.45		
PCB-42/59	1620				PCB-87/117/125	14300			E
PCB-43/49	23200			E	PCB-88/91	5750			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-08	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.70	Date Analyzed :	12-Dec-14 09:42	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.3				PCB-136	2200			E
PCB-90/101	62000			E	PCB-137	3000			E
PCB-93	ND	1.46			PCB-138/163/164	55700			E
PCB-94	14.2				PCB-139/149	14500			E
PCB-95/98/102	11700			E	PCB-140	296			
PCB-96	213				PCB-141	5120			E
PCB-97	12100			E	PCB-144	2040			E
PCB-99	44900			E	PCB-145	5.63			
PCB-100	559				PCB-146/165	11500			E
PCB-103	856				PCB-147	1890			E
PCB-104	11.7				PCB-148	144			
PCB-105	20900			E	PCB-150	130			
PCB-106/118	68200			E	PCB-151	8800			E
PCB-107/109	5020			E	PCB-152	30.3			
PCB-108/112	895				PCB-153	60500			E
PCB-110	20100			E	PCB-154	1740			E
PCB-111/115	1290				PCB-155	30.4			
PCB-113	ND	1.29			PCB-156	5070			E
PCB-114	1040				PCB-157	1270			
PCB-119	1920			E	PCB-158/160	7600			E
PCB-120	197				PCB-159	ND	2.03		
PCB-121	ND	0.868			PCB-166	243			
PCB-122	162				PCB-167	2600			E
PCB-123	1220				PCB-168	116			
PCB-124	1480			E	PCB-169	8.71			
PCB-126	218				PCB-170	8260			E
PCB-127	ND	7.78			PCB-171	2540			E
PCB-128/162	8090			E	PCB-172	1560			E
PCB-129	501				PCB-173	18.5			
PCB-130	3460			E	PCB-174	1500			E
PCB-131	ND	4.74			PCB-175	459			
PCB-132/161	2130				PCB-176	359			
PCB-133/142	1410				PCB-177	4160			E
PCB-134/143	1340				PCB-178	2650			E
PCB-135	1930			E	PCB-179	2390			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-08
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.70	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 09:42
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	20700			E	Total octaCB	19500			
PCB-181	93.7				Total nonaCB	3650			
PCB-182/187	18800			E	DecaCB	783			
PCB-183	7880			E	Total PCB	770000			
PCB-184	30.5								
PCB-185	478								
PCB-186	0.610								
PCB-188	155								
PCB-189	334								
PCB-190	1830			E					
PCB-191	373								
PCB-192	ND	2.90							
PCB-193	1230								
PCB-194	3740			E					
PCB-195	1150								
PCB-196/203	6420			E					
PCB-197	222								
PCB-198	118								
PCB-199	5170			E					
PCB-200	83.7								
PCB-201	713								
PCB-202	1650			E					
PCB-204	9.49								
PCB-205	176								
PCB-206	2620			E					
PCB-207	310								
PCB-208	718								
PCB-209	783								
Total monoCB	3.53								
Total diCB	265								
Total triCB	21800								
Total tetraCB	157000								
Total pentaCB	287000								
Total hexaCB	203000								
Total heptaCB	75800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-WS-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-08
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	5.70	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 09:42
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	107	5 -145		13C-PCB-170	95.4	10 -145	
13C-PCB-3	92.1	5 -145		13C-PCB-180	86.8	10 -145	
13C-PCB-4	88.5	5 -145		13C-PCB-188	73.4	10 -145	
13C-PCB-11	84.4	5 -145		13C-PCB-189	75.5	10 -145	
13C-PCB-9	87.6	5 -145		13C-PCB-194	88.2	10 -145	
13C-PCB-19	83.7	5 -145		13C-PCB-202	89.4	10 -145	
13C-PCB-28	89.2	5 -145		13C-PCB-206	92.9	10 -145	
13C-PCB-32	86.5	5 -145		13C-PCB-208	101	10 -145	
13C-PCB-37	101	5 -145		13C-PCB-209	97.2	10 -145	
13C-PCB-47	74.6	5 -145		CRS 13C-PCB-79	91.8	10 -145	
13C-PCB-52	64.8	5 -145		13C-PCB-178	90.8	10 -145	
13C-PCB-54	59.1	5 -145					
13C-PCB-70	83.9	5 -145					
13C-PCB-77	108	10 -145					
13C-PCB-80	91.4	10 -145					
13C-PCB-81	101	10 -145					
13C-PCB-95	83.0	10 -145					
13C-PCB-97	103	10 -145					
13C-PCB-101	82.4	10 -145					
13C-PCB-104	71.9	10 -145					
13C-PCB-105	69.3	10 -145					
13C-PCB-114	78.1	10 -145					
13C-PCB-118	84.7	10 -145					
13C-PCB-123	121	10 -145					
13C-PCB-126	88.9	10 -145					
13C-PCB-127	80.8	10 -145					
13C-PCB-138	70.9	10 -145					
13C-PCB-141	86.9	10 -145					
13C-PCB-153	65.1	10 -145					
13C-PCB-155	88.7	10 -145					
13C-PCB-156	98.4	10 -145					
13C-PCB-157	97.5	10 -145					
13C-PCB-159	94.2	10 -145					
13C-PCB-167	79.2	10 -145					
13C-PCB-169	101	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-09
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.67	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 10:46
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.545				PCB-44	478			
PCB-2	0.759				PCB-45	14.6			
PCB-3	0.336			J	PCB-46	10.4			
PCB-4/10	3.80				PCB-47	157			
PCB-5/8	10.7				PCB-48/75	98.3			
PCB-6	2.58				PCB-50	0.631			
PCB-7/9	1.91				PCB-51	27.1			
PCB-11	31.7				PCB-52/69	1680			
PCB-12/13	ND	0.782			PCB-53	65.5			
PCB-14	ND	0.698			PCB-54	2.90			
PCB-15	15.0				PCB-55	16.3			
PCB-16/32	57.2				PCB-56/60	299			
PCB-17	10.2				PCB-57	12.0			
PCB-18	70.6				PCB-58	6.03			
PCB-19	5.10				PCB-61/70	1580			
PCB-20/21/33	11.4				PCB-62	ND	0.827		
PCB-22	14.7				PCB-63	117			
PCB-23	ND	0.277			PCB-65	ND	0.801		
PCB-24/27	7.41				PCB-66/76	1520			
PCB-25	19.4				PCB-67	42.1			
PCB-26	40.5				PCB-68	28.5			
PCB-28	524				PCB-73	3.48			
PCB-29	0.807				PCB-74	1210			
PCB-30	ND	0.141			PCB-77	140			
PCB-31	251				PCB-78	ND	0.737		
PCB-34	2.36				PCB-79	117			
PCB-35	ND		0.280		PCB-80	ND	0.623		
PCB-36	1.75				PCB-81	8.85			
PCB-37	44.7				PCB-82	19.3			
PCB-38	3.23				PCB-83	ND	2.83		
PCB-39	0.683				PCB-84/92	1170			
PCB-40	11.3				PCB-85/116	32.0			
PCB-41/64/71/72	442				PCB-86	ND	3.92		
PCB-42/59	77.8				PCB-87/117/125	1200			
PCB-43/49	1180				PCB-88/91	404			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-09
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.67	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 10:46
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.67				PCB-136	226			
PCB-90/101	6460			E	PCB-137	438			
PCB-93	ND	1.26			PCB-138/163/164	9970			E
PCB-94	9.07				PCB-139/149	2330			
PCB-95/98/102	1540				PCB-140	24.4			
PCB-96	7.66				PCB-141	617			
PCB-97	805				PCB-144	228			
PCB-99	5090			E	PCB-145	0.616			
PCB-100	59.6				PCB-146/165	2070			
PCB-103	92.6				PCB-147	275			
PCB-104	2.12				PCB-148	24.8			
PCB-105	2150			E	PCB-150	15.8			
PCB-106/118	8270			E	PCB-151	1290			
PCB-107/109	823				PCB-152	3.00			
PCB-108/112	102				PCB-153	13400			E
PCB-110	1440			E	PCB-154	371			
PCB-111/115	139				PCB-155	11.4			
PCB-113	10.3				PCB-156	883			
PCB-114	125				PCB-157	214			
PCB-119	162				PCB-158/160	927			
PCB-120	49.6				PCB-159	ND	0.619		
PCB-121	ND	0.745			PCB-166	37.7			
PCB-122	12.6				PCB-167	498			
PCB-123	149				PCB-168	17.3			
PCB-124	202				PCB-169	ND	2.51		
PCB-126	32.4				PCB-170	1580			E
PCB-127	ND	2.58			PCB-171	414			
PCB-128/162	862				PCB-172	262			
PCB-129	35.7				PCB-173	3.23			
PCB-130	499				PCB-174	246			
PCB-131	ND	0.895			PCB-175	86.1			
PCB-132/161	242				PCB-176	40.8			
PCB-133/142	213				PCB-177	626			
PCB-134/143	131				PCB-178	505			
PCB-135	339				PCB-179	273			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-09
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.67	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 10:46
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4200			E	Total octaCB	3000			
PCB-181	11.4				Total nonaCB	334			
PCB-182/187	3450			E	DecaCB	71.1			
PCB-183	1470			E	Total PCB	94700			
PCB-184	10.4								
PCB-185	53.8								
PCB-186	ND	0.213							
PCB-188	20.2								
PCB-189	68.2								
PCB-190	360								
PCB-191	72.3								
PCB-192	ND	0.248							
PCB-193	278								
PCB-194	605								
PCB-195	207								
PCB-196/203	1030								
PCB-197	38.3								
PCB-198	17.0								
PCB-199	667								
PCB-200	11.8								
PCB-201	106								
PCB-202	281								
PCB-204	1.35								
PCB-205	34.4								
PCB-206	242								
PCB-207	32.9								
PCB-208	58.2								
PCB-209	71.1								
Total monoCB	1.64								
Total diCB	65.8								
Total triCB	1070								
Total tetraCB	9350								
Total pentaCB	30600								
Total hexaCB	36200								
Total heptaCB	14000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-09
Project:	120711-01.07 Task 1	Sample Size:	10.6 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.67	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 10:46
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	78.0	5 -145		13C-PCB-170	88.5	10 -145	
13C-PCB-3	74.8	5 -145		13C-PCB-180	86.2	10 -145	
13C-PCB-4	74.2	5 -145		13C-PCB-188	80.7	10 -145	
13C-PCB-11	82.0	5 -145		13C-PCB-189	82.7	10 -145	
13C-PCB-9	78.3	5 -145		13C-PCB-194	85.8	10 -145	
13C-PCB-19	80.9	5 -145		13C-PCB-202	81.9	10 -145	
13C-PCB-28	85.9	5 -145		13C-PCB-206	85.1	10 -145	
13C-PCB-32	83.4	5 -145		13C-PCB-208	90.0	10 -145	
13C-PCB-37	85.3	5 -145		13C-PCB-209	89.5	10 -145	
13C-PCB-47	81.7	5 -145		CRS 13C-PCB-79	89.4	10 -145	
13C-PCB-52	79.2	5 -145		13C-PCB-178	83.2	10 -145	
13C-PCB-54	79.9	5 -145					
13C-PCB-70	84.1	5 -145					
13C-PCB-77	84.9	10 -145					
13C-PCB-80	85.3	10 -145					
13C-PCB-81	90.7	10 -145					
13C-PCB-95	81.1	10 -145					
13C-PCB-97	88.2	10 -145					
13C-PCB-101	84.8	10 -145					
13C-PCB-104	76.6	10 -145					
13C-PCB-105	82.7	10 -145					
13C-PCB-114	81.4	10 -145					
13C-PCB-118	85.7	10 -145					
13C-PCB-123	89.9	10 -145					
13C-PCB-126	89.3	10 -145					
13C-PCB-127	85.2	10 -145					
13C-PCB-138	87.4	10 -145					
13C-PCB-141	87.0	10 -145					
13C-PCB-153	83.3	10 -145					
13C-PCB-155	71.1	10 -145					
13C-PCB-156	93.3	10 -145					
13C-PCB-157	91.7	10 -145					
13C-PCB-159	91.0	10 -145					
13C-PCB-167	83.8	10 -145					
13C-PCB-169	91.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-10
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.52	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 11:50
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.487			PCB-44	127			
PCB-2	ND		0.369		PCB-45	16.4			
PCB-3	ND	0.492			PCB-46	3.63			
PCB-4/10	ND	1.60			PCB-47	606			
PCB-5/8	3.81				PCB-48/75	119			
PCB-6	ND		1.62		PCB-50	1.39			
PCB-7/9	ND	1.24			PCB-51	26.4			
PCB-11	22.6				PCB-52/69	1530			
PCB-12/13	ND	1.30			PCB-53	32.9			
PCB-14	ND	1.16			PCB-54	2.22			
PCB-15	12.9				PCB-55	16.9			
PCB-16/32	63.2				PCB-56/60	538			
PCB-17	13.3				PCB-57	10.3			
PCB-18	47.0				PCB-58	8.15			
PCB-19	2.21				PCB-61/70	1600			
PCB-20/21/33	13.4				PCB-62	ND	0.322		
PCB-22	26.6				PCB-63	114			
PCB-23	ND	0.218			PCB-65	ND	0.312		
PCB-24/27	3.05				PCB-66/76	2090			
PCB-25	17.6				PCB-67	39.4			
PCB-26	22.1				PCB-68	30.5			
PCB-28	455				PCB-73	ND	0.315		
PCB-29	0.585				PCB-74	1210			
PCB-30	ND	0.147			PCB-77	199			
PCB-31	187				PCB-78	ND	0.305		
PCB-34	1.16				PCB-79	125			
PCB-35	0.552				PCB-80	ND	0.249		
PCB-36	1.24				PCB-81	10.8			
PCB-37	55.1				PCB-82	76.6			
PCB-38	13.4				PCB-83	1.17			
PCB-39	0.908				PCB-84/92	837			
PCB-40	20.6				PCB-85/116	383			
PCB-41/64/71/72	625				PCB-86	ND	0.755		
PCB-42/59	93.1				PCB-87/117/125	1150			
PCB-43/49	1110				PCB-88/91	391			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-10
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.52	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 11:50
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.72				PCB-136	137			
PCB-90/101	6610			E	PCB-137	445			
PCB-93	ND	0.645			PCB-138/163/164	10300			E
PCB-94	ND	0.658			PCB-139/149	1320			
PCB-95/98/102	689				PCB-140	44.4			
PCB-96	8.24				PCB-141	491			
PCB-97	865				PCB-144	194			
PCB-99	5490			E	PCB-145	0.530			
PCB-100	82.1				PCB-146/165	1970			
PCB-103	77.7				PCB-147	266			
PCB-104	1.96				PCB-148	23.9			
PCB-105	2420			E	PCB-150	12.8			
PCB-106/118	8700			E	PCB-151	1040			
PCB-107/109	846				PCB-152	2.92			
PCB-108/112	52.9				PCB-153	13100			E
PCB-110	2300			E	PCB-154	380			
PCB-111/115	130				PCB-155	9.45			
PCB-113	5.69				PCB-156	922			
PCB-114	128				PCB-157	224			
PCB-119	251				PCB-158/160	1020			
PCB-120	54.3				PCB-159	ND	3.06		
PCB-121	ND	0.383			PCB-166	37.8			
PCB-122	27.5				PCB-167	500			
PCB-123	158				PCB-168	19.0			
PCB-124	200				PCB-169	ND	3.15		
PCB-126	38.7				PCB-170	1520			E
PCB-127	ND	1.93			PCB-171	465			
PCB-128/162	1180				PCB-172	220			
PCB-129	29.8				PCB-173	0.788			
PCB-130	500				PCB-174	79.2			
PCB-131	ND	4.45			PCB-175	87.2			
PCB-132/161	133				PCB-176	22.3			
PCB-133/142	193				PCB-177	550			
PCB-134/143	84.5				PCB-178	ND	0.205		
PCB-135	167				PCB-179	204			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-10 Date Received: 24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053 Date Extracted: 08-Dec-2014 10:52
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.52	Date Analyzed :	12-Dec-14 11:50 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3840			E	Total octaCB	2680			
PCB-181	14.2				Total nonaCB	310			
PCB-182/187	3200			E	DecaCB	65.3			
PCB-183	1440				Total PCB	93500			
PCB-184	8.81								
PCB-185	37.1								
PCB-186	ND	0.150							
PCB-188	22.2								
PCB-189	62.0								
PCB-190	350								
PCB-191	70.2								
PCB-192	ND	0.173							
PCB-193	254								
PCB-194	496								
PCB-195	185								
PCB-196/203	930								
PCB-197	38.7								
PCB-198	15.0								
PCB-199	586								
PCB-200	3.77								
PCB-201	105								
PCB-202	287								
PCB-204	1.31								
PCB-205	29.2								
PCB-206	218								
PCB-207	32.7								
PCB-208	58.7								
PCB-209	65.3								
Total monoCB	ND		0.369						
Total diCB	39.3		40.9						
Total triCB	923								
Total tetraCB	10300								
Total pentaCB	32000								
Total hexaCB	34800								
Total heptaCB	12400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-10
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.52	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 11:50
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	71.1	5 -145		13C-PCB-170	92.9	10 -145	
13C-PCB-3	74.7	5 -145		13C-PCB-180	88.5	10 -145	
13C-PCB-4	73.4	5 -145		13C-PCB-188	82.0	10 -145	
13C-PCB-11	83.4	5 -145		13C-PCB-189	71.6	10 -145	
13C-PCB-9	78.7	5 -145		13C-PCB-194	88.2	10 -145	
13C-PCB-19	81.0	5 -145		13C-PCB-202	83.4	10 -145	
13C-PCB-28	96.6	5 -145		13C-PCB-206	91.5	10 -145	
13C-PCB-32	85.3	5 -145		13C-PCB-208	92.6	10 -145	
13C-PCB-37	92.4	5 -145		13C-PCB-209	94.6	10 -145	
13C-PCB-47	84.7	5 -145		CRS 13C-PCB-79	95.2	10 -145	
13C-PCB-52	83.1	5 -145		13C-PCB-178	85.0	10 -145	
13C-PCB-54	81.4	5 -145					
13C-PCB-70	88.8	5 -145					
13C-PCB-77	91.9	10 -145					
13C-PCB-80	90.0	10 -145					
13C-PCB-81	92.5	10 -145					
13C-PCB-95	83.3	10 -145					
13C-PCB-97	89.5	10 -145					
13C-PCB-101	86.0	10 -145					
13C-PCB-104	80.0	10 -145					
13C-PCB-105	85.9	10 -145					
13C-PCB-114	84.9	10 -145					
13C-PCB-118	89.3	10 -145					
13C-PCB-123	90.0	10 -145					
13C-PCB-126	87.8	10 -145					
13C-PCB-127	85.7	10 -145					
13C-PCB-138	87.8	10 -145					
13C-PCB-141	90.3	10 -145					
13C-PCB-153	84.7	10 -145					
13C-PCB-155	73.8	10 -145					
13C-PCB-156	95.7	10 -145					
13C-PCB-157	94.8	10 -145					
13C-PCB-159	92.6	10 -145					
13C-PCB-167	82.5	10 -145					
13C-PCB-169	97.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-11	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	Date Analyzed :	12-Dec-14 12:54	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.334			J	PCB-44	213			
PCB-2	0.460			J	PCB-45	15.9			
PCB-3	0.177			J	PCB-46	5.74			
PCB-4/10	2.75				PCB-47	330			
PCB-5/8	5.03				PCB-48/75	95.5			
PCB-6	1.71				PCB-50	0.837			
PCB-7/9	1.31			J	PCB-51	35.2			
PCB-11	26.1				PCB-52/69	1670			
PCB-12/13	ND	0.708			PCB-53	50.9			
PCB-14	ND	0.632			PCB-54	4.06			
PCB-15	18.3				PCB-55	16.7			
PCB-16/32	63.1				PCB-56/60	362			
PCB-17	12.2				PCB-57	12.0			
PCB-18	61.5				PCB-58	7.91			
PCB-19	3.39				PCB-61/70	1580			
PCB-20/21/33	13.6				PCB-62	ND	0.360		
PCB-22	19.4				PCB-63	106			
PCB-23	ND	0.272			PCB-65	ND	0.348		
PCB-24/27	4.25				PCB-66/76	1740			
PCB-25	25.1				PCB-67	39.7			
PCB-26	36.9				PCB-68	26.8			
PCB-28	581				PCB-73	ND	0.365		
PCB-29	0.753				PCB-74	1180			
PCB-30	ND	0.147			PCB-77	175			
PCB-31	213				PCB-78	ND	0.321		
PCB-34	1.49				PCB-79	123			
PCB-35	0.552				PCB-80	ND	0.291		
PCB-36	1.54				PCB-81	12.3			
PCB-37	64.5				PCB-82	31.4			
PCB-38	7.94				PCB-83	ND	0.291		
PCB-39	0.933				PCB-84/92	901			
PCB-40	14.3				PCB-85/116	113			
PCB-41/64/71/72	519				PCB-86	ND	0.434		
PCB-42/59	77.7				PCB-87/117/125	1180			
PCB-43/49	1160				PCB-88/91	400			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-11
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 12:54
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.382			PCB-136	201			
PCB-90/101	6200			E	PCB-137	467			
PCB-93	ND	0.374			PCB-138/163/164	10400			E
PCB-94	2.80				PCB-139/149	1720			
PCB-95/98/102	1030				PCB-140	37.6			
PCB-96	11.6				PCB-141	561			
PCB-97	818				PCB-144	248			
PCB-99	4950			E	PCB-145	0.749			
PCB-100	78.7				PCB-146/165	1870			
PCB-103	89.8				PCB-147	276			
PCB-104	3.28				PCB-148	31.8			
PCB-105	2270			E	PCB-150	16.2			
PCB-106/118	8170			E	PCB-151	1260			
PCB-107/109	779				PCB-152	4.19			
PCB-108/112	70.2				PCB-153	13000			E
PCB-110	1710			E	PCB-154	376			
PCB-111/115	135				PCB-155	10.9			
PCB-113	ND	0.288			PCB-156	907			
PCB-114	121				PCB-157	215			
PCB-119	213				PCB-158/160	1050			
PCB-120	39.3				PCB-159	ND	1.37		
PCB-121	ND	0.222			PCB-166	40.9			
PCB-122	18.3				PCB-167	499			
PCB-123	147				PCB-168	20.5			
PCB-124	207				PCB-169	ND	1.43		
PCB-126	32.8				PCB-170	1600			E
PCB-127	ND	1.06			PCB-171	459			
PCB-128/162	1100				PCB-172	246			
PCB-129	36.4				PCB-173	2.06			
PCB-130	466				PCB-174	144			
PCB-131	ND	1.92			PCB-175	79.0			
PCB-132/161	201				PCB-176	36.3			
PCB-133/142	193				PCB-177	656			
PCB-134/143	117				PCB-178	469			
PCB-135	212				PCB-179	299			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-11
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 12:54
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4020			E	Total octaCB	2820			
PCB-181	14.7				Total nonaCB	310			
PCB-182/187	3460			E	DecaCB	67.5			
PCB-183	1470			E	Total PCB	93000			
PCB-184	8.87								
PCB-185	50.3								
PCB-186	ND	0.664							
PCB-188	19.1								
PCB-189	64.9								
PCB-190	366								
PCB-191	73.2								
PCB-192	ND	0.791							
PCB-193	271								
PCB-194	510								
PCB-195	195								
PCB-196/203	1000								
PCB-197	38.7								
PCB-198	16.4								
PCB-199	618								
PCB-200	7.10								
PCB-201	110								
PCB-202	296								
PCB-204	1.01								
PCB-205	31.9								
PCB-206	217								
PCB-207	33.0								
PCB-208	59.8								
PCB-209	67.5								
Total monoCB	0.971								
Total diCB	55.2								
Total triCB	1110								
Total tetraCB	9570								
Total pentaCB	29700								
Total hexaCB	35500								
Total heptaCB	13800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-11 Date Received: 24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.3 g	QC Batch:	B4L0053 Date Extracted: 08-Dec-2014 10:52
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	Date Analyzed :	12-Dec-14 12:54 Column: ZB-1 Analyst: MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	64.9	5 -145		13C-PCB-170	76.2	10 -145	
13C-PCB-3	66.8	5 -145		13C-PCB-180	72.5	10 -145	
13C-PCB-4	62.4	5 -145		13C-PCB-188	68.1	10 -145	
13C-PCB-11	70.9	5 -145		13C-PCB-189	66.3	10 -145	
13C-PCB-9	68.2	5 -145		13C-PCB-194	75.8	10 -145	
13C-PCB-19	68.0	5 -145		13C-PCB-202	68.7	10 -145	
13C-PCB-28	75.3	5 -145		13C-PCB-206	78.0	10 -145	
13C-PCB-32	71.4	5 -145		13C-PCB-208	79.9	10 -145	
13C-PCB-37	75.9	5 -145		13C-PCB-209	78.8	10 -145	
13C-PCB-47	70.5	5 -145		CRS 13C-PCB-79	79.2	10 -145	
13C-PCB-52	70.3	5 -145		13C-PCB-178	71.3	10 -145	
13C-PCB-54	68.2	5 -145					
13C-PCB-70	75.1	5 -145					
13C-PCB-77	75.8	10 -145					
13C-PCB-80	74.7	10 -145					
13C-PCB-81	80.3	10 -145					
13C-PCB-95	68.8	10 -145					
13C-PCB-97	74.8	10 -145					
13C-PCB-101	74.3	10 -145					
13C-PCB-104	67.0	10 -145					
13C-PCB-105	71.2	10 -145					
13C-PCB-114	69.6	10 -145					
13C-PCB-118	74.3	10 -145					
13C-PCB-123	74.8	10 -145					
13C-PCB-126	73.3	10 -145					
13C-PCB-127	72.1	10 -145					
13C-PCB-138	72.8	10 -145					
13C-PCB-141	75.6	10 -145					
13C-PCB-153	73.2	10 -145					
13C-PCB-155	61.4	10 -145					
13C-PCB-156	80.2	10 -145					
13C-PCB-157	78.1	10 -145					
13C-PCB-159	77.6	10 -145					
13C-PCB-167	74.6	10 -145					
13C-PCB-169	80.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-12
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.22	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 13:59
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.342			J	PCB-44	280			
PCB-2	0.643				PCB-45	14.8			
PCB-3	0.230			J	PCB-46	6.97			
PCB-4/10	2.76				PCB-47	327			
PCB-5/8	5.55				PCB-48/75	84.6			
PCB-6	1.60				PCB-50	0.862			
PCB-7/9	1.50			J	PCB-51	41.8			
PCB-11	30.9				PCB-52/69	1910			
PCB-12/13	ND	1.12			PCB-53	66.5			
PCB-14	ND	1.00			PCB-54	4.89			
PCB-15	19.5				PCB-55	17.1			
PCB-16/32	58.1				PCB-56/60	328			
PCB-17	10.1				PCB-57	13.0			
PCB-18	61.8				PCB-58	8.22			
PCB-19	3.78				PCB-61/70	1690			
PCB-20/21/33	13.0				PCB-62	ND	0.544		
PCB-22	17.0				PCB-63	113			
PCB-23	ND	0.226			PCB-65	ND	0.527		
PCB-24/27	4.80				PCB-66/76	1780			
PCB-25	28.4				PCB-67	47.1			
PCB-26	48.9				PCB-68	28.3			
PCB-28	651				PCB-73	1.46			
PCB-29	0.751				PCB-74	1180			
PCB-30	ND	0.124			PCB-77	180			
PCB-31	270				PCB-78	ND	0.886		
PCB-34	1.72				PCB-79	117			
PCB-35	0.463			J	PCB-80	ND	0.750		
PCB-36	2.14				PCB-81	11.7			
PCB-37	67.3				PCB-82	28.5			
PCB-38	6.28				PCB-83	ND	0.323		
PCB-39	1.05				PCB-84/92	1040			
PCB-40	11.8				PCB-85/116	80.7			
PCB-41/64/71/72	516				PCB-86	ND	0.480		
PCB-42/59	86.7				PCB-87/117/125	1310			
PCB-43/49	1390				PCB-88/91	448			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-12
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.22	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 13:59
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.429			PCB-136	264			
PCB-90/101	6690			E	PCB-137	426			
PCB-93	ND	0.406			PCB-138/163/164	9980			E
PCB-94	ND		3.20		PCB-139/149	2310			
PCB-95/98/102	1340				PCB-140	33.6			
PCB-96	15.8				PCB-141	651			
PCB-97	892				PCB-144	250			
PCB-99	4990			E	PCB-145	0.733			
PCB-100	79.2				PCB-146/165	1890			
PCB-103	99.0				PCB-147	295			
PCB-104	4.18				PCB-148	27.6			
PCB-105	2230			E	PCB-150	19.7			
PCB-106/118	7970			E	PCB-151	1380			
PCB-107/109	774				PCB-152	5.30			
PCB-108/112	94.3				PCB-153	12700			E
PCB-110	1760			E	PCB-154	369			
PCB-111/115	135				PCB-155	10.4			
PCB-113	ND	0.323			PCB-156	867			
PCB-114	120				PCB-157	206			
PCB-119	195				PCB-158/160	929			
PCB-120	47.7				PCB-159	ND	3.37		
PCB-121	ND	0.241			PCB-166	37.3			
PCB-122	15.8				PCB-167	450			
PCB-123	156				PCB-168	22.5			
PCB-124	216				PCB-169	ND	3.52		
PCB-126	32.1				PCB-170	1530			E
PCB-127	ND	0.813			PCB-171	428			
PCB-128/162	989				PCB-172	262			
PCB-129	41.3				PCB-173	3.16			
PCB-130	546				PCB-174	216			
PCB-131	ND	5.09			PCB-175	80.1			
PCB-132/161	223				PCB-176	47.8			
PCB-133/142	203				PCB-177	708			
PCB-134/143	157				PCB-178	453			
PCB-135	310				PCB-179	363			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-12
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.22	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 13:59
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4020			E	Total octaCB	2700			
PCB-181	13.1				Total nonaCB	296			
PCB-182/187	3270			E	DecaCB	63.1			
PCB-183	1330				Total PCB	94500			
PCB-184	8.54								
PCB-185	68.3								
PCB-186	ND	0.240							
PCB-188	19.3								
PCB-189	63.2								
PCB-190	346								
PCB-191	70.6								
PCB-192	ND	0.293							
PCB-193	265								
PCB-194	515								
PCB-195	182								
PCB-196/203	914								
PCB-197	34.4								
PCB-198	15.4								
PCB-199	635								
PCB-200	10.1								
PCB-201	99.8								
PCB-202	271								
PCB-204	0.703								
PCB-205	27.8								
PCB-206	208								
PCB-207	30.0								
PCB-208	58.0								
PCB-209	63.1								
Total monoCB	1.21								
Total diCB	61.9								
Total triCB	1250								
Total tetraCB	10300								
Total pentaCB	30800								
Total hexaCB	35600								
Total heptaCB	13600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-12
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.22	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 13:59
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.4	5 -145		13C-PCB-170	89.4	10 -145	
13C-PCB-3	73.7	5 -145		13C-PCB-180	84.6	10 -145	
13C-PCB-4	72.3	5 -145		13C-PCB-188	83.1	10 -145	
13C-PCB-11	81.7	5 -145		13C-PCB-189	70.8	10 -145	
13C-PCB-9	78.3	5 -145		13C-PCB-194	88.3	10 -145	
13C-PCB-19	78.5	5 -145		13C-PCB-202	84.2	10 -145	
13C-PCB-28	75.3	5 -145		13C-PCB-206	88.4	10 -145	
13C-PCB-32	82.9	5 -145		13C-PCB-208	91.6	10 -145	
13C-PCB-37	81.2	5 -145		13C-PCB-209	89.5	10 -145	
13C-PCB-47	85.5	5 -145		CRS 13C-PCB-79	93.5	10 -145	
13C-PCB-52	80.0	5 -145		13C-PCB-178	84.2	10 -145	
13C-PCB-54	79.0	5 -145					
13C-PCB-70	88.4	5 -145					
13C-PCB-77	90.1	10 -145					
13C-PCB-80	90.7	10 -145					
13C-PCB-81	93.6	10 -145					
13C-PCB-95	81.6	10 -145					
13C-PCB-97	88.7	10 -145					
13C-PCB-101	86.3	10 -145					
13C-PCB-104	78.0	10 -145					
13C-PCB-105	86.4	10 -145					
13C-PCB-114	84.8	10 -145					
13C-PCB-118	88.8	10 -145					
13C-PCB-123	93.0	10 -145					
13C-PCB-126	89.9	10 -145					
13C-PCB-127	88.9	10 -145					
13C-PCB-138	89.6	10 -145					
13C-PCB-141	89.5	10 -145					
13C-PCB-153	86.8	10 -145					
13C-PCB-155	73.1	10 -145					
13C-PCB-156	94.3	10 -145					
13C-PCB-157	92.6	10 -145					
13C-PCB-159	92.9	10 -145					
13C-PCB-167	78.5	10 -145					
13C-PCB-169	93.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-13
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.91	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 15:03
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.317			J	PCB-44	200			
PCB-2	0.495			J	PCB-45	18.2			
PCB-3	0.169			J	PCB-46	5.03			
PCB-4/10	2.76				PCB-47	459			
PCB-5/8	5.76				PCB-48/75	108			
PCB-6	1.86				PCB-50	1.43			
PCB-7/9	1.54			J	PCB-51	37.5			
PCB-11	36.1				PCB-52/69	1800			
PCB-12/13	ND	0.674			PCB-53	45.6			
PCB-14	ND	0.602			PCB-54	3.73			
PCB-15	17.9				PCB-55	17.8			
PCB-16/32	67.0				PCB-56/60	447			
PCB-17	16.0				PCB-57	13.4			
PCB-18	57.9				PCB-58	8.07			
PCB-19	2.71				PCB-61/70	1890			
PCB-20/21/33	18.2				PCB-62	ND	0.510		
PCB-22	30.0				PCB-63	127			
PCB-23	ND	0.380			PCB-65	ND	0.494		
PCB-24/27	3.90				PCB-66/76	2050			
PCB-25	25.3				PCB-67	44.8			
PCB-26	37.2				PCB-68	30.9			
PCB-28	608				PCB-73	ND	0.504		
PCB-29	0.796				PCB-74	1280			
PCB-30	ND	0.129			PCB-77	198			
PCB-31	264				PCB-78	ND	0.469		
PCB-34	1.66				PCB-79	141			
PCB-35	0.580				PCB-80	ND	0.386		
PCB-36	2.53				PCB-81	14.2			
PCB-37	63.9				PCB-82	56.9			
PCB-38	8.82				PCB-83	1.65			
PCB-39	1.06				PCB-84/92	1030			
PCB-40	18.6				PCB-85/116	219			
PCB-41/64/71/72	549				PCB-86	ND	0.499		
PCB-42/59	97.4				PCB-87/117/125	1370			
PCB-43/49	1260				PCB-88/91	446			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-13
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	QC Batch:	B4L0053
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.91	Date Received:	24-Nov-2014 13:28
				Date Analyzed:	12-Dec-14 15:03
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	3.63				PCB-136	254			
PCB-90/101	7290			E	PCB-137	525			
PCB-93	ND	0.656			PCB-138/163/164	11900			E
PCB-94	2.46				PCB-139/149	1960			
PCB-95/98/102	1080				PCB-140	46.3			
PCB-96	12.6				PCB-141	649			
PCB-97	878				PCB-144	273			
PCB-99	5750			E	PCB-145	0.737			
PCB-100	99.4				PCB-146/165	2240			
PCB-103	105				PCB-147	336			
PCB-104	3.69				PCB-148	31.3			
PCB-105	2610			E	PCB-150	18.9			
PCB-106/118	9310			E	PCB-151	1690			E
PCB-107/109	941				PCB-152	5.10			
PCB-108/112	78.1				PCB-153	15400			E
PCB-110	2070			E	PCB-154	466			
PCB-111/115	160				PCB-155	11.6			
PCB-113	ND	0.326			PCB-156	1030			
PCB-114	150				PCB-157	244			
PCB-119	252				PCB-158/160	1110			
PCB-120	59.1				PCB-159	ND	1.14		
PCB-121	ND	0.390			PCB-166	41.9			
PCB-122	23.5				PCB-167	528			
PCB-123	189				PCB-168	21.0			
PCB-124	254				PCB-169	1.64			
PCB-126	39.2				PCB-170	1920			E
PCB-127	ND	1.48			PCB-171	557			
PCB-128/162	1300				PCB-172	294			
PCB-129	40.2				PCB-173	1.91			
PCB-130	590				PCB-174	157			
PCB-131	ND	1.73			PCB-175	95.0			
PCB-132/161	183				PCB-176	38.5			
PCB-133/142	229				PCB-177	749			
PCB-134/143	139				PCB-178	500			
PCB-135	254				PCB-179	344			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-13
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.91	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 15:03
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4860			E	Total octaCB	3220			
PCB-181	16.4				Total nonaCB	330			
PCB-182/187	3800			E	DecaCB	64.9			
PCB-183	1620			E	Total PCB	108000			
PCB-184	9.92								
PCB-185	63.6								
PCB-186	ND	0.214							
PCB-188	21.7								
PCB-189	72.6								
PCB-190	419								
PCB-191	80.7								
PCB-192	ND	0.262							
PCB-193	309								
PCB-194	591								
PCB-195	214								
PCB-196/203	1170								
PCB-197	43.1								
PCB-198	19.0								
PCB-199	711								
PCB-200	8.17								
PCB-201	122								
PCB-202	303								
PCB-204	1.11								
PCB-205	30.7								
PCB-206	232								
PCB-207	34.6								
PCB-208	63.4								
PCB-209	64.9								
Total monoCB	0.981								
Total diCB	65.9								
Total triCB	1210								
Total tetraCB	10900								
Total pentaCB	34500								
Total hexaCB	41400								
Total heptaCB	15900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-13
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.91	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 15:03
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	61.7	5 -145		13C-PCB-170	83.0	10 -145	
13C-PCB-3	61.7	5 -145		13C-PCB-180	79.1	10 -145	
13C-PCB-4	60.5	5 -145		13C-PCB-188	78.6	10 -145	
13C-PCB-11	72.9	5 -145		13C-PCB-189	67.4	10 -145	
13C-PCB-9	66.2	5 -145		13C-PCB-194	83.9	10 -145	
13C-PCB-19	67.3	5 -145		13C-PCB-202	76.6	10 -145	
13C-PCB-28	69.3	5 -145		13C-PCB-206	87.1	10 -145	
13C-PCB-32	73.3	5 -145		13C-PCB-208	86.5	10 -145	
13C-PCB-37	78.9	5 -145		13C-PCB-209	84.2	10 -145	
13C-PCB-47	78.8	5 -145		CRS 13C-PCB-79	84.6	10 -145	
13C-PCB-52	77.1	5 -145		13C-PCB-178	79.0	10 -145	
13C-PCB-54	68.9	5 -145					
13C-PCB-70	82.2	5 -145					
13C-PCB-77	87.2	10 -145					
13C-PCB-80	84.7	10 -145					
13C-PCB-81	85.9	10 -145					
13C-PCB-95	76.5	10 -145					
13C-PCB-97	82.3	10 -145					
13C-PCB-101	82.5	10 -145					
13C-PCB-104	73.1	10 -145					
13C-PCB-105	81.0	10 -145					
13C-PCB-114	81.1	10 -145					
13C-PCB-118	84.5	10 -145					
13C-PCB-123	83.9	10 -145					
13C-PCB-126	85.0	10 -145					
13C-PCB-127	80.8	10 -145					
13C-PCB-138	84.5	10 -145					
13C-PCB-141	86.2	10 -145					
13C-PCB-153	80.3	10 -145					
13C-PCB-155	66.6	10 -145					
13C-PCB-156	92.2	10 -145					
13C-PCB-157	88.1	10 -145					
13C-PCB-159	88.5	10 -145					
13C-PCB-167	74.8	10 -145					
13C-PCB-169	90.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-06-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-14	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	7.28	Date Analyzed :	12-Dec-14 16:08	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.22				PCB-44	1700			E
PCB-2	1.70				PCB-45	74.7			
PCB-3	0.481			J	PCB-46	33.4			
PCB-4/10	14.7				PCB-47	1880			E
PCB-5/8	14.9				PCB-48/75	413			
PCB-6	8.98				PCB-50	4.86			
PCB-7/9	7.01				PCB-51	295			
PCB-11	183				PCB-52/69	10200			E
PCB-12/13	2.67				PCB-53	408			
PCB-14	ND	0.570			PCB-54	39.6			
PCB-15	94.3				PCB-55	97.5			
PCB-16/32	330				PCB-56/60	1660			
PCB-17	41.8				PCB-57	83.0			
PCB-18	389				PCB-58	37.4			
PCB-19	26.6				PCB-61/70	7240			E
PCB-20/21/33	58.9				PCB-62	ND	0.279		
PCB-22	111				PCB-63	493			
PCB-23	ND	0.290			PCB-65	1.10			
PCB-24/27	36.5				PCB-66/76	8030			E
PCB-25	160				PCB-67	259			
PCB-26	348				PCB-68	128			
PCB-28	3340			E	PCB-73	8.21			
PCB-29	4.45				PCB-74	4900			E
PCB-30	0.523				PCB-77	831			
PCB-31	1320				PCB-78	ND	0.238		
PCB-34	10.9				PCB-79	441			
PCB-35	1.97				PCB-80	ND	0.217		
PCB-36	11.2				PCB-81	58.0			
PCB-37	322				PCB-82	147			
PCB-38	37.7				PCB-83	6.49			
PCB-39	4.56				PCB-84/92	6210			E
PCB-40	65.3				PCB-85/116	399			
PCB-41/64/71/72	2980				PCB-86	ND	0.513		
PCB-42/59	477				PCB-87/117/125	6580			E
PCB-43/49	7600			E	PCB-88/91	2530			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-06-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-14	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	7.28	Date Analyzed :	12-Dec-14 16:08	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.02				PCB-136	1350			
PCB-90/101	33600			E	PCB-137	1700			E
PCB-93	ND	0.479			PCB-138/163/164	41500			E
PCB-94	10.8				PCB-139/149	10500			E
PCB-95/98/102	5470			E	PCB-140	180			
PCB-96	91.2				PCB-141	3810			E
PCB-97	5290			E	PCB-144	1400			
PCB-99	22100			E	PCB-145	3.91			
PCB-100	608				PCB-146/165	10400			E
PCB-103	771				PCB-147	1670			E
PCB-104	40.2				PCB-148	114			
PCB-105	9220			E	PCB-150	138			
PCB-106/118	32000			E	PCB-151	6820			E
PCB-107/109	3000			E	PCB-152	32.9			
PCB-108/112	409				PCB-153	52700			E
PCB-110	11500			E	PCB-154	2090			E
PCB-111/115	511				PCB-155	42.1			
PCB-113	ND	0.423			PCB-156	3380			E
PCB-114	464				PCB-157	871			
PCB-119	1120				PCB-158/160	5040			E
PCB-120	161				PCB-159	ND	3.75		
PCB-121	ND	0.284			PCB-166	156			
PCB-122	125				PCB-167	1850			E
PCB-123	583				PCB-168	108			
PCB-124	908				PCB-169	7.32			
PCB-126	148				PCB-170	7440			E
PCB-127	ND	1.17			PCB-171	2310			E
PCB-128/162	5080			E	PCB-172	1460			
PCB-129	316				PCB-173	11.8			
PCB-130	2800			E	PCB-174	949			
PCB-131	ND	8.10			PCB-175	440			
PCB-132/161	1490				PCB-176	272			
PCB-133/142	1310				PCB-177	3940			E
PCB-134/143	949				PCB-178	2650			E
PCB-135	1550			E	PCB-179	1870			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-06-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-14
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	7.28	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 16:08
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	17800			E	Total octaCB	14500			
PCB-181	67.5				Total nonaCB	1800			
PCB-182/187	16300			E	DecaCB	363			
PCB-183	6820			E	Total PCB	444000			
PCB-184	28.3								
PCB-185	392								
PCB-186	ND	0.686							
PCB-188	100								
PCB-189	305								
PCB-190	1690			E					
PCB-191	317								
PCB-192	ND	0.777							
PCB-193	1300								
PCB-194	3160			E					
PCB-195	1040								
PCB-196/203	4540			E					
PCB-197	182								
PCB-198	91.9								
PCB-199	3690			E					
PCB-200	48.8								
PCB-201	506								
PCB-202	1080								
PCB-204	4.20								
PCB-205	159								
PCB-206	1340								
PCB-207	164								
PCB-208	298								
PCB-209	363								
Total monoCB	3.41								
Total diCB	325								
Total triCB	6560								
Total tetraCB	50500								
Total pentaCB	144000								
Total hexaCB	159000								
Total heptaCB	66500								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-WS-06-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-14
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	7.28	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 16:08
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	86.0	5 -145		13C-PCB-170	86.7	10 -145	
13C-PCB-3	85.6	5 -145		13C-PCB-180	83.1	10 -145	
13C-PCB-4	81.0	5 -145		13C-PCB-188	75.2	10 -145	
13C-PCB-11	83.6	5 -145		13C-PCB-189	55.6	10 -145	
13C-PCB-9	85.5	5 -145		13C-PCB-194	90.4	10 -145	
13C-PCB-19	81.4	5 -145		13C-PCB-202	83.3	10 -145	
13C-PCB-28	76.0	5 -145		13C-PCB-206	83.8	10 -145	
13C-PCB-32	86.3	5 -145		13C-PCB-208	96.2	10 -145	
13C-PCB-37	84.4	5 -145		13C-PCB-209	86.5	10 -145	
13C-PCB-47	77.7	5 -145		CRS 13C-PCB-79	82.8	10 -145	
13C-PCB-52	72.7	5 -145		13C-PCB-178	84.1	10 -145	
13C-PCB-54	73.1	5 -145					
13C-PCB-70	80.2	5 -145					
13C-PCB-77	87.0	10 -145					
13C-PCB-80	84.0	10 -145					
13C-PCB-81	93.4	10 -145					
13C-PCB-95	84.9	10 -145					
13C-PCB-97	98.0	10 -145					
13C-PCB-101	81.4	10 -145					
13C-PCB-104	83.9	10 -145					
13C-PCB-105	81.8	10 -145					
13C-PCB-114	83.5	10 -145					
13C-PCB-118	83.5	10 -145					
13C-PCB-123	103	10 -145					
13C-PCB-126	91.1	10 -145					
13C-PCB-127	87.8	10 -145					
13C-PCB-138	75.2	10 -145					
13C-PCB-141	88.8	10 -145					
13C-PCB-153	66.0	10 -145					
13C-PCB-155	79.5	10 -145					
13C-PCB-156	94.3	10 -145					
13C-PCB-157	95.3	10 -145					
13C-PCB-159	92.4	10 -145					
13C-PCB-167	69.1	10 -145					
13C-PCB-169	93.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-08-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-15
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.95	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 17:12
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.521				PCB-44	787			
PCB-2	0.597				PCB-45	16.3			
PCB-3	0.191			J	PCB-46	16.8			
PCB-4/10	5.06				PCB-47	245			
PCB-5/8	11.1				PCB-48/75	90.7			
PCB-6	2.27				PCB-50	1.13			
PCB-7/9	1.65			J	PCB-51	47.0			
PCB-11	19.6				PCB-52/69	1920			
PCB-12/13	ND	0.585			PCB-53	137			
PCB-14	ND	0.522			PCB-54	4.05			
PCB-15	17.3				PCB-55	17.5			
PCB-16/32	83.6				PCB-56/60	244			
PCB-17	18.7				PCB-57	14.0			
PCB-18	92.5				PCB-58	6.50			
PCB-19	8.75				PCB-61/70	1150			
PCB-20/21/33	16.8				PCB-62	ND	0.399		
PCB-22	16.1				PCB-63	102			
PCB-23	ND	0.103			PCB-65	ND	0.386		
PCB-24/27	11.1				PCB-66/76	1470			
PCB-25	21.9				PCB-67	52.0			
PCB-26	57.7				PCB-68	25.7			
PCB-28	530				PCB-73	3.46			
PCB-29	0.348			J	PCB-74	1010			
PCB-30	ND	0.140			PCB-77	136			
PCB-31	177				PCB-78	ND	0.361		
PCB-34	2.51				PCB-79	105			
PCB-35	0.355			J	PCB-80	ND	0.303		
PCB-36	0.834				PCB-81	15.9			
PCB-37	55.7				PCB-82	40.7			
PCB-38	5.45				PCB-83	2.17			
PCB-39	0.383			J	PCB-84/92	1230			
PCB-40	9.92				PCB-85/116	63.3			
PCB-41/64/71/72	571				PCB-86	ND	0.420		
PCB-42/59	104				PCB-87/117/125	1430			
PCB-43/49	1460				PCB-88/91	449			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-08-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-15	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.95	Date Analyzed :	12-Dec-14 17:12	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.99				PCB-136	460			
PCB-90/101	6760			E	PCB-137	384			
PCB-93	ND	0.373			PCB-138/163/164	8500			E
PCB-94	5.33				PCB-139/149	2300			
PCB-95/98/102	1960				PCB-140	36.7			
PCB-96	19.1				PCB-141	667			
PCB-97	776				PCB-144	278			
PCB-99	4510			E	PCB-145	0.964			
PCB-100	68.4				PCB-146/165	1680			
PCB-103	123				PCB-147	279			
PCB-104	3.71				PCB-148	12.4			
PCB-105	1900			E	PCB-150	27.0			
PCB-106/118	6640			E	PCB-151	1590			E
PCB-107/109	688				PCB-152	6.75			
PCB-108/112	111				PCB-153	10900			E
PCB-110	2640			E	PCB-154	320			
PCB-111/115	110				PCB-155	9.82			
PCB-113	ND	0.295			PCB-156	654			
PCB-114	111				PCB-157	164			
PCB-119	203				PCB-158/160	800			
PCB-120	42.4				PCB-159	ND	2.06		
PCB-121	ND	0.221			PCB-166	32.0			
PCB-122	14.2				PCB-167	386			
PCB-123	126				PCB-168	18.5			
PCB-124	143				PCB-169	ND	2.11		
PCB-126	22.3				PCB-170	1190			
PCB-127	ND	0.830			PCB-171	357			
PCB-128/162	979				PCB-172	230			
PCB-129	32.2				PCB-173	4.69			
PCB-130	545				PCB-174	167			
PCB-131	ND	3.05			PCB-175	55.6			
PCB-132/161	342				PCB-176	75.2			
PCB-133/142	210				PCB-177	758			
PCB-134/143	237				PCB-178	418			
PCB-135	358				PCB-179	472			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-08-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-15
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.95	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 17:12
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3010			E	Total octaCB	1910			
PCB-181	6.75				Total nonaCB	176			
PCB-182/187	2880				DecaCB	36.9			
PCB-183	1040				Total PCB	86700			
PCB-184	6.99								
PCB-185	71.2								
PCB-186	ND	0.226							
PCB-188	15.6								
PCB-189	43.3								
PCB-190	238								
PCB-191	51.6								
PCB-192	ND	0.260							
PCB-193	209								
PCB-194	323								
PCB-195	125								
PCB-196/203	622								
PCB-197	25.2								
PCB-198	15.7								
PCB-199	496								
PCB-200	10.5								
PCB-201	78.8								
PCB-202	199								
PCB-204	0.624								
PCB-205	17.3								
PCB-206	113								
PCB-207	19.6								
PCB-208	43.7								
PCB-209	36.9								
Total monoCB	1.31								
Total diCB	56.9								
Total triCB	1100								
Total tetraCB	9760								
Total pentaCB	30200								
Total hexaCB	32200								
Total heptaCB	11300								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-08-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-15
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.95	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 17:12
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	57.9	5 -145		13C-PCB-170	79.7	10 -145	
13C-PCB-3	62.8	5 -145		13C-PCB-180	75.3	10 -145	
13C-PCB-4	62.6	5 -145		13C-PCB-188	71.8	10 -145	
13C-PCB-11	72.5	5 -145		13C-PCB-189	71.4	10 -145	
13C-PCB-9	67.8	5 -145		13C-PCB-194	79.1	10 -145	
13C-PCB-19	68.0	5 -145		13C-PCB-202	72.0	10 -145	
13C-PCB-28	76.3	5 -145		13C-PCB-206	79.1	10 -145	
13C-PCB-32	73.1	5 -145		13C-PCB-208	81.8	10 -145	
13C-PCB-37	81.4	5 -145		13C-PCB-209	70.0	10 -145	
13C-PCB-47	70.9	5 -145		CRS 13C-PCB-79	80.3	10 -145	
13C-PCB-52	69.2	5 -145		13C-PCB-178	77.5	10 -145	
13C-PCB-54	68.6	5 -145					
13C-PCB-70	78.1	5 -145					
13C-PCB-77	76.2	10 -145					
13C-PCB-80	78.3	10 -145					
13C-PCB-81	79.6	10 -145					
13C-PCB-95	73.8	10 -145					
13C-PCB-97	81.3	10 -145					
13C-PCB-101	76.7	10 -145					
13C-PCB-104	71.4	10 -145					
13C-PCB-105	76.2	10 -145					
13C-PCB-114	77.1	10 -145					
13C-PCB-118	79.3	10 -145					
13C-PCB-123	80.1	10 -145					
13C-PCB-126	81.5	10 -145					
13C-PCB-127	80.3	10 -145					
13C-PCB-138	80.1	10 -145					
13C-PCB-141	79.1	10 -145					
13C-PCB-153	77.2	10 -145					
13C-PCB-155	64.2	10 -145					
13C-PCB-156	83.4	10 -145					
13C-PCB-157	83.6	10 -145					
13C-PCB-159	82.9	10 -145					
13C-PCB-167	74.9	10 -145					
13C-PCB-169	86.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-16
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 18:16
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.536				PCB-44	914			
PCB-2	0.557				PCB-45	16.8			
PCB-3	0.238			J	PCB-46	17.5			
PCB-4/10	5.16				PCB-47	307			
PCB-5/8	10.5				PCB-48/75	109			
PCB-6	2.37				PCB-50	1.28			
PCB-7/9	1.41			J	PCB-51	58.8			
PCB-11	19.8				PCB-52/69	2390			
PCB-12/13	ND	0.561			PCB-53	157			
PCB-14	ND	0.500			PCB-54	4.95			
PCB-15	18.2				PCB-55	21.7			
PCB-16/32	87.0				PCB-56/60	313			
PCB-17	19.7				PCB-57	19.5			
PCB-18	92.3				PCB-58	9.91			
PCB-19	8.79				PCB-61/70	1610			
PCB-20/21/33	17.3				PCB-62	ND	0.104		
PCB-22	17.5				PCB-63	137			
PCB-23	ND	0.0777			PCB-65	0.368			J
PCB-24/27	11.1				PCB-66/76	1830			
PCB-25	27.3				PCB-67	69.9			
PCB-26	72.2				PCB-68	34.8			
PCB-28	628				PCB-73	3.88			
PCB-29	0.272			J	PCB-74	1390			
PCB-30	ND	0.0642			PCB-77	197			
PCB-31	225				PCB-78	ND	0.0943		
PCB-34	2.98				PCB-79	137			
PCB-35	0.371			J	PCB-80	ND	0.0823		
PCB-36	0.872				PCB-81	20.9			
PCB-37	69.8				PCB-82	45.4			
PCB-38	6.59				PCB-83	2.27			
PCB-39	0.433			J	PCB-84/92	1710			
PCB-40	11.3				PCB-85/116	69.0			
PCB-41/64/71/72	655				PCB-86	ND	0.795		
PCB-42/59	120				PCB-87/117/125	1970			
PCB-43/49	1930				PCB-88/91	597			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-16
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 18:16
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	6.57				PCB-136	640			
PCB-90/101	9270			E	PCB-137	431			
PCB-93	ND	0.685			PCB-138/163/164	11000			E
PCB-94	7.41				PCB-139/149	3200			E
PCB-95/98/102	2630				PCB-140	48.1			
PCB-96	26.9				PCB-141	933			
PCB-97	1050				PCB-144	362			
PCB-99	5990			E	PCB-145	1.31			
PCB-100	94.1				PCB-146/165	2220			
PCB-103	177				PCB-147	357			
PCB-104	4.70				PCB-148	22.5			
PCB-105	2480			E	PCB-150	38.1			
PCB-106/118	8610			E	PCB-151	2080			E
PCB-107/109	884				PCB-152	8.86			
PCB-108/112	150				PCB-153	13900			E
PCB-110	3660			E	PCB-154	421			
PCB-111/115	144				PCB-155	12.3			
PCB-113	ND	0.537			PCB-156	792			
PCB-114	141				PCB-157	202			
PCB-119	276				PCB-158/160	1050			
PCB-120	59.2				PCB-159	ND	1.58		
PCB-121	ND	0.407			PCB-166	35.5			
PCB-122	22.3				PCB-167	467			
PCB-123	180				PCB-168	22.2			
PCB-124	212				PCB-169	ND	1.66		
PCB-126	29.9				PCB-170	1470			E
PCB-127	ND	1.33			PCB-171	452			
PCB-128/162	1280				PCB-172	304			
PCB-129	40.6				PCB-173	ND	0.251		
PCB-130	760				PCB-174	240			
PCB-131	ND	2.49			PCB-175	78.6			
PCB-132/161	514				PCB-176	113			
PCB-133/142	289				PCB-177	1050			
PCB-134/143	332				PCB-178	548			
PCB-135	523				PCB-179	662			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-16
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed:	12-Dec-14 18:16
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3740			E	Total octaCB	2440			
PCB-181	12.6				Total nonaCB	234			
PCB-182/187	3780			E	DecaCB	48.6			
PCB-183	1350				Total PCB	114000			
PCB-184	10.8								
PCB-185	102								
PCB-186	ND	0.167							
PCB-188	21.4								
PCB-189	54.5								
PCB-190	320								
PCB-191	62.5								
PCB-192	ND	0.191							
PCB-193	257								
PCB-194	414								
PCB-195	155								
PCB-196/203	785								
PCB-197	30.3								
PCB-198	20.3								
PCB-199	653								
PCB-200	17.4								
PCB-201	100								
PCB-202	246								
PCB-204	0.985								
PCB-205	20.9								
PCB-206	151								
PCB-207	24.5								
PCB-208	58.5								
PCB-209	48.6								
Total monoCB	1.33								
Total diCB	57.5								
Total triCB	1290								
Total tetraCB	12500								
Total pentaCB	40500								
Total hexaCB	42000								
Total heptaCB	14600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-16
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.08	QC Batch:	B4L0053
				Date Analyzed :	12-Dec-14 18:16
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.2	5 -145		13C-PCB-170	83.8	10 -145	
13C-PCB-3	69.2	5 -145		13C-PCB-180	77.2	10 -145	
13C-PCB-4	70.3	5 -145		13C-PCB-188	73.9	10 -145	
13C-PCB-11	77.7	5 -145		13C-PCB-189	64.0	10 -145	
13C-PCB-9	75.8	5 -145		13C-PCB-194	83.4	10 -145	
13C-PCB-19	74.5	5 -145		13C-PCB-202	75.8	10 -145	
13C-PCB-28	74.6	5 -145		13C-PCB-206	84.3	10 -145	
13C-PCB-32	76.6	5 -145		13C-PCB-208	86.3	10 -145	
13C-PCB-37	78.4	5 -145		13C-PCB-209	80.9	10 -145	
13C-PCB-47	77.7	5 -145		CRS 13C-PCB-79	84.8	10 -145	
13C-PCB-52	74.1	5 -145		13C-PCB-178	78.1	10 -145	
13C-PCB-54	74.5	5 -145					
13C-PCB-70	82.0	5 -145					
13C-PCB-77	85.3	10 -145					
13C-PCB-80	82.4	10 -145					
13C-PCB-81	87.2	10 -145					
13C-PCB-95	76.3	10 -145					
13C-PCB-97	83.6	10 -145					
13C-PCB-101	79.1	10 -145					
13C-PCB-104	74.7	10 -145					
13C-PCB-105	79.1	10 -145					
13C-PCB-114	80.1	10 -145					
13C-PCB-118	83.4	10 -145					
13C-PCB-123	85.9	10 -145					
13C-PCB-126	84.6	10 -145					
13C-PCB-127	83.1	10 -145					
13C-PCB-138	82.0	10 -145					
13C-PCB-141	82.7	10 -145					
13C-PCB-153	78.1	10 -145					
13C-PCB-155	68.6	10 -145					
13C-PCB-156	87.3	10 -145					
13C-PCB-157	87.0	10 -145					
13C-PCB-159	85.6	10 -145					
13C-PCB-167	73.8	10 -145					
13C-PCB-169	89.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-17
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.88	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 13:02
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.623				PCB-44	707			
PCB-2	0.539				PCB-45	13.9			
PCB-3	0.229			J	PCB-46	15.2			
PCB-4/10	5.71				PCB-47	242			
PCB-5/8	12.6				PCB-48/75	86.4			
PCB-6	2.79				PCB-50	1.22			
PCB-7/9	1.59			J	PCB-51	47.2			
PCB-11	18.2				PCB-52/69	1850			
PCB-12/13	ND	0.140			PCB-53	108			
PCB-14	ND	0.125			PCB-54	4.12			
PCB-15	18.2				PCB-55	21.3			
PCB-16/32	82.3				PCB-56/60	271			
PCB-17	19.3				PCB-57	16.5			
PCB-18	91.9				PCB-58	7.65			
PCB-19	9.00				PCB-61/70	1130			
PCB-20/21/33	18.1				PCB-62	ND	0.240		
PCB-22	17.1				PCB-63	109			
PCB-23	ND	0.100			PCB-65	ND	0.233		
PCB-24/27	10.8				PCB-66/76	1550			
PCB-25	21.1				PCB-67	56.4			
PCB-26	56.4				PCB-68	27.3			
PCB-28	450				PCB-73	3.94			
PCB-29	0.248			J	PCB-74	1050			
PCB-30	ND	0.107			PCB-77	167			
PCB-31	144				PCB-78	8.18			
PCB-34	2.72				PCB-79	160			
PCB-35	ND		0.226		PCB-80	ND	0.182		
PCB-36	0.558				PCB-81	22.6			
PCB-37	57.1				PCB-82	46.1			
PCB-38	9.07				PCB-83	ND	0.265		
PCB-39	0.289			J	PCB-84/92	1520			
PCB-40	9.36				PCB-85/116	78.8			
PCB-41/64/71/72	571				PCB-86	ND	0.394		
PCB-42/59	91.9				PCB-87/117/125	1880			
PCB-43/49	1500				PCB-88/91	531			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-17
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.88	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 13:02
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	6.06				PCB-136	597			
PCB-90/101	8720			E	PCB-137	466			
PCB-93	ND	0.341			PCB-138/163/164	10500			E
PCB-94	6.03				PCB-139/149	2890			
PCB-95/98/102	2270				PCB-140	44.0			
PCB-96	23.6				PCB-141	765			
PCB-97	967				PCB-144	367			
PCB-99	5730			E	PCB-145	1.03			
PCB-100	88.1				PCB-146/165	2030			
PCB-103	160				PCB-147	373			
PCB-104	4.77				PCB-148	31.5			
PCB-105	2500			E	PCB-150	34.6			
PCB-106/118	8680			E	PCB-151	2040			E
PCB-107/109	924				PCB-152	8.37			
PCB-108/112	137				PCB-153	13400			E
PCB-110	3280			E	PCB-154	405			
PCB-111/115	156				PCB-155	12.8			
PCB-113	ND	0.274			PCB-156	799			
PCB-114	148				PCB-157	203			
PCB-119	254				PCB-158/160	994			
PCB-120	59.0				PCB-159	136			
PCB-121	ND	0.202			PCB-166	36.0			
PCB-122	18.4				PCB-167	466			
PCB-123	181				PCB-168	15.4			
PCB-124	177				PCB-169	0.760			
PCB-126	30.5				PCB-170	1580			E
PCB-127	ND	0.636			PCB-171	450			
PCB-128/162	1160				PCB-172	287			
PCB-129	37.6				PCB-173	7.88			
PCB-130	681				PCB-174	202			
PCB-131	ND	0.920			PCB-175	84.9			
PCB-132/161	456				PCB-176	103			
PCB-133/142	262				PCB-177	960			
PCB-134/143	290				PCB-178	543			
PCB-135	448				PCB-179	604			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-17
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.88	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 13:02
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3950			E	Total octaCB	2520			
PCB-181	13.4				Total nonaCB	246			
PCB-182/187	3830			E	DecaCB	49.7			
PCB-183	1380				Total PCB	107000			
PCB-184	9.57								
PCB-185	89.9								
PCB-186	ND	0.0950							
PCB-188	20.3								
PCB-189	59.9								
PCB-190	314								
PCB-191	63.1								
PCB-192	ND	0.104							
PCB-193	248								
PCB-194	459								
PCB-195	164								
PCB-196/203	816								
PCB-197	32.4								
PCB-198	23.4								
PCB-199	634								
PCB-200	14.7								
PCB-201	106								
PCB-202	247								
PCB-204	0.986								
PCB-205	22.3								
PCB-206	161								
PCB-207	26.4								
PCB-208	58.5								
PCB-209	49.7								
Total monoCB	1.39								
Total diCB	59.0								
Total triCB	990								
Total tetraCB	9850								
Total pentaCB	38600								
Total hexaCB	40000								
Total heptaCB	14800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-WO-SS-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-17
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.88	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 13:02
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.3	5 -145		13C-PCB-170	79.1	10 -145	
13C-PCB-3	69.0	5 -145		13C-PCB-180	79.0	10 -145	
13C-PCB-4	69.3	5 -145		13C-PCB-188	72.5	10 -145	
13C-PCB-11	76.7	5 -145		13C-PCB-189	78.5	10 -145	
13C-PCB-9	74.6	5 -145		13C-PCB-194	83.1	10 -145	
13C-PCB-19	66.7	5 -145		13C-PCB-202	68.6	10 -145	
13C-PCB-28	89.7	5 -145		13C-PCB-206	79.6	10 -145	
13C-PCB-32	71.0	5 -145		13C-PCB-208	72.8	10 -145	
13C-PCB-37	97.0	5 -145		13C-PCB-209	84.9	10 -145	
13C-PCB-47	71.8	5 -145		CRS 13C-PCB-79	82.3	10 -145	
13C-PCB-52	70.3	5 -145		13C-PCB-178	76.2	10 -145	
13C-PCB-54	65.7	5 -145					
13C-PCB-70	75.6	5 -145					
13C-PCB-77	85.4	10 -145					
13C-PCB-80	78.2	10 -145					
13C-PCB-81	86.5	10 -145					
13C-PCB-95	76.3	10 -145					
13C-PCB-97	82.9	10 -145					
13C-PCB-101	79.4	10 -145					
13C-PCB-104	70.5	10 -145					
13C-PCB-105	83.1	10 -145					
13C-PCB-114	84.9	10 -145					
13C-PCB-118	83.9	10 -145					
13C-PCB-123	83.0	10 -145					
13C-PCB-126	89.7	10 -145					
13C-PCB-127	87.3	10 -145					
13C-PCB-138	82.3	10 -145					
13C-PCB-141	82.0	10 -145					
13C-PCB-153	80.6	10 -145					
13C-PCB-155	73.6	10 -145					
13C-PCB-156	86.0	10 -145					
13C-PCB-157	85.5	10 -145					
13C-PCB-159	85.9	10 -145					
13C-PCB-167	85.7	10 -145					
13C-PCB-169	85.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-18
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	3.04	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 14:06
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.13				PCB-44	1590			E
PCB-2	0.677				PCB-45	25.5			
PCB-3	0.476			J	PCB-46	34.6			
PCB-4/10	12.1				PCB-47	529			
PCB-5/8	20.4				PCB-48/75	222			
PCB-6	5.77				PCB-50	2.88			
PCB-7/9	3.97				PCB-51	75.6			
PCB-11	34.3				PCB-52/69	4220			E
PCB-12/13	0.860			J	PCB-53	342			
PCB-14	ND	0.202			PCB-54	7.12			
PCB-15	50.5				PCB-55	46.9			
PCB-16/32	225				PCB-56/60	471			
PCB-17	39.5				PCB-57	33.8			
PCB-18	237				PCB-58	19.2			
PCB-19	19.9				PCB-61/70	2430			
PCB-20/21/33	44.4				PCB-62	ND	0.237		
PCB-22	30.3				PCB-63	235			
PCB-23	ND	0.419			PCB-65	0.457			J
PCB-24/27	32.6				PCB-66/76	3390			E
PCB-25	66.4				PCB-67	116			
PCB-26	197				PCB-68	73.4			
PCB-28	1530			E	PCB-73	6.19			
PCB-29	0.512				PCB-74	2330			E
PCB-30	0.143			J	PCB-77	331			
PCB-31	509				PCB-78	21.9			
PCB-34	7.29				PCB-79	342			
PCB-35	0.316			J	PCB-80	162			
PCB-36	1.23				PCB-81	53.0			
PCB-37	138				PCB-82	85.7			
PCB-38	24.1				PCB-83	4.77			
PCB-39	0.855				PCB-84/92	4060			E
PCB-40	15.4				PCB-85/116	185			
PCB-41/64/71/72	1120				PCB-86	ND	1.02		
PCB-42/59	195				PCB-87/117/125	3830			
PCB-43/49	3360			E	PCB-88/91	1220			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-18	Date Received:	24-Nov-2014 13:28		
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52		
Date Collected:	12-Oct-2014 0:00	%Lipids:	3.04	Date Analyzed :	17-Dec-14 14:06	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	16.1				PCB-136	1400			
PCB-90/101	20300			E	PCB-137	891			
PCB-93	ND	0.931			PCB-138/163/164	24800			E
PCB-94	15.9				PCB-139/149	9110			E
PCB-95/98/102	6110			E	PCB-140	103			
PCB-96	49.6				PCB-141	2230			E
PCB-97	2420			E	PCB-144	942			
PCB-99	14400			E	PCB-145	3.00			
PCB-100	139				PCB-146/165	6490			E
PCB-103	338				PCB-147	719			
PCB-104	3.36				PCB-148	64.6			
PCB-105	5620			E	PCB-150	68.4			
PCB-106/118	20200			E	PCB-151	5080			E
PCB-107/109	2070				PCB-152	9.98			
PCB-108/112	365				PCB-153	29500			E
PCB-110	7220			E	PCB-154	939			
PCB-111/115	292				PCB-155	20.7			
PCB-113	ND	0.801			PCB-156	1740			E
PCB-114	313				PCB-157	463			
PCB-119	623				PCB-158/160	2570			
PCB-120	159				PCB-159	368			
PCB-121	ND	0.553			PCB-166	71.2			
PCB-122	48.4				PCB-167	1160			
PCB-123	398				PCB-168	49.5			
PCB-124	416				PCB-169	3.17			
PCB-126	71.7				PCB-170	4500			E
PCB-127	ND	1.38			PCB-171	1330			
PCB-128/162	2720				PCB-172	893			
PCB-129	87.3				PCB-173	19.2			
PCB-130	1540			E	PCB-174	768			
PCB-131	ND	3.72			PCB-175	269			
PCB-132/161	1160				PCB-176	292			
PCB-133/142	767				PCB-177	2890			E
PCB-134/143	751				PCB-178	1810			E
PCB-135	1280				PCB-179	1560			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-18	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	12-Oct-2014 0:00	%Lipids:	3.04	Date Analyzed :	17-Dec-14 14:06	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	12000			E	Total octaCB	8040			
PCB-181	24.9				Total nonaCB	906			
PCB-182/187	12400			E	DecaCB	170			
PCB-183	4480			E	Total PCB	268000			
PCB-184	14.2								
PCB-185	275								
PCB-186	ND	0.822							
PCB-188	44.1								
PCB-189	156								
PCB-190	1000								
PCB-191	191								
PCB-192	ND	0.868							
PCB-193	755								
PCB-194	1490			E					
PCB-195	525								
PCB-196/203	2480								
PCB-197	90.2								
PCB-198	71.3								
PCB-199	2210			E					
PCB-200	37.9								
PCB-201	310								
PCB-202	756								
PCB-204	2.20								
PCB-205	72.4								
PCB-206	630								
PCB-207	78.1								
PCB-208	198								
PCB-209	170								
Total monoCB	2.28								
Total diCB	128								
Total triCB	3110								
Total tetraCB	21800								
Total pentaCB	91000								
Total hexaCB	97000								
Total heptaCB	45600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-18
Project:	120711-01.07 Task 1	Sample Size:	10.2 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	3.04	QC Batch:	B4L0053
				Date Analyzed :	17-Dec-14 14:06
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.7	5 -145		13C-PCB-170	83.9	10 -145	
13C-PCB-3	62.3	5 -145		13C-PCB-180	81.3	10 -145	
13C-PCB-4	67.9	5 -145		13C-PCB-188	74.0	10 -145	
13C-PCB-11	80.6	5 -145		13C-PCB-189	83.3	10 -145	
13C-PCB-9	75.0	5 -145		13C-PCB-194	87.1	10 -145	
13C-PCB-19	67.8	5 -145		13C-PCB-202	73.2	10 -145	
13C-PCB-28	74.0	5 -145		13C-PCB-206	89.2	10 -145	
13C-PCB-32	72.7	5 -145		13C-PCB-208	81.1	10 -145	
13C-PCB-37	71.3	5 -145		13C-PCB-209	98.5	10 -145	
13C-PCB-47	77.8	5 -145		CRS 13C-PCB-79	90.4	10 -145	
13C-PCB-52	77.7	5 -145		13C-PCB-178	81.5	10 -145	
13C-PCB-54	74.2	5 -145					
13C-PCB-70	85.1	5 -145					
13C-PCB-77	96.9	10 -145					
13C-PCB-80	84.9	10 -145					
13C-PCB-81	94.8	10 -145					
13C-PCB-95	78.7	10 -145					
13C-PCB-97	88.6	10 -145					
13C-PCB-101	78.6	10 -145					
13C-PCB-104	72.2	10 -145					
13C-PCB-105	81.6	10 -145					
13C-PCB-114	82.3	10 -145					
13C-PCB-118	81.5	10 -145					
13C-PCB-123	91.1	10 -145					
13C-PCB-126	89.0	10 -145					
13C-PCB-127	82.2	10 -145					
13C-PCB-138	80.7	10 -145					
13C-PCB-141	86.5	10 -145					
13C-PCB-153	69.9	10 -145					
13C-PCB-155	79.9	10 -145					
13C-PCB-156	92.8	10 -145					
13C-PCB-157	91.1	10 -145					
13C-PCB-159	90.6	10 -145					
13C-PCB-167	89.3	10 -145					
13C-PCB-169	91.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-19	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.31	Date Analyzed :	20-Dec-14 01:24	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.78			J, D	PCB-44	2020			D
PCB-2	ND		1.10	D	PCB-45	39.4			D
PCB-3	ND		0.587	D	PCB-46	56.7			D
PCB-4/10	18.8			D	PCB-47	952			D
PCB-5/8	38.4			D	PCB-48/75	253			D
PCB-6	11.3			D	PCB-50	3.90			D
PCB-7/9	7.03			J, D	PCB-51	110			D
PCB-11	46.0			D	PCB-52/69	5540			D
PCB-12/13	ND	0.348		D	PCB-53	461			D
PCB-14	ND	0.311		D	PCB-54	8.81			D
PCB-15	69.7			D	PCB-55	63.4			D
PCB-16/32	358			D	PCB-56/60	691			D
PCB-17	75.9			D	PCB-57	43.1			D
PCB-18	408			D	PCB-58	21.7			D
PCB-19	34.9			D	PCB-61/70	3010			D
PCB-20/21/33	81.8			D	PCB-62	ND	0.791		D
PCB-22	58.7			D	PCB-63	286			D
PCB-23	ND	0.767		D	PCB-65	ND	0.766		D
PCB-24/27	53.5			D	PCB-66/76	5340			D
PCB-25	113			D	PCB-67	145			D
PCB-26	256			D	PCB-68	87.3			D
PCB-28	2150			D	PCB-73	8.67			D
PCB-29	1.64			J, D	PCB-74	2810			D
PCB-30	ND	0.175		D	PCB-77	390			D
PCB-31	780			D	PCB-78	30.5			D
PCB-34	12.5			D	PCB-79	461			D
PCB-35	ND	0.845		D	PCB-80	ND	0.621		D
PCB-36	2.25			J, D	PCB-81	83.0			D
PCB-37	193			D	PCB-82	147			D
PCB-38	42.4			D	PCB-83	5.36			D
PCB-39	1.72			J, D	PCB-84/92	4490			D
PCB-40	22.6			D	PCB-85/116	589			D
PCB-41/64/71/72	1470			D	PCB-86	ND	1.38		D
PCB-42/59	259			D	PCB-87/117/125	4610			D
PCB-43/49	4320			D	PCB-88/91	1550			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-19
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	QC Batch:	B4L0053
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.31	Date Received:	24-Nov-2014 13:28
				Date Analyzed:	20-Dec-14 01:24
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.5			D	PCB-136	1790			D
PCB-90/101	23900			E, D	PCB-137	971			D
PCB-93	ND	1.11		D	PCB-138/163/164	33900			E, D
PCB-94	24.5			D	PCB-139/149	12000			D
PCB-95/98/102	7960			D	PCB-140	123			D
PCB-96	65.2			D	PCB-141	2780			D
PCB-97	3010			D	PCB-144	1120			D
PCB-99	15900			E, D	PCB-145	4.39			D
PCB-100	155			D	PCB-146/165	6350			D
PCB-103	398			D	PCB-147	820			D
PCB-104	3.68			D	PCB-148	82.9			D
PCB-105	6710			D	PCB-150	80.4			D
PCB-106/118	23500			E, D	PCB-151	6520			D
PCB-107/109	2270			D	PCB-152	13.2			D
PCB-108/112	451			D	PCB-153	48500			E, D
PCB-110	9020			E, D	PCB-154	1050			D
PCB-111/115	315			D	PCB-155	25.5			D
PCB-113	ND	0.892		D	PCB-156	2150			D
PCB-114	335			D	PCB-157	511			D
PCB-119	737			D	PCB-158/160	2650			D
PCB-120	176			D	PCB-159	531			D
PCB-121	ND	0.661		D	PCB-166	84.4			D
PCB-122	56.9			D	PCB-167	1430			D
PCB-123	481			D	PCB-168	52.8			D
PCB-124	482			D	PCB-169	4.59			D
PCB-126	73.6			D	PCB-170	7100			D
PCB-127	ND	2.07		D	PCB-171	1700			D
PCB-128/162	3480			D	PCB-172	1170			D
PCB-129	108			D	PCB-173	27.0			D
PCB-130	1810			D	PCB-174	983			D
PCB-131	ND	3.37		D	PCB-175	325			D
PCB-132/161	1370			D	PCB-176	331			D
PCB-133/142	722			D	PCB-177	3820			D
PCB-134/143	722			D	PCB-178	2230			D
PCB-135	1720			D	PCB-179	1850			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-19
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.31	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 01:24
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	18000			E, D	Total octaCB	11300			
PCB-181	22.4			D	Total nonaCB	958			
PCB-182/187	15900			E, D	DecaCB	236			
PCB-183	5450			D	Total PCB	349000			
PCB-184	16.8			D					
PCB-185	307			D					
PCB-186	ND	0.503		D					
PCB-188	50.6			D					
PCB-189	227			D					
PCB-190	1510			D					
PCB-191	272			D					
PCB-192	ND	0.520		D					
PCB-193	983			D					
PCB-194	2060			D					
PCB-195	733			D					
PCB-196/203	3520			D					
PCB-197	125			D					
PCB-198	94.4			D					
PCB-199	3190			D					
PCB-200	52.2			D					
PCB-201	422			D					
PCB-202	941			D					
PCB-204	2.98			D					
PCB-205	106			D					
PCB-206	657			D					
PCB-207	90.2			D					
PCB-208	210			D					
PCB-209	236			D					
Total monoCB	1.78		3.46						
Total diCB	191								
Total triCB	4620								
Total tetraCB	29000								
Total pentaCB	107000								
Total hexaCB	133000								
Total heptaCB	62300								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-19
Project:	120711-01.07 Task 1	Sample Size:	10.4 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.31	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 01:24
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	75.9	5 -145	D	13C-PCB-170	74.1	10 -145	D
13C-PCB-3	79.0	5 -145	D	13C-PCB-180	79.0	10 -145	D
13C-PCB-4	83.1	5 -145	D	13C-PCB-188	71.1	10 -145	D
13C-PCB-11	84.1	5 -145	D	13C-PCB-189	68.7	10 -145	D
13C-PCB-9	84.3	5 -145	D	13C-PCB-194	89.2	10 -145	D
13C-PCB-19	66.5	5 -145	D	13C-PCB-202	50.8	10 -145	D
13C-PCB-28	71.9	5 -145	D	13C-PCB-206	79.1	10 -145	D
13C-PCB-32	65.4	5 -145	D	13C-PCB-208	73.3	10 -145	D
13C-PCB-37	78.4	5 -145	D	13C-PCB-209	78.6	10 -145	D
13C-PCB-47	83.2	5 -145	D	CRS 13C-PCB-79	83.1	10 -145	D
13C-PCB-52	84.4	5 -145	D	13C-PCB-178	68.5	10 -145	D
13C-PCB-54	81.5	5 -145	D				
13C-PCB-70	83.0	5 -145	D				
13C-PCB-77	89.3	10 -145	D				
13C-PCB-80	88.2	10 -145	D				
13C-PCB-81	88.7	10 -145	D				
13C-PCB-95	80.3	10 -145	D				
13C-PCB-97	85.5	10 -145	D				
13C-PCB-101	84.3	10 -145	D				
13C-PCB-104	80.0	10 -145	D				
13C-PCB-105	103	10 -145	D				
13C-PCB-114	100	10 -145	D				
13C-PCB-118	87.8	10 -145	D				
13C-PCB-123	79.6	10 -145	D				
13C-PCB-126	104	10 -145	D				
13C-PCB-127	101	10 -145	D				
13C-PCB-138	96.5	10 -145	D				
13C-PCB-141	88.5	10 -145	D				
13C-PCB-153	92.9	10 -145	D				
13C-PCB-155	55.0	10 -145	D				
13C-PCB-156	93.7	10 -145	D				
13C-PCB-157	89.4	10 -145	D				
13C-PCB-159	88.3	10 -145	D				
13C-PCB-167	92.4	10 -145	D				
13C-PCB-169	88.2	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-20	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.89	Date Analyzed :	20-Dec-14 02:28	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.802			J, D	PCB-44	1580			D
PCB-2	ND	0.566		D	PCB-45	18.3			D
PCB-3	ND	0.549		D	PCB-46	24.9			D
PCB-4/10	8.50			J, D	PCB-47	427			D
PCB-5/8	18.8			D	PCB-48/75	222			D
PCB-6	5.10			D	PCB-50	1.58			J, D
PCB-7/9	2.70			J, D	PCB-51	61.2			D
PCB-11	16.1			D	PCB-52/69	5060			D
PCB-12/13	ND	1.39		D	PCB-53	320			D
PCB-14	ND	1.24		D	PCB-54	4.37			D
PCB-15	30.0			D	PCB-55	50.3			D
PCB-16/32	178			D	PCB-56/60	492			D
PCB-17	35.4			D	PCB-57	43.9			D
PCB-18	183			D	PCB-58	19.5			D
PCB-19	15.3			D	PCB-61/70	2160			D
PCB-20/21/33	41.9			D	PCB-62	ND	0.920		D
PCB-22	29.5			D	PCB-63	312			D
PCB-23	ND	0.274		D	PCB-65	ND		0.381	D
PCB-24/27	24.8			D	PCB-66/76	3600			D
PCB-25	61.6			D	PCB-67	123			D
PCB-26	185			D	PCB-68	87.5			D
PCB-28	1510			D	PCB-73	ND	0.869		D
PCB-29	0.757			J, D	PCB-74	3100			D
PCB-30	ND	0.215		D	PCB-77	369			D
PCB-31	382			D	PCB-78	ND	0.855		D
PCB-34	6.85			D	PCB-79	484			D
PCB-35	ND	0.304		D	PCB-80	ND	0.727		D
PCB-36	0.735			J, D	PCB-81	21.5			D
PCB-37	138			D	PCB-82	64.4			D
PCB-38	16.6			D	PCB-83	3.91			D
PCB-39	0.524			J, D	PCB-84/92	3700			D
PCB-40	12.1			D	PCB-85/116	196			D
PCB-41/64/71/72	1100			D	PCB-86	ND	1.35		D
PCB-42/59	173			D	PCB-87/117/125	4890			D
PCB-43/49	4020			D	PCB-88/91	1190			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-20
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.89	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 02:28
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.39			D	PCB-136	1520			D
PCB-90/101	24700			E, D	PCB-137	1060			D
PCB-93	ND	1.13		D	PCB-138/163/164	31400			E, D
PCB-94	6.58			D	PCB-139/149	7130			D
PCB-95/98/102	5430			D	PCB-140	108			D
PCB-96	51.8			D	PCB-141	2120			D
PCB-97	2150			D	PCB-144	1070			D
PCB-99	16800			E, D	PCB-145	2.61			D
PCB-100	135			D	PCB-146/165	6530			D
PCB-103	432			D	PCB-147	930			D
PCB-104	3.49			D	PCB-148	43.6			D
PCB-105	6800			D	PCB-150	72.8			D
PCB-106/118	25300			E, D	PCB-151	6500			D
PCB-107/109	2630			D	PCB-152	11.1			D
PCB-108/112	302			D	PCB-153	44300			E, D
PCB-110	6900			D	PCB-154	1070			D
PCB-111/115	370			D	PCB-155	32.1			D
PCB-113	ND	0.914		D	PCB-156	2320			D
PCB-114	370			D	PCB-157	554			D
PCB-119	722			D	PCB-158/160	2600			D
PCB-120	183			D	PCB-159	ND	1.17		D
PCB-121	ND	0.668		D	PCB-166	99.1			D
PCB-122	29.0			D	PCB-167	1430			D
PCB-123	538			D	PCB-168	58.1			D
PCB-124	384			D	PCB-169	2.56			D
PCB-126	78.5			D	PCB-170	5300			D
PCB-127	ND	3.34		D	PCB-171	1600			D
PCB-128/162	3180			D	PCB-172	955			D
PCB-129	43.6			D	PCB-173	16.6			D
PCB-130	2100			D	PCB-174	391			D
PCB-131	ND	1.57		D	PCB-175	305			D
PCB-132/161	945			D	PCB-176	219			D
PCB-133/142	730			D	PCB-177	3110			D
PCB-134/143	663			D	PCB-178	2030			D
PCB-135	1030			D	PCB-179	1560			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-20 Date Received: 24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	QC Batch:	B4L0053 Date Extracted: 08-Dec-2014 10:52
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.89	Date Analyzed :	20-Dec-14 02:28 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	13900			E, D	Total octaCB	9070			
PCB-181	29.6			D	Total nonaCB	1060			
PCB-182/187	14100			D	DecaCB	276			
PCB-183	5130			D	Total PCB	313000			
PCB-184	25.6			D					
PCB-185	216			D					
PCB-186	ND	0.429		D					
PCB-188	59.5			D					
PCB-189	201			D					
PCB-190	1110			D					
PCB-191	216			D					
PCB-192	ND	0.443		D					
PCB-193	845			D					
PCB-194	1750			D					
PCB-195	635			D					
PCB-196/203	2950			D					
PCB-197	117			D					
PCB-198	78.7			D					
PCB-199	2160			D					
PCB-200	23.1			D					
PCB-201	370			D					
PCB-202	893			D					
PCB-204	3.40			D					
PCB-205	88.2			D					
PCB-206	753			D					
PCB-207	100			D					
PCB-208	207			D					
PCB-209	276			D					
Total monoCB	0.802								
Total diCB	81.2								
Total triCB	2810								
Total tetraCB	23900								
Total pentaCB	104000								
Total hexaCB	120000								
Total heptaCB	51300								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-20
Project:	120711-01.07 Task 1	Sample Size:	10.1 g	Date Received:	24-Nov-2014 13:28
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.89	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 02:28
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	68.2	5 -145	D	13C-PCB-170	74.8	10 -145	D
13C-PCB-3	71.0	5 -145	D	13C-PCB-180	76.4	10 -145	D
13C-PCB-4	76.1	5 -145	D	13C-PCB-188	67.3	10 -145	D
13C-PCB-11	81.7	5 -145	D	13C-PCB-189	64.0	10 -145	D
13C-PCB-9	80.1	5 -145	D	13C-PCB-194	91.0	10 -145	D
13C-PCB-19	62.4	5 -145	D	13C-PCB-202	52.1	10 -145	D
13C-PCB-28	81.9	5 -145	D	13C-PCB-206	75.3	10 -145	D
13C-PCB-32	63.8	5 -145	D	13C-PCB-208	74.2	10 -145	D
13C-PCB-37	78.9	5 -145	D	13C-PCB-209	71.9	10 -145	D
13C-PCB-47	81.7	5 -145	D	CRS 13C-PCB-79	84.4	10 -145	D
13C-PCB-52	84.6	5 -145	D	13C-PCB-178	69.4	10 -145	D
13C-PCB-54	83.1	5 -145	D				
13C-PCB-70	84.3	5 -145	D				
13C-PCB-77	82.8	10 -145	D				
13C-PCB-80	83.4	10 -145	D				
13C-PCB-81	83.8	10 -145	D				
13C-PCB-95	84.8	10 -145	D				
13C-PCB-97	86.2	10 -145	D				
13C-PCB-101	87.4	10 -145	D				
13C-PCB-104	84.1	10 -145	D				
13C-PCB-105	106	10 -145	D				
13C-PCB-114	97.8	10 -145	D				
13C-PCB-118	89.1	10 -145	D				
13C-PCB-123	85.5	10 -145	D				
13C-PCB-126	105	10 -145	D				
13C-PCB-127	101	10 -145	D				
13C-PCB-138	95.1	10 -145	D				
13C-PCB-141	86.9	10 -145	D				
13C-PCB-153	91.7	10 -145	D				
13C-PCB-155	58.4	10 -145	D				
13C-PCB-156	91.2	10 -145	D				
13C-PCB-157	85.7	10 -145	D				
13C-PCB-159	86.4	10 -145	D				
13C-PCB-167	89.0	10 -145	D				
13C-PCB-169	82.3	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-21	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	1.03 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	23-Nov-2014 0:00	%Lipids:	10.2	Date Analyzed :	20-Dec-14 03:33	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	6.87		D	PCB-44	3310			D
PCB-2	ND	6.61		D	PCB-45	128			D
PCB-3	ND	6.41		D	PCB-46	57.9			D
PCB-4/10	ND	3.95		D	PCB-47	2150			D
PCB-5/8	ND	3.25		D	PCB-48/75	349			D
PCB-6	ND	3.18		D	PCB-50	ND	5.12		D
PCB-7/9	ND	3.16		D	PCB-51	31.4			J, D
PCB-11	31.7			J, D	PCB-52/69	5840			D
PCB-12/13	ND	2.97		D	PCB-53	197			D
PCB-14	ND	2.65		D	PCB-54	ND	4.13		D
PCB-15	ND	2.70		D	PCB-55	125			D
PCB-16/32	74.6			J, D	PCB-56/60	2370			D
PCB-17	117			D	PCB-57	70.9			D
PCB-18	444			D	PCB-58	ND		42.0	D
PCB-19	ND		16.8	D	PCB-61/70	11300			D
PCB-20/21/33	63.5			J, D	PCB-62	ND	4.32		D
PCB-22	231			D	PCB-63	602			D
PCB-23	ND	2.23		D	PCB-65	ND	4.19		D
PCB-24/27	27.2			J, D	PCB-66/76	8540			D
PCB-25	69.2			D	PCB-67	222			D
PCB-26	167			D	PCB-68	307			D
PCB-28	1460			D	PCB-73	10.1			J, D
PCB-29	ND	2.16		D	PCB-74	4130			D
PCB-30	ND	2.32		D	PCB-77	327			D
PCB-31	959			D	PCB-78	90.5			D
PCB-34	ND	2.28		D	PCB-79	911			D
PCB-35	ND	4.81		D	PCB-80	ND	3.09		D
PCB-36	ND	4.82		D	PCB-81	126			D
PCB-37	13.3			J, D	PCB-82	185			D
PCB-38	88.4			D	PCB-83	ND	7.65		D
PCB-39	ND	4.66		D	PCB-84/92	11300			D
PCB-40	203			D	PCB-85/116	13700			D
PCB-41/64/71/72	3190			D	PCB-86	ND	11.4		D
PCB-42/59	579			D	PCB-87/117/125	9470			D
PCB-43/49	3200			D	PCB-88/91	2230			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-21	Date Received:	24-Nov-2014 13:28
Project:	120711-01.07 Task 1	Sample Size:	1.03 g	QC Batch:	B4L0053	Date Extracted:	08-Dec-2014 10:52
Date Collected:	23-Nov-2014 0:00	%Lipids:	10.2	Date Analyzed :	20-Dec-14 03:33	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	81.8			D	PCB-136	2000			D
PCB-90/101	41800			D	PCB-137	4860			D
PCB-93	ND	9.54		D	PCB-138/163/164	138000			D
PCB-94	87.3			D	PCB-139/149	32800			D
PCB-95/98/102	13100			D	PCB-140	854			D
PCB-96	ND		18.7	D	PCB-141	11900			D
PCB-97	5700			D	PCB-144	2210			D
PCB-99	28800			D	PCB-145	ND	9.90		D
PCB-100	137			D	PCB-146/165	25800			D
PCB-103	198			D	PCB-147	2100			D
PCB-104	ND	6.80		D	PCB-148	262			D
PCB-105	19800			D	PCB-150	64.1			D
PCB-106/118	61400			D	PCB-151	10200			D
PCB-107/109	8160			D	PCB-152	42.7			J, D
PCB-108/112	1360			D	PCB-153	172000			E, D
PCB-110	26600			D	PCB-154	1580			D
PCB-111/115	ND		787	D	PCB-155	151			D
PCB-113	ND	7.93		D	PCB-156	8650			D
PCB-114	1320			D	PCB-157	2450			D
PCB-119	1240			D	PCB-158/160	7130			D
PCB-120	761			D	PCB-159	2280			D
PCB-121	61.3			D	PCB-166	545			D
PCB-122	91.2			D	PCB-167	5500			D
PCB-123	1260			D	PCB-168	223			D
PCB-124	2640			D	PCB-169	80.7			D
PCB-126	ND		309	D	PCB-170	25800			D
PCB-127	ND	25.5		D	PCB-171	7310			D
PCB-128/162	19700			D	PCB-172	8200			D
PCB-129	573			D	PCB-173	ND	13.9		D
PCB-130	7320			D	PCB-174	9160			D
PCB-131	ND	13.9		D	PCB-175	1770			D
PCB-132/161	4290			D	PCB-176	630			D
PCB-133/142	3740			D	PCB-177	15400			D
PCB-134/143	1430			D	PCB-178	11800			D
PCB-135	9390			D	PCB-179	5560			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-21
Project:	120711-01.07 Task 1	Sample Size:	1.03 g	Date Received:	24-Nov-2014 13:28
Date Collected:	23-Nov-2014 0:00	%Lipids:	10.2	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 03:33
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	79400			D	Total octaCB	76600			
PCB-181	254			D	Total nonaCB	8260			
PCB-182/187	67700			D	DecaCB	1050			
PCB-183	23300			D	Total PCB	1140000			
PCB-184	454			D					
PCB-185	1900			D					
PCB-186	ND	9.12		D					
PCB-188	375			D					
PCB-189	1580			D					
PCB-190	6480			D					
PCB-191	959			D					
PCB-192	ND	10.5		D					
PCB-193	5530			D					
PCB-194	14000			D					
PCB-195	4570			D					
PCB-196/203	25000			D					
PCB-197	1480			D					
PCB-198	1020			D					
PCB-199	21100			D					
PCB-200	261			D					
PCB-201	2930			D					
PCB-202	5120			D					
PCB-204	155			D					
PCB-205	914			D					
PCB-206	5170			D					
PCB-207	1380			D					
PCB-208	1710			D					
PCB-209	1050			D					
Total monoCB	ND	6.87							
Total diCB	31.7								
Total triCB	3710		3730						
Total tetraCB	48400								
Total pentaCB	251000		253000						
Total hexaCB	478000								
Total heptaCB	274000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400892-21
Project:	120711-01.07 Task 1	Sample Size:	1.03 g	Date Received:	24-Nov-2014 13:28
Date Collected:	23-Nov-2014 0:00	%Lipids:	10.2	QC Batch:	B4L0053
				Date Analyzed :	20-Dec-14 03:33
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	60.5	5 -145	D	13C-PCB-170	77.9	10 -145	D
13C-PCB-3	65.6	5 -145	D	13C-PCB-180	74.6	10 -145	D
13C-PCB-4	69.5	5 -145	D	13C-PCB-188	67.8	10 -145	D
13C-PCB-11	78.8	5 -145	D	13C-PCB-189	70.5	10 -145	D
13C-PCB-9	74.0	5 -145	D	13C-PCB-194	94.4	10 -145	D
13C-PCB-19	55.2	5 -145	D	13C-PCB-202	51.1	10 -145	D
13C-PCB-28	92.2	5 -145	D	13C-PCB-206	85.7	10 -145	D
13C-PCB-32	62.6	5 -145	D	13C-PCB-208	81.1	10 -145	D
13C-PCB-37	93.0	5 -145	D	13C-PCB-209	80.7	10 -145	D
13C-PCB-47	76.8	5 -145	D	CRS 13C-PCB-79	83.4	10 -145	D
13C-PCB-52	83.0	5 -145	D	13C-PCB-178	64.8	10 -145	D
13C-PCB-54	78.0	5 -145	D				
13C-PCB-70	83.1	5 -145	D				
13C-PCB-77	87.0	10 -145	D				
13C-PCB-80	85.0	10 -145	D				
13C-PCB-81	90.7	10 -145	D				
13C-PCB-95	88.3	10 -145	D				
13C-PCB-97	93.1	10 -145	D				
13C-PCB-101	86.2	10 -145	D				
13C-PCB-104	82.6	10 -145	D				
13C-PCB-105	103	10 -145	D				
13C-PCB-114	98.7	10 -145	D				
13C-PCB-118	89.2	10 -145	D				
13C-PCB-123	86.8	10 -145	D				
13C-PCB-126	105	10 -145	D				
13C-PCB-127	103	10 -145	D				
13C-PCB-138	92.0	10 -145	D				
13C-PCB-141	89.6	10 -145	D				
13C-PCB-153	91.3	10 -145	D				
13C-PCB-155	59.2	10 -145	D				
13C-PCB-156	88.7	10 -145	D				
13C-PCB-157	88.3	10 -145	D				
13C-PCB-159	90.6	10 -145	D				
13C-PCB-167	87.7	10 -145	D				
13C-PCB-169	87.2	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400892-01	FH-WO-WS-02-08-20141013	26.8	10-Dec-2014	B4L0052
1400892-02	FH-WO-WS-03-08-20141013	23.7	10-Dec-2014	B4L0052
1400892-03	FH-WO-WS-04-08-20141013	23.5	10-Dec-2014	B4L0052
1400892-04	FH-WO-WS-05-08-20141013	24.6	10-Dec-2014	B4L0052
1400892-05	FH-WO-WS-06-08-20141013	23.4	10-Dec-2014	B4L0052
1400892-06	FH-WO-WS-07-08-20141013	30.3	10-Dec-2014	B4L0052
1400892-07	FH-WO-WS-08-08-20141013	29.6	10-Dec-2014	B4L0052
1400892-08	FH-WO-WS-10-08-20141013	29.3	10-Dec-2014	B4L0052
1400892-09	OA-WO-WS-01-06-20141011	25.4	10-Dec-2014	B4L0052
1400892-10	OA-WO-WS-02-06-20141011	25.2	10-Dec-2014	B4L0052
1400892-11	OA-WO-WS-03-06-20141011	23.3	10-Dec-2014	B4L0052
1400892-12	OA-WO-WS-04-06-20141011	25.8	10-Dec-2014	B4L0052
1400892-13	OA-WO-WS-05-06-20141011	23.0	10-Dec-2014	B4L0052
1400892-14	OA-WO-WS-06-06-20141013	28.9	10-Dec-2014	B4L0052
1400892-15	OA-WO-SS-08-06-20141013	22.5	10-Dec-2014	B4L0052
1400892-16	OA-WO-SS-09-06-20141011	24.1	10-Dec-2014	B4L0052
1400892-17	OA-WO-SS-10-06-20141011	23.4	10-Dec-2014	B4L0052
1400892-18	IB-WO-SS-01-05-20141012	24.5	10-Dec-2014	B4L0052
1400892-19	IB-WO-SS-02-05-20141012	26.8	10-Dec-2014	B4L0052
1400892-20	IB-WO-SS-03-05-20141012	23.3	10-Dec-2014	B4L0052

Fish Scale Measurements

Field Sample ID	Lab ID	No.	Measurements of Scaled Fish	
			Total Length (cm)	Standard Length (cm)
OA-WO-WS-01-06-20141011	1400892-09	4	11.2	8.2
OA-WO-SS-10-06-20141011	1400892-17	7	9.3	7.2

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

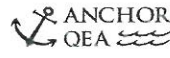
Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				No. of Fish in Replicate	Vista Test Parameters (Sub's noted in Bold)										Comments	
Track #	Field Sample ID	Collection Date/Time	Fish Type		PCBs (low-res) 8270 Congeners - is conducted on sample ID - FF/OF - for Skin Off Fillets (FF) ONLY - NOT OFFAL (CF)- CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physys (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziploc bag and NEW ID tag with replicate ID #. If multiple fish in replicate - choose fish directed to in comments or middle size fish.	Archive: No testing / keep frozen	See notes: section at bottom. FF/OF fish are for full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
	Date: 11/20/2014															
	Project Name: Harbor TMDL Food Web Sampling															
	Project Number: 120711-01.07 Task 1															
	Project Manager: Chris Stransky															
	Phone Number: (858) 300 4350															
	Shipment Method:															
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x	x					x	Scalcs already collected. Skin-Off Fillets + Offal from this replicate.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x				x			Scalcs already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5										x		"Lab pic 027". Contains 5 fish in 1 foil (A1-A5). Orig. Archive.
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch.	1 -> 2	x	x	x	x	x	x			x		x	Scalcs already collected. Skin-Off Fillets + Offal from this replicate. CONFIRMED. NEEDS TO HAVE Archive A-4 ADDED to replicate + scales taken
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch.	2	x	x	x	x		x						Scalcs already collected.
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch.	3	x	x	x	x		x						Scalcs already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch.	3	x	x	x	x		x						Scalcs already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch.	3	x	x	x	x		x						Scalcs already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch.	3	x	x	x	x		x						Scalcs already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch.	1	x	x	x	x		x						Scalcs already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch.	1	x	x	x	x		x						Scalcs already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch.	1	x	x	x	x		x						Scalcs already collected.



1400892
0.2°C, -0.3°C, 0.9°C, -2.1°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Sniner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; LA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: *Replacement page* Company: Anchor OEA Date/Time: *12/26/14 via email*



Received By: *Original rec'd 12/03/14. ASD Benedikt 12/26/14 14:27* Company: _____ Date/Time: _____

Relinquished By: _____ Company: _____ Date/Time: _____

Received By: _____ Company: _____ Date/Time: _____

- * 1400892
- Ⓐ 1400900
- Ⓢ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments			 	
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aloquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. NO testing / keep frozen		See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
Track. #	Field Sample ID	Collection Date/Time	Type of Fish														PCBs (high res) epa 1668C	
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x								Scales already collected.
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x								Scales already collected.
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x								Scales already collected.
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5												x		Photo 29. Label says "OA-XX-CA-A-06-20141011"
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x		x				TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x		x	x	x		x	x						Scales already collected.
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x		x	x	x		x	x						Scales already collected.
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x	x	x	x	x	x	x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x		
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x		x	x	x		x	x						Scales already collected.
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x		x	x	x		x	x						Scales already collected.
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x		x	x	x		x	x		x				TAKE SCALES. Note which fish taken from (size). No otolith.
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x		Unknown actual number b/c of on-boat mis-ID
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x		x				Scales already collected.
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x	x	x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x		x				Scales already collected.
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x		x				Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Received By: Matthew Benedict Vista Company: 11/20/14 1510
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Compensers - is conducted on sample ID "FF/OF" - sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSUIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSUIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Phytate (C/N Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x			x		Scales already collected.	
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x		x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x		x			Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm	
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x		x			Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm	
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4											x			
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21											x		# of Archive unknown b/c of final sorting	
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x		x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate.	
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x		x		x			Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.	
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x		x	x					Scales already collected from one fish in this rep.	
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x		x	x					Scales already collected from one fish in this rep.	
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x		x	x					Scales already collected from one fish in this rep.	
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x		x	x					Scales already collected from both fish in this Rep #5.	
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x		x	x					Scales already collected from one fish in this rep.	
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1											x			
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	



VVVV**20202222

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Beth Benedict Company: Vista
Signature/Printed Name _____ Date/Time 12/04/14 1051

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

* 1400892
> 1400893
~ 1400901
⊙ 1400906
⊕ 1400904

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>A-5</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input checked="" type="checkbox"/> Return
	Retain	Dispose	

Comments:

Sample ID label

0A-WO-WS-02-06-20141011
 ↓ -03- ↓ K2 11-25-14
 -04-
 -06-
 -05-

LB-WO-SS-01-05-20141012
 ↓ -02- ↓

1B-WO-SS-03-05-20141012

COC

LB-WO-SS-03-05-20141012

Sample Login 11/2013 ckt

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

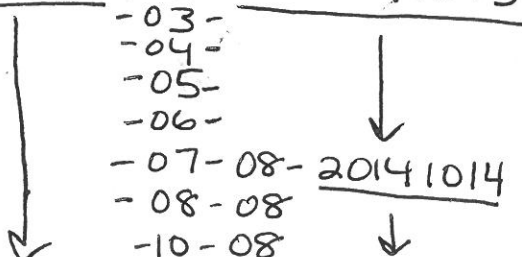
Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBSB	Location: WF2 Shelf/Rack: NA
Logged In:	Date/Time 11/24/14 1328	Initials: K UBSB	Location: WF2 Shelf/Rack: A-5
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -0.3 (uncorrected)	Time: 0921		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>5099</u> Trk # <u>7718 4040 1851</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID Label

FH-WO-WS-02-08-20141013



COFC

FH-WO-WS-07-08-20141013
 FH-WO-WS-08-08-20141013
 FH-WO-WS-10-08-20141013

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A-5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: <u>-0.9</u> (uncorrected)	Time: <u>0912</u>		Thermometer ID: IR-1
Temp °C: <u>-0.9</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>6 of 9</u> Trk # <u>7718 4040 2229</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

Sample ID label

0A-W0-WS-06-06-20141012
0A-W0-SS-08-06-20141011
 ↓ -09- ↓
 -10- ↓

CofC

0A-W0-WS-06-06-20141013
0A-W0-SS-08-06-20141013

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>KE</u> <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A-5</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>-2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>7049</u> Trk # <u>7718 4046 1472</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

Sample label
CA-WO-WS-01-06-20141013

COC
CA-WO-WS-01-06-20141011

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400892
 Date Received: 24-Nov-14 13:28
 Documented by/date: B.Benedict 12/01/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|--|---|---|
| <input type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments: COC ID:

FH-WO-WS-07-08-20141013
 FH-WO-WS-08-08-20141013
 FH-WO-WS-10-08-20141013
 OA-WO-WS-01-06-20141011
 OA-WO-WS-06-06-20141013
 OA-WO-SS-08-06-20141013
 IB-WO-SS-01-05020141012
 IB-WO-SS-02-05020141012

Label ID:

FH-WO-WS-07-08-20141014
 FH-WO-WS-08-08-20141014
 FH-WO-WS-10-08-20141014
 OA-WO-WS-01-06-20141013
 OA-WO-WS-06-06-20141012
 OA-WO-SS-08-06-20141011
 LB-WO-SS-01-05020141012
 LB-WO-SS-02-05020141012

Client Authorization

Proceed with Analysis: YES NO

Signature and Date MM 12/2/14

Client Comments/Instructions per email, COC IDs are correct

January 20, 2015

Vista Project I.D.: 1400893

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time, under your Project Name '120711-01.07 Task 1'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400893

Case Narrative

Sample Condition on Receipt:

Sixteen tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

As requested, scales were removed from samples "IB-WO-WS-07-05-20141012", "IB-WO-WS-08-05-20141012", "IB-WO-WS-09-05-20141012" and "FH-WO-SS-09-08-20141013". The physical measurements of each scaled fish are included in the report.

The replicates for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses. As directed, sample "FH-WO-SS-09-08-20141013" was only analyzed for PCBs and Percent Lipids due to the low mass available.

The samples were re-extracted because four analytes did not meet method criteria in the original OPR.

EPA Method 1668C

The samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The method holding time criteria was met for these samples.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

The recoveries of all labeled standards in the QC and field samples were within method acceptance criteria.

As requested, an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400893-01	IB-WO-SS-04-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-02	IB-WO-SS-05-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-03	IB-WO-SS-06-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-04	IB-WO-WS-07-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-05	IB-WO-WS-08-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-06	IB-WO-WS-09-05-20141012	12-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-07	CS-WO-WS-01-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-08	CS-WO-WS-02-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-09	CS-WO-WS-03-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-10	CS-WO-WS-05-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-11	CS-WO-WS-06-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-12	CS-WO-WS-07-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-13	CS-WO-WS-08-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-14	CS-WO-WS-09-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-15	CS-WO-WS-10-03-20141010	10-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil
1400893-16	FH-WO-SS-09-08-20141013	13-Oct-14 00:00	25-Nov-14 16:07	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0007	Lab Sample: B5A0007-BLK1
Sample Size: 2.00 g	Date Extracted: 03-Jan-2015 6:49	Date Analyzed: 08-Jan-15 15:43 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.909			PCB-43/49	ND	0.627		
PCB-2	ND	0.918			PCB-44	ND	0.691		
PCB-3	ND	0.889			PCB-45	ND	0.722		
PCB-4/10	ND	5.98			PCB-46	ND	0.733		
PCB-5/8	ND	4.80			PCB-47	ND	0.573		
PCB-6	ND	4.70			PCB-48/75	ND	0.498		
PCB-7/9	ND	4.67			PCB-50	ND	0.574		
PCB-11	ND	4.43			PCB-51	ND	0.605		
PCB-12/13	ND	4.68			PCB-52/69	ND	0.546		
PCB-14	ND	4.18			PCB-53	ND	0.587		
PCB-15	ND	4.26			PCB-54	ND	0.464		
PCB-16/32	ND	0.456			PCB-55	ND	0.480		
PCB-17	ND	0.521			PCB-56/60	ND	0.490		
PCB-18	ND	0.546			PCB-57	ND	0.486		
PCB-19	ND	0.606			PCB-58	ND	0.491		
PCB-20/21/33	ND	0.406			PCB-61/70	ND	0.501		
PCB-22	ND	0.402			PCB-62	ND	0.503		
PCB-23	ND	0.406			PCB-63	ND	0.484		
PCB-24/27	ND	0.399			PCB-65	ND	0.487		
PCB-25	ND	0.396			PCB-66/76	ND	0.476		
PCB-26	ND	0.412			PCB-67	ND	0.504		
PCB-28	ND	0.386			PCB-68	ND	0.437		
PCB-29	ND	0.400			PCB-73	ND	0.508		
PCB-30	ND	0.429			PCB-74	ND	0.450		
PCB-31	ND	0.375			PCB-77	ND	0.488		
PCB-34	ND	0.422			PCB-78	ND	0.491		
PCB-35	ND	0.510			PCB-79	ND	0.474		
PCB-36	ND	0.510			PCB-80	ND	0.417		
PCB-37	ND	0.504			PCB-81	ND	0.439		
PCB-38	ND	0.518			PCB-82	ND	1.61		
PCB-39	ND	0.494			PCB-83	ND	1.04		
PCB-40	ND	0.793			PCB-84/92	ND	1.28		
PCB-41/64/71/72	ND	0.495			PCB-85/116	ND	1.21		
PCB-42/59	ND	0.534			PCB-86	ND	1.55		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0007	Lab Sample: B5A0007-BLK1
Sample Size: 2.00 g	Date Extracted: 03-Jan-2015 6:49	Date Analyzed: 08-Jan-15 15:43 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	1.01			PCB-133/142	ND	0.944		
PCB-88/91	ND	1.38			PCB-134/143	ND	0.962		
PCB-89	ND	1.33			PCB-135	ND	1.29		
PCB-90/101	ND	1.13			PCB-136	ND	0.928		
PCB-93	ND	1.24			PCB-137	ND	0.830		
PCB-94	ND	1.27			PCB-138/163/164	ND	0.731		
PCB-95/98/102	ND	1.16			PCB-139/149	ND	1.19		
PCB-96	ND	0.964			PCB-140	ND	1.28		
PCB-97	ND	1.27			PCB-141	ND	0.913		
PCB-99	ND	1.05			PCB-144	ND	1.23		
PCB-100	ND	1.05			PCB-145	ND	0.921		
PCB-103	ND	1.13			PCB-146/165	ND	0.772		
PCB-104	ND	0.837			PCB-147	ND	1.21		
PCB-105	ND	0.864			PCB-148	ND	1.36		
PCB-106/118	ND	0.923			PCB-150	ND	0.946		
PCB-107/109	ND	0.973			PCB-151	ND	1.24		
PCB-108/112	ND	1.23			PCB-152	ND	0.916		
PCB-110	ND	0.940			PCB-153	ND		1.39	
PCB-111/115	ND	0.902			PCB-154	ND	1.14		
PCB-113	ND	0.998			PCB-155	ND	0.887		
PCB-114	ND	0.835			PCB-156	ND	0.695		
PCB-119	ND	0.918			PCB-157	ND	0.741		
PCB-120	ND	0.887			PCB-158/160	ND	0.695		
PCB-121	ND	0.739			PCB-159	ND	0.689		
PCB-122	ND	0.915			PCB-166	ND	0.720		
PCB-123	ND	0.975			PCB-167	ND	0.713		
PCB-124	ND	0.898			PCB-168	ND	0.652		
PCB-126	ND	0.916			PCB-169	ND	0.813		
PCB-127	ND	0.870			PCB-170	ND	0.715		
PCB-128/162	ND	0.788			PCB-171	ND	0.700		
PCB-129	ND	0.969			PCB-172	ND	0.752		
PCB-130	ND	1.05			PCB-173	ND	0.792		
PCB-131	ND	0.976			PCB-174	ND	0.687		
PCB-132/161	ND	0.802			PCB-175	ND	0.642		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0007	Lab Sample: B5A0007-BLK1
Sample Size: 2.00 g	Date Extracted: 03-Jan-2015 6:49	Date Analyzed: 08-Jan-15 15:43 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.457			Total triCB	ND	0.606		
PCB-177	ND	0.741			Total tetraCB	ND	0.793		
PCB-178	ND	0.664			Total pentaCB	ND	1.61		
PCB-179	ND	0.477			Total hexaCB	ND		1.39	
PCB-180	ND	0.643			Total heptaCB	ND	0.792		
PCB-181	ND	0.675			Total octaCB	ND	1.13		
PCB-182/187	ND	0.613			Total nonaCB	ND	1.26		
PCB-183	ND	0.575			DecaCB	ND	1.02		
PCB-184	ND	0.503			Total PCB	ND			
PCB-185	ND	0.685							
PCB-186	ND	0.488							
PCB-188	ND	0.443							
PCB-189	ND	0.555							
PCB-190	ND	0.532							
PCB-191	ND	0.550							
PCB-192	ND	0.602							
PCB-193	ND	0.556							
PCB-194	ND	0.894							
PCB-195	ND	0.929							
PCB-196/203	ND	1.07							
PCB-197	ND	0.767							
PCB-198	ND	1.11							
PCB-199	ND	1.13							
PCB-200	ND	0.809							
PCB-201	ND	0.746							
PCB-202	ND	0.791							
PCB-204	ND	0.828							
PCB-205	ND	0.789							
PCB-206	ND	1.26							
PCB-207	ND	0.673							
PCB-208	ND	0.641							
PCB-209	ND	1.02							
Total monoCB	ND	0.918							
Total diCB	ND	5.98							

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0007	Lab Sample: B5A0007-BLK1
Sample Size: 2.00 g	Date Extracted: 03-Jan-2015 6:49	Date Analyzed: 08-Jan-15 15:43 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	74.0	5 - 145		13C-PCB-157	104	10 - 145	
13C-PCB-3	78.8	5 - 145		13C-PCB-159	104	10 - 145	
13C-PCB-4	75.4	5 - 145		13C-PCB-167	103	10 - 145	
13C-PCB-11	85.7	5 - 145		13C-PCB-169	98.7	10 - 145	
13C-PCB-9	81.0	5 - 145		13C-PCB-170	102	10 - 145	
13C-PCB-19	75.0	5 - 145		13C-PCB-180	101	10 - 145	
13C-PCB-28	87.9	5 - 145		13C-PCB-188	101	10 - 145	
13C-PCB-32	84.1	5 - 145		13C-PCB-189	98.2	10 - 145	
13C-PCB-37	82.4	5 - 145		13C-PCB-194	96.8	10 - 145	
13C-PCB-47	97.4	5 - 145		13C-PCB-202	101	10 - 145	
13C-PCB-52	98.0	5 - 145		13C-PCB-206	106	10 - 145	
13C-PCB-54	99.8	5 - 145		13C-PCB-208	103	10 - 145	
13C-PCB-70	97.6	5 - 145		13C-PCB-209	120	10 - 145	
13C-PCB-77	97.5	10 - 145		CRS 13C-PCB-79	107	10 - 145	
13C-PCB-80	98.5	10 - 145		13C-PCB-178	116	10 - 145	
13C-PCB-81	97.8	10 - 145					
13C-PCB-95	96.2	10 - 145					
13C-PCB-97	97.9	10 - 145					
13C-PCB-101	98.8	10 - 145					
13C-PCB-104	99.5	10 - 145					
13C-PCB-105	92.6	10 - 145					
13C-PCB-114	92.1	10 - 145					
13C-PCB-118	95.0	10 - 145					
13C-PCB-123	94.4	10 - 145					
13C-PCB-126	93.4	10 - 145					
13C-PCB-127	95.3	10 - 145					
13C-PCB-138	104	10 - 145					
13C-PCB-141	103	10 - 145					
13C-PCB-153	103	10 - 145					
13C-PCB-155	105	10 - 145					
13C-PCB-156	100	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR**EPA Method 1668C**Matrix: Tissue
Sample Size: 2.00 gQC Batch: B5A0007
Date Extracted: 03-Jan-2015 6:49Lab Sample: B5A0007-BS1
Date Analyzed: 08-Jan-15 13:33 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	513	500	103	60 - 135	IS 13C-PCB-1	49.2	15 - 145
PCB-3	516	500	103	60 - 135	IS 13C-PCB-3	61.4	15 - 145
PCB-4/10	2150	2000	107	60 - 135	IS 13C-PCB-4	60.5	15 - 145
PCB-15	1020	1000	102	60 - 135	IS 13C-PCB-11	80.6	15 - 145
PCB-19	510	500	102	60 - 135	IS 13C-PCB-9	67.4	15 - 145
PCB-37	427	500	85.4	60 - 135	IS 13C-PCB-19	66.4	15 - 145
PCB-54	484	500	96.7	60 - 135	IS 13C-PCB-28	85.2	15 - 145
PCB-77	528	500	106	60 - 135	IS 13C-PCB-32	75.6	15 - 145
PCB-81	502	500	100	60 - 135	IS 13C-PCB-37	86.8	15 - 145
PCB-104	520	500	104	60 - 135	IS 13C-PCB-47	92.9	15 - 145
PCB-105	552	500	110	60 - 135	IS 13C-PCB-52	92.0	15 - 145
PCB-106/118	1080	1000	108	60 - 135	IS 13C-PCB-54	91.6	15 - 145
PCB-114	552	500	110	60 - 135	IS 13C-PCB-70	94.2	15 - 145
PCB-123	531	500	106	60 - 135	IS 13C-PCB-77	95.5	40 - 145
PCB-126	548	500	110	60 - 135	IS 13C-PCB-80	95.7	40 - 145
PCB-155	548	500	110	60 - 135	IS 13C-PCB-81	94.2	40 - 145
PCB-156	537	500	107	60 - 135	IS 13C-PCB-95	92.9	40 - 145
PCB-157	540	500	108	60 - 135	IS 13C-PCB-97	95.0	40 - 145
PCB-167	542	500	108	60 - 135	IS 13C-PCB-101	95.7	40 - 145
PCB-169	555	500	111	60 - 135	IS 13C-PCB-104	89.6	40 - 145
PCB-188	557	500	111	60 - 135	IS 13C-PCB-105	94.3	40 - 145
PCB-189	599	500	120	60 - 135	IS 13C-PCB-114	94.3	40 - 145
PCB-202	538	500	108	60 - 135	IS 13C-PCB-118	92.9	40 - 145
PCB-205	582	500	116	60 - 135	IS 13C-PCB-123	94.2	40 - 145
PCB-206	542	500	108	60 - 135	IS 13C-PCB-126	95.6	40 - 145
PCB-208	542	500	108	60 - 135	IS 13C-PCB-127	94.4	40 - 145
PCB-209	579	500	116	60 - 135	IS 13C-PCB-138	104	40 - 145
					IS 13C-PCB-141	104	40 - 145
					IS 13C-PCB-153	104	40 - 145
					IS 13C-PCB-155	97.6	40 - 145
					IS 13C-PCB-156	101	40 - 145
					IS 13C-PCB-157	104	40 - 145
					IS 13C-PCB-159	104	40 - 145
					IS 13C-PCB-167	103	40 - 145
					IS 13C-PCB-169	98.2	40 - 145
					IS 13C-PCB-170	96.0	40 - 145
					IS 13C-PCB-180	99.4	40 - 145
					IS 13C-PCB-188	102	40 - 145
					IS 13C-PCB-189	90.3	40 - 145
					IS 13C-PCB-194	97.4	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 2.00 g

QC Batch: B5A0007
Date Extracted: 03-Jan-2015 6:49

Lab Sample: B5A0007-BS1
Date Analyzed: 08-Jan-15 13:33 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	97.4	40 - 145
					IS 13C-PCB-206	92.3	40 - 145
					IS 13C-PCB-208	96.9	40 - 145
					IS 13C-PCB-209	113	40 - 145
					CRS 13C-PCB-79	109	40 - 145
					CRS 13C-PCB-178	117	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: IB-WO-SS-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-01	Date Received:	13-Nov-2014 8:49
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.84	Date Analyzed :	10-Jan-15 00:23	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.69				PCB-44	2300			
PCB-2	1.33			J	PCB-45	40.7			
PCB-3	ND	1.39			PCB-46	62.7			
PCB-4/10	24.0				PCB-47	884			
PCB-5/8	44.6				PCB-48/75	281			
PCB-6	12.7				PCB-50	3.60			
PCB-7/9	7.79			J	PCB-51	115			
PCB-11	46.0				PCB-52/69	6450			
PCB-12/13	ND	4.87			PCB-53	513			
PCB-14	ND	4.34			PCB-54	11.1			
PCB-15	78.6				PCB-55	70.6			
PCB-16/32	345				PCB-56/60	664			
PCB-17	69.2				PCB-57	48.9			
PCB-18	359				PCB-58	26.6			
PCB-19	36.6				PCB-61/70	3090			
PCB-20/21/33	91.9				PCB-62	ND	0.817		
PCB-22	60.0				PCB-63	349			
PCB-23	ND	0.648			PCB-65	ND	0.791		
PCB-24/27	50.1				PCB-66/76	4830			
PCB-25	130				PCB-67	165			
PCB-26	354				PCB-68	105			
PCB-28	2720				PCB-73	10.3			
PCB-29	1.57			J	PCB-74	3370			
PCB-30	ND	0.992			PCB-77	442			
PCB-31	895				PCB-78	ND	4.23		
PCB-34	12.3				PCB-79	602			
PCB-35	ND	0.686			PCB-80	ND	0.629		
PCB-36	1.83			J	PCB-81	36.3			
PCB-37	245				PCB-82	115			
PCB-38	39.7				PCB-83	ND	2.50		
PCB-39	ND		0.847		PCB-84/92	4140			
PCB-40	23.5				PCB-85/116	907			
PCB-41/64/71/72	1640				PCB-86	ND	3.72		
PCB-42/59	303				PCB-87/117/125	4860			
PCB-43/49	4870				PCB-88/91	1530			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-01	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.84	Date Analyzed :	10-Jan-15 00:23	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	19.4				PCB-136	1810			
PCB-90/101	26900			E	PCB-137	1150			
PCB-93	ND	2.94			PCB-138/163/164	35100			E
PCB-94	25.8				PCB-139/149	12700			
PCB-95/98/102	7750				PCB-140	117			
PCB-96	68.2				PCB-141	2750			
PCB-97	2820				PCB-144	1200			
PCB-99	16600			E	PCB-145	ND		2.76	
PCB-100	151				PCB-146/165	6180			
PCB-103	430				PCB-147	880			
PCB-104	3.83				PCB-148	68.2			
PCB-105	7750			E	PCB-150	91.0			
PCB-106/118	26500			E	PCB-151	6320			
PCB-107/109	2620				PCB-152	ND		11.6	
PCB-108/112	439				PCB-153	51500			E
PCB-110	9310			E	PCB-154	1120			
PCB-111/115	376				PCB-155	29.8			
PCB-113	21.1				PCB-156	2350			
PCB-114	445				PCB-157	602			
PCB-119	760				PCB-158/160	2590			
PCB-120	221				PCB-159	ND	0.719		
PCB-121	ND	1.74			PCB-166	99.5			
PCB-122	58.8				PCB-167	1520			
PCB-123	563				PCB-168	49.1			
PCB-124	526				PCB-169	1.88			J
PCB-126	86.0				PCB-170	5850			
PCB-127	ND	7.08			PCB-171	1640			
PCB-128/162	3110				PCB-172	986			
PCB-129	ND	0.913			PCB-173	27.8			
PCB-130	1950				PCB-174	1260			
PCB-131	ND	0.829			PCB-175	295			
PCB-132/161	1250				PCB-176	348			
PCB-133/142	647				PCB-177	3580			
PCB-134/143	591				PCB-178	2090			
PCB-135	1460				PCB-179	1920			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-01	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.84	Date Analyzed :	10-Jan-15 00:23	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	15900			E	Total octaCB	11300			
PCB-181	24.1				Total nonaCB	1370			
PCB-182/187	15300			E	DecaCB	370			
PCB-183	5400				Total PCB	361000			
PCB-184	21.9								
PCB-185	317								
PCB-186	ND	2.46							
PCB-188	62.9								
PCB-189	207								
PCB-190	1320								
PCB-191	235								
PCB-192	ND	2.89							
PCB-193	1020								
PCB-194	2080								
PCB-195	758								
PCB-196/203	3630								
PCB-197	137								
PCB-198	86.5								
PCB-199	2920								
PCB-200	67.2								
PCB-201	446								
PCB-202	1070								
PCB-204	3.88								
PCB-205	114								
PCB-206	948								
PCB-207	139								
PCB-208	284								
PCB-209	370								
Total monoCB	4.03								
Total diCB	214								
Total triCB	5410								
Total tetraCB	31300								
Total pentaCB	116000								
Total hexaCB	137000								
Total heptaCB	57800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-01
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.84	QC Batch:	B5A0007
			Date Analyzed : 10-Jan-15 00:23 Column: ZB-1 Analyst: DMS		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	65.1	5 -145		13C-PCB-170	85.1	10 -145	
13C-PCB-3	69.7	5 -145		13C-PCB-180	84.8	10 -145	
13C-PCB-4	69.0	5 -145		13C-PCB-188	84.2	10 -145	
13C-PCB-11	77.0	5 -145		13C-PCB-189	91.1	10 -145	
13C-PCB-9	74.4	5 -145		13C-PCB-194	87.8	10 -145	
13C-PCB-19	54.5	5 -145		13C-PCB-202	67.0	10 -145	
13C-PCB-28	66.4	5 -145		13C-PCB-206	75.6	10 -145	
13C-PCB-32	59.8	5 -145		13C-PCB-208	69.6	10 -145	
13C-PCB-37	76.6	5 -145		13C-PCB-209	78.8	10 -145	
13C-PCB-47	85.9	5 -145		CRS 13C-PCB-79	105	10 -145	
13C-PCB-52	89.3	5 -145		13C-PCB-178	81.6	10 -145	
13C-PCB-54	85.0	5 -145					
13C-PCB-70	91.6	5 -145					
13C-PCB-77	96.1	10 -145					
13C-PCB-80	93.7	10 -145					
13C-PCB-81	92.4	10 -145					
13C-PCB-95	82.5	10 -145					
13C-PCB-97	83.5	10 -145					
13C-PCB-101	96.8	10 -145					
13C-PCB-104	81.5	10 -145					
13C-PCB-105	114	10 -145					
13C-PCB-114	105	10 -145					
13C-PCB-118	103	10 -145					
13C-PCB-123	85.2	10 -145					
13C-PCB-126	107	10 -145					
13C-PCB-127	108	10 -145					
13C-PCB-138	106	10 -145					
13C-PCB-141	93.8	10 -145					
13C-PCB-153	113	10 -145					
13C-PCB-155	72.1	10 -145					
13C-PCB-156	96.0	10 -145					
13C-PCB-157	94.1	10 -145					
13C-PCB-159	95.7	10 -145					
13C-PCB-167	94.3	10 -145					
13C-PCB-169	96.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-02
Project:	120711-01.07 Task 1	Sample Size:	2.06 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.29	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 01:28
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		3.00		PCB-44	2340			
PCB-2	ND		1.51		PCB-45	40.0			
PCB-3	1.61			J	PCB-46	66.4			
PCB-4/10	24.8				PCB-47	950			
PCB-5/8	51.8				PCB-48/75	332			
PCB-6	15.5				PCB-50	ND		3.73	
PCB-7/9	9.53			J	PCB-51	120			
PCB-11	83.2				PCB-52/69	6120			
PCB-12/13	ND	4.96			PCB-53	514			
PCB-14	ND	4.44			PCB-54	12.2			
PCB-15	95.3				PCB-55	68.8			
PCB-16/32	375				PCB-56/60	726			
PCB-17	80.1				PCB-57	45.3			
PCB-18	395				PCB-58	23.4			
PCB-19	40.2				PCB-61/70	3870			
PCB-20/21/33	75.9				PCB-62	ND	0.941		
PCB-22	47.9				PCB-63	308			
PCB-23	ND	1.27			PCB-65	ND	0.911		
PCB-24/27	50.7				PCB-66/76	5250			
PCB-25	110				PCB-67	166			
PCB-26	308				PCB-68	94.7			
PCB-28	2530				PCB-73	13.6			
PCB-29	1.15			J	PCB-74	3070			
PCB-30	ND	0.933			PCB-77	388			
PCB-31	718				PCB-78	ND	0.878		
PCB-34	9.66				PCB-79	544			
PCB-35	ND	1.45			PCB-80	ND	0.696		
PCB-36	3.44				PCB-81	43.4			
PCB-37	256				PCB-82	114			
PCB-38	48.2				PCB-83	ND	2.39		
PCB-39	2.49				PCB-84/92	3860			
PCB-40	25.4				PCB-85/116	996			
PCB-41/64/71/72	1630				PCB-86	ND	3.55		
PCB-42/59	296				PCB-87/117/125	4230			
PCB-43/49	4840				PCB-88/91	1380			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-02
Project:	120711-01.07 Task 1	Sample Size:	2.06 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.29	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 01:28
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		9.03		PCB-136	1600			
PCB-90/101	22500			E	PCB-137	950			
PCB-93	ND	2.81			PCB-138/163/164	28700			E
PCB-94	29.2				PCB-139/149	12000			
PCB-95/98/102	7430				PCB-140	108			
PCB-96	64.4				PCB-141	2490			
PCB-97	2710				PCB-144	993			
PCB-99	14500			E	PCB-145	2.91			
PCB-100	156				PCB-146/165	4580			
PCB-103	355				PCB-147	727			
PCB-104	ND		3.92		PCB-148	53.4			
PCB-105	6820				PCB-150	76.6			
PCB-106/118	21400			E	PCB-151	5080			
PCB-107/109	2100				PCB-152	13.0			
PCB-108/112	421				PCB-153	37600			E
PCB-110	8490			E	PCB-154	896			
PCB-111/115	305				PCB-155	25.1			
PCB-113	ND	1.99			PCB-156	1760			
PCB-114	361				PCB-157	450			
PCB-119	713				PCB-158/160	2100			
PCB-120	172				PCB-159	ND	3.91		
PCB-121	ND	1.67			PCB-166	71.0			
PCB-122	56.7				PCB-167	1120			
PCB-123	433				PCB-168	38.5			
PCB-124	549				PCB-169	ND	4.21		
PCB-126	65.6				PCB-170	4250			
PCB-127	ND	3.95			PCB-171	1210			
PCB-128/162	2810				PCB-172	718			
PCB-129	78.0				PCB-173	25.0			
PCB-130	1520				PCB-174	1040			
PCB-131	ND	4.30			PCB-175	228			
PCB-132/161	1160				PCB-176	325			
PCB-133/142	531				PCB-177	2770			
PCB-134/143	534				PCB-178	1640			
PCB-135	1370				PCB-179	1700			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-02
Project:	120711-01.07 Task 1	Sample Size:	2.06 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.29	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 01:28
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	10800			E	Total octaCB	7730			
PCB-181	18.0				Total nonaCB	959			
PCB-182/187	11800				DecaCB	283			
PCB-183	3800				Total PCB	298000			
PCB-184	19.7								
PCB-185	261								
PCB-186	ND	0.754							
PCB-188	48.3								
PCB-189	131								
PCB-190	997								
PCB-191	160								
PCB-192	ND	0.862							
PCB-193	695								
PCB-194	1380								
PCB-195	532								
PCB-196/203	2290								
PCB-197	94.1								
PCB-198	68.1								
PCB-199	2080								
PCB-200	56.7								
PCB-201	337								
PCB-202	804								
PCB-204	ND	2.64							
PCB-205	90.3								
PCB-206	645								
PCB-207	95.1								
PCB-208	219								
PCB-209	283								
Total monoCB	1.61		6.11						
Total diCB	280								
Total triCB	5050								
Total tetraCB	31900								
Total pentaCB	100000								
Total hexaCB	109000								
Total heptaCB	42700								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-02
Project:	120711-01.07 Task 1	Sample Size:	2.06 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.29	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 01:28
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	79.4	5 -145		13C-PCB-170	78.8	10 -145	
13C-PCB-3	75.0	5 -145		13C-PCB-180	90.2	10 -145	
13C-PCB-4	74.8	5 -145		13C-PCB-188	84.0	10 -145	
13C-PCB-11	81.3	5 -145		13C-PCB-189	87.8	10 -145	
13C-PCB-9	78.7	5 -145		13C-PCB-194	84.1	10 -145	
13C-PCB-19	55.2	5 -145		13C-PCB-202	69.6	10 -145	
13C-PCB-28	93.3	5 -145		13C-PCB-206	73.7	10 -145	
13C-PCB-32	59.7	5 -145		13C-PCB-208	67.9	10 -145	
13C-PCB-37	83.4	5 -145		13C-PCB-209	84.0	10 -145	
13C-PCB-47	83.9	5 -145		CRS 13C-PCB-79	100	10 -145	
13C-PCB-52	83.7	5 -145		13C-PCB-178	80.4	10 -145	
13C-PCB-54	80.0	5 -145					
13C-PCB-70	90.1	5 -145					
13C-PCB-77	91.0	10 -145					
13C-PCB-80	92.5	10 -145					
13C-PCB-81	89.9	10 -145					
13C-PCB-95	84.8	10 -145					
13C-PCB-97	85.4	10 -145					
13C-PCB-101	95.9	10 -145					
13C-PCB-104	80.1	10 -145					
13C-PCB-105	108	10 -145					
13C-PCB-114	101	10 -145					
13C-PCB-118	103	10 -145					
13C-PCB-123	85.3	10 -145					
13C-PCB-126	107	10 -145					
13C-PCB-127	104	10 -145					
13C-PCB-138	105	10 -145					
13C-PCB-141	93.0	10 -145					
13C-PCB-153	113	10 -145					
13C-PCB-155	73.4	10 -145					
13C-PCB-156	96.8	10 -145					
13C-PCB-157	98.2	10 -145					
13C-PCB-159	96.7	10 -145					
13C-PCB-167	97.5	10 -145					
13C-PCB-169	90.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-03
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.03	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 02:33
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.29			J	PCB-44	2380			
PCB-2	1.22			J	PCB-45	31.8			
PCB-3	ND	1.32			PCB-46	51.2			
PCB-4/10	21.2				PCB-47	713			
PCB-5/8	42.6				PCB-48/75	345			
PCB-6	13.8				PCB-50	3.50			
PCB-7/9	8.78			J	PCB-51	114			
PCB-11	52.8				PCB-52/69	7760			
PCB-12/13	ND	3.87			PCB-53	516			
PCB-14	ND	3.46			PCB-54	8.98			
PCB-15	81.1				PCB-55	79.4			
PCB-16/32	336				PCB-56/60	676			
PCB-17	56.6				PCB-57	60.9			
PCB-18	329				PCB-58	26.3			
PCB-19	31.0				PCB-61/70	3600			
PCB-20/21/33	75.0				PCB-62	ND	1.37		
PCB-22	48.7				PCB-63	420			
PCB-23	ND	1.05			PCB-65	ND	1.86		
PCB-24/27	47.4				PCB-66/76	5200			
PCB-25	102				PCB-67	180			
PCB-26	284				PCB-68	135			
PCB-28	2640				PCB-73	9.19			
PCB-29	1.35			J	PCB-74	4190			
PCB-30	ND	0.813			PCB-77	540			
PCB-31	670				PCB-78	ND	1.57		
PCB-34	9.99				PCB-79	797			
PCB-35	ND	1.40			PCB-80	ND	1.22		
PCB-36	2.57				PCB-81	32.3			
PCB-37	268				PCB-82	ND	3.32		
PCB-38	38.2				PCB-83	6.27			
PCB-39	ND	1.41			PCB-84/92	4890			
PCB-40	19.2				PCB-85/116	676			
PCB-41/64/71/72	1720				PCB-86	ND	3.34		
PCB-42/59	289				PCB-87/117/125	5990			
PCB-43/49	5790				PCB-88/91	1610			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-WO-SS-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-03
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.03	QC Batch:	B5A0007
			Date Analyzed : 10-Jan-15 02:33 Column: ZB-1 Analyst: MAS		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	17.0				PCB-136	2280			
PCB-90/101	33100			E	PCB-137	1230			
PCB-93	ND	1.95			PCB-138/163/164	41400			E
PCB-94	23.1				PCB-139/149	15700			E
PCB-95/98/102	8510				PCB-140	138			
PCB-96	70.2				PCB-141	3660			
PCB-97	2700				PCB-144	1510			
PCB-99	20100			E	PCB-145	3.93			
PCB-100	185				PCB-146/165	6820			
PCB-103	553				PCB-147	1200			
PCB-104	ND		4.14		PCB-148	80.1			
PCB-105	9480			E	PCB-150	111			
PCB-106/118	30900			E	PCB-151	8650			E
PCB-107/109	3120				PCB-152	15.4			
PCB-108/112	457				PCB-153	55100			E
PCB-110	9570			E	PCB-154	1400			
PCB-111/115	477				PCB-155	32.3			
PCB-113	29.0				PCB-156	2540			
PCB-114	537				PCB-157	653			
PCB-119	940				PCB-158/160	3020			
PCB-120	242				PCB-159	ND	3.89		
PCB-121	ND	1.16			PCB-166	102			
PCB-122	47.5				PCB-167	1670			
PCB-123	578				PCB-168	45.4			
PCB-124	627				PCB-169	3.66			
PCB-126	89.5				PCB-170	6600			
PCB-127	ND	4.83			PCB-171	1930			
PCB-128/162	3770				PCB-172	1160			
PCB-129	58.8				PCB-173	35.0			
PCB-130	2500				PCB-174	1060			
PCB-131	ND	1.47			PCB-175	356			
PCB-132/161	1440				PCB-176	434			
PCB-133/142	764				PCB-177	4420			
PCB-134/143	753				PCB-178	2490			
PCB-135	1860				PCB-179	2490			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-03
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.03	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 02:33
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	17200			E	Total octaCB	12300			
PCB-181	23.7				Total nonaCB	1420			
PCB-182/187	17900			E	DecaCB	406			
PCB-183	5850				Total PCB	414000			
PCB-184	24.4								
PCB-185	415								
PCB-186	ND	1.13							
PCB-188	71.7								
PCB-189	208								
PCB-190	1490								
PCB-191	252								
PCB-192	ND	1.31							
PCB-193	1050								
PCB-194	2110								
PCB-195	772								
PCB-196/203	3810								
PCB-197	148								
PCB-198	105								
PCB-199	3490								
PCB-200	70.4								
PCB-201	508								
PCB-202	1180								
PCB-204	3.62								
PCB-205	125								
PCB-206	941								
PCB-207	142								
PCB-208	341								
PCB-209	406								
Total monoCB	3.50								
Total diCB	220								
Total triCB	4940								
Total tetraCB	35700								
Total pentaCB	136000								
Total hexaCB	158000								
Total heptaCB	65500								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-SS-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-03
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.03	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 02:33
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	55.7	5 -145		13C-PCB-170	73.6	10 -145	
13C-PCB-3	56.5	5 -145		13C-PCB-180	80.2	10 -145	
13C-PCB-4	56.7	5 -145		13C-PCB-188	78.6	10 -145	
13C-PCB-11	65.9	5 -145		13C-PCB-189	85.2	10 -145	
13C-PCB-9	62.2	5 -145		13C-PCB-194	80.6	10 -145	
13C-PCB-19	43.4	5 -145		13C-PCB-202	64.5	10 -145	
13C-PCB-28	77.1	5 -145		13C-PCB-206	71.0	10 -145	
13C-PCB-32	49.6	5 -145		13C-PCB-208	63.3	10 -145	
13C-PCB-37	75.4	5 -145		13C-PCB-209	76.8	10 -145	
13C-PCB-47	75.9	5 -145		CRS 13C-PCB-79	93.8	10 -145	
13C-PCB-52	75.5	5 -145		13C-PCB-178	75.3	10 -145	
13C-PCB-54	72.0	5 -145					
13C-PCB-70	86.4	5 -145					
13C-PCB-77	88.8	10 -145					
13C-PCB-80	87.0	10 -145					
13C-PCB-81	83.4	10 -145					
13C-PCB-95	78.9	10 -145					
13C-PCB-97	78.9	10 -145					
13C-PCB-101	89.6	10 -145					
13C-PCB-104	70.4	10 -145					
13C-PCB-105	102	10 -145					
13C-PCB-114	93.5	10 -145					
13C-PCB-118	101	10 -145					
13C-PCB-123	80.9	10 -145					
13C-PCB-126	91.1	10 -145					
13C-PCB-127	97.7	10 -145					
13C-PCB-138	98.9	10 -145					
13C-PCB-141	85.1	10 -145					
13C-PCB-153	105	10 -145					
13C-PCB-155	66.5	10 -145					
13C-PCB-156	89.0	10 -145					
13C-PCB-157	89.4	10 -145					
13C-PCB-159	88.8	10 -145					
13C-PCB-167	86.9	10 -145					
13C-PCB-169	83.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-04	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.13 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.35	Date Analyzed :	10-Jan-15 03:37	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.06			J	PCB-44	1150			
PCB-2	ND	1.38			PCB-45	163			
PCB-3	ND	1.34			PCB-46	32.4			
PCB-4/10	28.7				PCB-47	5870			
PCB-5/8	35.0				PCB-48/75	1280			
PCB-6	40.6				PCB-50	28.3			
PCB-7/9	12.5				PCB-51	474			
PCB-11	67.6				PCB-52/69	11800			
PCB-12/13	ND	3.82			PCB-53	748			
PCB-14	ND	3.41			PCB-54	44.3			
PCB-15	80.7				PCB-55	143			
PCB-16/32	1320				PCB-56/60	3010			
PCB-17	330				PCB-57	59.5			
PCB-18	1030				PCB-58	38.1			
PCB-19	50.5				PCB-61/70	8870			
PCB-20/21/33	282				PCB-62	ND	1.63		
PCB-22	452				PCB-63	420			
PCB-23	ND	0.712			PCB-65	ND	1.58		
PCB-24/27	116				PCB-66/76	12400			
PCB-25	351				PCB-67	210			
PCB-26	537				PCB-68	151			
PCB-28	4360				PCB-73	9.67			
PCB-29	8.47				PCB-74	5410			
PCB-30	1.13			J	PCB-77	628			
PCB-31	1560				PCB-78	ND	1.58		
PCB-34	19.4				PCB-79	1100			
PCB-35	ND	1.18			PCB-80	ND	1.35		
PCB-36	2.84				PCB-81	42.1			
PCB-37	330				PCB-82	1120			
PCB-38	315				PCB-83	ND	1.78		
PCB-39	2.67				PCB-84/92	4980			
PCB-40	223				PCB-85/116	8750			
PCB-41/64/71/72	3950				PCB-86	ND	2.65		
PCB-42/59	892				PCB-87/117/125	6820			
PCB-43/49	8210				PCB-88/91	2480			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-04
Project:	120711-01.07 Task 1	Sample Size:	2.13 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.35	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 03:37
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	35.4				PCB-136	1650			
PCB-90/101	40800			E	PCB-137	2140			
PCB-93	ND	2.07			PCB-138/163/164	50800			E
PCB-94	11.5				PCB-139/149	16500			E
PCB-95/98/102	6600				PCB-140	239			
PCB-96	68.2				PCB-141	4620			
PCB-97	6950				PCB-144	1510			
PCB-99	28200			E	PCB-145	5.72			
PCB-100	375				PCB-146/165	6970			
PCB-103	475				PCB-147	1190			
PCB-104	8.40				PCB-148	86.6			
PCB-105	13200			E	PCB-150	81.3			
PCB-106/118	44300			E	PCB-151	7170			E
PCB-107/109	3520				PCB-152	16.6			
PCB-108/112	474				PCB-153	64000			E
PCB-110	23200			E	PCB-154	1480			
PCB-111/115	676				PCB-155	29.5			
PCB-113	ND	1.45			PCB-156	4310			
PCB-114	743				PCB-157	1040			
PCB-119	1470				PCB-158/160	4340			
PCB-120	175				PCB-159	ND	1.17		
PCB-121	ND	1.23			PCB-166	184			
PCB-122	288				PCB-167	2320			
PCB-123	834				PCB-168	68.1			
PCB-124	1190				PCB-169	5.73			
PCB-126	154				PCB-170	10000			E
PCB-127	ND	4.75			PCB-171	2600			
PCB-128/162	6300				PCB-172	1440			
PCB-129	416				PCB-173	24.5			
PCB-130	2630				PCB-174	1410			
PCB-131	ND	1.27			PCB-175	448			
PCB-132/161	1680				PCB-176	338			
PCB-133/142	781				PCB-177	4440			
PCB-134/143	667				PCB-178	2660			
PCB-135	1510				PCB-179	2190			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-04
Project:	120711-01.07 Task 1	Sample Size:	2.13 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.35	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 03:37
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	24100			E	Total octaCB	19500			
PCB-181	51.9				Total nonaCB	2750			
PCB-182/187	20400			E	DecaCB	830			
PCB-183	7830			E	Total PCB	567000			
PCB-184	25.4								
PCB-185	447								
PCB-186	ND	1.02							
PCB-188	73.8								
PCB-189	353								
PCB-190	2190								
PCB-191	342								
PCB-192	ND	1.10							
PCB-193	1250								
PCB-194	4150								
PCB-195	1390								
PCB-196/203	6190								
PCB-197	229								
PCB-198	133								
PCB-199	4880								
PCB-200	87.7								
PCB-201	754								
PCB-202	1520								
PCB-204	4.79								
PCB-205	211								
PCB-206	1930								
PCB-207	262								
PCB-208	556								
PCB-209	830								
Total monoCB	2.06								
Total diCB	265								
Total triCB	11100								
Total tetraCB	67300								
Total pentaCB	198000								
Total hexaCB	185000								
Total heptaCB	82600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-04
Project:	120711-01.07 Task 1	Sample Size:	2.13 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	5.35	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 03:37
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	67.0	5 -145		13C-PCB-170	77.1	10 -145	
13C-PCB-3	69.7	5 -145		13C-PCB-180	89.4	10 -145	
13C-PCB-4	70.0	5 -145		13C-PCB-188	82.0	10 -145	
13C-PCB-11	83.6	5 -145		13C-PCB-189	80.2	10 -145	
13C-PCB-9	79.2	5 -145		13C-PCB-194	88.5	10 -145	
13C-PCB-19	55.7	5 -145		13C-PCB-202	67.2	10 -145	
13C-PCB-28	74.1	5 -145		13C-PCB-206	76.4	10 -145	
13C-PCB-32	59.7	5 -145		13C-PCB-208	68.7	10 -145	
13C-PCB-37	79.4	5 -145		13C-PCB-209	87.4	10 -145	
13C-PCB-47	86.8	5 -145		CRS 13C-PCB-79	100	10 -145	
13C-PCB-52	90.0	5 -145		13C-PCB-178	79.1	10 -145	
13C-PCB-54	84.0	5 -145					
13C-PCB-70	92.8	5 -145					
13C-PCB-77	88.7	10 -145					
13C-PCB-80	89.5	10 -145					
13C-PCB-81	87.9	10 -145					
13C-PCB-95	86.4	10 -145					
13C-PCB-97	86.2	10 -145					
13C-PCB-101	99.9	10 -145					
13C-PCB-104	83.0	10 -145					
13C-PCB-105	108	10 -145					
13C-PCB-114	101	10 -145					
13C-PCB-118	111	10 -145					
13C-PCB-123	84.6	10 -145					
13C-PCB-126	97.4	10 -145					
13C-PCB-127	103	10 -145					
13C-PCB-138	108	10 -145					
13C-PCB-141	91.2	10 -145					
13C-PCB-153	115	10 -145					
13C-PCB-155	72.3	10 -145					
13C-PCB-156	94.6	10 -145					
13C-PCB-157	95.7	10 -145					
13C-PCB-159	92.5	10 -145					
13C-PCB-167	92.9	10 -145					
13C-PCB-169	86.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-05
Project:	120711-01.07 Task 1	Sample Size:	2.04 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.36	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 04:42
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.32			J	PCB-44	962			
PCB-2	0.773			J	PCB-45	60.1			
PCB-3	ND	0.880			PCB-46	25.4			
PCB-4/10	16.5				PCB-47	1300			
PCB-5/8	20.6				PCB-48/75	518			
PCB-6	13.5				PCB-50	ND		2.66	
PCB-7/9	9.10			J	PCB-51	119			
PCB-11	72.1				PCB-52/69	8600			
PCB-12/13	ND	3.98			PCB-53	239			
PCB-14	ND	3.55			PCB-54	14.9			
PCB-15	71.2				PCB-55	97.8			
PCB-16/32	390				PCB-56/60	1280			
PCB-17	49.9				PCB-57	65.2			
PCB-18	382				PCB-58	37.0			
PCB-19	20.3				PCB-61/70	5910			
PCB-20/21/33	83.5				PCB-62	ND	0.905		
PCB-22	104				PCB-63	580			
PCB-23	ND	2.37			PCB-65	ND	1.84		
PCB-24/27	37.4				PCB-66/76	8210			
PCB-25	206				PCB-67	186			
PCB-26	351				PCB-68	162			
PCB-28	3610				PCB-73	ND	13.3		
PCB-29	4.62				PCB-74	5910			
PCB-30	0.610			J	PCB-77	609			
PCB-31	1450				PCB-78	ND	2.03		
PCB-34	10.2				PCB-79	1180			
PCB-35	ND	1.79			PCB-80	ND	1.59		
PCB-36	3.83				PCB-81	50.2			
PCB-37	269				PCB-82	146			
PCB-38	67.9				PCB-83	7.13			
PCB-39	2.45				PCB-84/92	4400			
PCB-40	47.8				PCB-85/116	1240			
PCB-41/64/71/72	2400				PCB-86	ND	9.12		
PCB-42/59	327				PCB-87/117/125	6760			
PCB-43/49	6190				PCB-88/91	1840			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-05	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.04 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.36	Date Analyzed :	10-Jan-15 04:42	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.0				PCB-136	1630			
PCB-90/101	41300			E	PCB-137	2410			
PCB-93	ND	2.08			PCB-138/163/164	75300			E
PCB-94	4.94				PCB-139/149	14500			
PCB-95/98/102	4760				PCB-140	209			
PCB-96	58.0				PCB-141	5290			
PCB-97	4280				PCB-144	1940			
PCB-99	30800			E	PCB-145	3.83			
PCB-100	304				PCB-146/165	11000			
PCB-103	503				PCB-147	1510			
PCB-104	4.70				PCB-148	142			
PCB-105	13600			E	PCB-150	88.2			
PCB-106/118	51800			E	PCB-151	12800			E
PCB-107/109	4930				PCB-152	14.4			
PCB-108/112	300				PCB-153	114000			E
PCB-110	8950			E	PCB-154	2420			
PCB-111/115	844				PCB-155	50.4			
PCB-113	ND	3.90			PCB-156	5800			
PCB-114	826				PCB-157	1320			
PCB-119	1290				PCB-158/160	5780			
PCB-120	302				PCB-159	ND	4.29		
PCB-121	ND	1.24			PCB-166	224			
PCB-122	85.7				PCB-167	3320			
PCB-123	972				PCB-168	86.7			
PCB-124	1150				PCB-169	9.65			
PCB-126	175				PCB-170	17500			E
PCB-127	ND	3.98			PCB-171	4050			
PCB-128/162	5990				PCB-172	2250			
PCB-129	133				PCB-173	17.3			
PCB-130	2970				PCB-174	1140			
PCB-131	ND	1.85			PCB-175	840			
PCB-132/161	773				PCB-176	333			
PCB-133/142	978				PCB-177	5750			
PCB-134/143	479				PCB-178	4780			
PCB-135	1360				PCB-179	2980			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-05
Project:	120711-01.07 Task 1	Sample Size:	2.04 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.36	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 04:42
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	48400			E	Total octaCB	37700			
PCB-181	65.8				Total nonaCB	4550			
PCB-182/187	42200			E	DecaCB	1400			
PCB-183	16600			E	Total PCB	706000			
PCB-184	44.0								
PCB-185	522								
PCB-186	ND	0.959							
PCB-188	134								
PCB-189	617								
PCB-190	4050								
PCB-191	618								
PCB-192	ND	3.62							
PCB-193	2270								
PCB-194	7820			E					
PCB-195	2660								
PCB-196/203	13400								
PCB-197	461								
PCB-198	238								
PCB-199	8490			E					
PCB-200	89.1								
PCB-201	1350								
PCB-202	2730								
PCB-204	6.77								
PCB-205	404								
PCB-206	3250								
PCB-207	469								
PCB-208	828								
PCB-209	1400								
Total monoCB	2.09								
Total diCB	203								
Total triCB	7040								
Total tetraCB	45100								
Total pentaCB	182000								
Total hexaCB	273000								
Total heptaCB	155000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-05
Project:	120711-01.07 Task 1	Sample Size:	2.04 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.36	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 04:42
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	66.5	5 -145		13C-PCB-170	83.3	10 -145	
13C-PCB-3	67.7	5 -145		13C-PCB-180	98.3	10 -145	
13C-PCB-4	69.8	5 -145		13C-PCB-188	85.4	10 -145	
13C-PCB-11	83.4	5 -145		13C-PCB-189	88.3	10 -145	
13C-PCB-9	79.0	5 -145		13C-PCB-194	86.4	10 -145	
13C-PCB-19	55.1	5 -145		13C-PCB-202	69.2	10 -145	
13C-PCB-28	67.3	5 -145		13C-PCB-206	76.1	10 -145	
13C-PCB-32	58.6	5 -145		13C-PCB-208	66.1	10 -145	
13C-PCB-37	79.3	5 -145		13C-PCB-209	83.2	10 -145	
13C-PCB-47	87.3	5 -145		CRS 13C-PCB-79	102	10 -145	
13C-PCB-52	90.1	5 -145		13C-PCB-178	83.7	10 -145	
13C-PCB-54	89.0	5 -145					
13C-PCB-70	95.8	5 -145					
13C-PCB-77	91.2	10 -145					
13C-PCB-80	94.5	10 -145					
13C-PCB-81	89.1	10 -145					
13C-PCB-95	83.9	10 -145					
13C-PCB-97	82.7	10 -145					
13C-PCB-101	97.4	10 -145					
13C-PCB-104	83.4	10 -145					
13C-PCB-105	110	10 -145					
13C-PCB-114	104	10 -145					
13C-PCB-118	108	10 -145					
13C-PCB-123	81.6	10 -145					
13C-PCB-126	97.8	10 -145					
13C-PCB-127	104	10 -145					
13C-PCB-138	114	10 -145					
13C-PCB-141	92.7	10 -145					
13C-PCB-153	125	10 -145					
13C-PCB-155	71.9	10 -145					
13C-PCB-156	98.0	10 -145					
13C-PCB-157	97.4	10 -145					
13C-PCB-159	93.6	10 -145					
13C-PCB-167	95.1	10 -145					
13C-PCB-169	86.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-06
Project:	120711-01.07 Task 1	Sample Size:	2.10 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.62	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 05:47
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.92			J	PCB-44	972			
PCB-2	ND	1.77			PCB-45	61.1			
PCB-3	ND	1.72			PCB-46	24.9			
PCB-4/10	14.7				PCB-47	1600			
PCB-5/8	28.9				PCB-48/75	495			
PCB-6	15.0				PCB-50	3.81			
PCB-7/9	9.68				PCB-51	118			
PCB-11	68.5				PCB-52/69	8390			
PCB-12/13	ND	3.79			PCB-53	259			
PCB-14	ND	3.39			PCB-54	15.2			
PCB-15	70.1				PCB-55	99.0			
PCB-16/32	366				PCB-56/60	1460			
PCB-17	56.6				PCB-57	64.3			
PCB-18	365				PCB-58	35.4			
PCB-19	21.0				PCB-61/70	6390			
PCB-20/21/33	79.9				PCB-62	ND	1.47		
PCB-22	96.1				PCB-63	552			
PCB-23	ND	0.751			PCB-65	ND	1.43		
PCB-24/27	38.9				PCB-66/76	9400			
PCB-25	155				PCB-67	151			
PCB-26	272				PCB-68	176			
PCB-28	3380				PCB-68	176			
PCB-29	4.24				PCB-73	ND	1.39		
PCB-30	ND	0.923			PCB-74	5820			
PCB-31	1050				PCB-77	645			
PCB-34	8.02				PCB-78	ND	3.75		
PCB-35	ND	1.09			PCB-79	1240			
PCB-36	2.56				PCB-80	ND	2.94		
PCB-37	243				PCB-81	49.2			
PCB-38	83.4				PCB-82	148			
PCB-39	2.34			J	PCB-83	6.43			
PCB-40	54.7				PCB-84/92	3920			
PCB-41/64/71/72	2130				PCB-85/116	1730			
PCB-42/59	323				PCB-86	ND	3.27		
PCB-43/49	5600				PCB-87/117/125	6290			
					PCB-88/91	1930			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-06
Project:	120711-01.07 Task 1	Sample Size:	2.10 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.62	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 05:47
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.8				PCB-136	1310			
PCB-90/101	38000			E	PCB-137	2140			
PCB-93	ND	2.29			PCB-138/163/164	64600			E
PCB-94	ND		6.09		PCB-139/149	11900			
PCB-95/98/102	4470				PCB-140	213			
PCB-96	51.1				PCB-141	3970			
PCB-97	4080				PCB-144	1610			
PCB-99	32800			E	PCB-145	3.03			
PCB-100	340				PCB-146/165	9120			
PCB-103	456				PCB-147	1370			
PCB-104	4.69				PCB-148	129			
PCB-105	14000			E	PCB-150	70.0			
PCB-106/118	49400			E	PCB-151	9020			E
PCB-107/109	4550				PCB-152	12.3			
PCB-108/112	299				PCB-153	87900			E
PCB-110	8240			E	PCB-154	2210			
PCB-111/115	824				PCB-155	40.2			
PCB-113	ND	1.72			PCB-156	5320			
PCB-114	776				PCB-157	1180			
PCB-119	1390				PCB-158/160	4830			
PCB-120	277				PCB-159	ND	2.06		
PCB-121	ND	1.36			PCB-166	190			
PCB-122	92.4				PCB-167	3000			
PCB-123	916				PCB-168	74.8			
PCB-124	1100				PCB-169	7.86			
PCB-126	163				PCB-170	13800			E
PCB-127	ND	1.37			PCB-171	3300			
PCB-128/162	6230				PCB-172	1740			
PCB-129	132				PCB-173	14.8			
PCB-130	2840				PCB-174	907			
PCB-131	ND	2.05			PCB-175	637			
PCB-132/161	855				PCB-176	274			
PCB-133/142	805				PCB-177	4220			
PCB-134/143	383				PCB-178	3330			
PCB-135	1080				PCB-179	2100			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-06	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.10 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.62	Date Analyzed :	10-Jan-15 05:47	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	36100			E	Total octaCB	27500			
PCB-181	63.4				Total nonaCB	3770			
PCB-182/187	30700			E	DecaCB	1120			
PCB-183	12400			E	Total PCB	600000			
PCB-184	38.0								
PCB-185	391								
PCB-186	ND	0.878							
PCB-188	112								
PCB-189	518								
PCB-190	3050								
PCB-191	465								
PCB-192	ND	0.874							
PCB-193	1660								
PCB-194	5990								
PCB-195	2020								
PCB-196/203	9460								
PCB-197	340								
PCB-198	160								
PCB-199	6190								
PCB-200	75.6								
PCB-201	1010								
PCB-202	1990								
PCB-204	5.43								
PCB-205	300								
PCB-206	2740								
PCB-207	361								
PCB-208	664								
PCB-209	1120								
Total monoCB	1.92								
Total diCB	207								
Total triCB	6220								
Total tetraCB	46100								
Total pentaCB	176000								
Total hexaCB	223000								
Total heptaCB	116000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-WO-WS-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-06
Project:	120711-01.07 Task 1	Sample Size:	2.10 g	Date Received:	13-Nov-2014 8:49
Date Collected:	12-Oct-2014 0:00	%Lipids:	4.62	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 05:47
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	64.3	5 -145		13C-PCB-170	84.9	10 -145	
13C-PCB-3	65.9	5 -145		13C-PCB-180	103	10 -145	
13C-PCB-4	68.3	5 -145		13C-PCB-188	85.6	10 -145	
13C-PCB-11	84.5	5 -145		13C-PCB-189	91.6	10 -145	
13C-PCB-9	78.1	5 -145		13C-PCB-194	88.5	10 -145	
13C-PCB-19	56.2	5 -145		13C-PCB-202	72.9	10 -145	
13C-PCB-28	81.1	5 -145		13C-PCB-206	80.2	10 -145	
13C-PCB-32	60.9	5 -145		13C-PCB-208	71.9	10 -145	
13C-PCB-37	82.2	5 -145		13C-PCB-209	88.3	10 -145	
13C-PCB-47	82.2	5 -145		CRS 13C-PCB-79	99.3	10 -145	
13C-PCB-52	87.9	5 -145		13C-PCB-178	79.9	10 -145	
13C-PCB-54	83.0	5 -145					
13C-PCB-70	93.0	5 -145					
13C-PCB-77	89.6	10 -145					
13C-PCB-80	92.8	10 -145					
13C-PCB-81	85.7	10 -145					
13C-PCB-95	84.7	10 -145					
13C-PCB-97	86.2	10 -145					
13C-PCB-101	103	10 -145					
13C-PCB-104	85.3	10 -145					
13C-PCB-105	114	10 -145					
13C-PCB-114	105	10 -145					
13C-PCB-118	121	10 -145					
13C-PCB-123	89.4	10 -145					
13C-PCB-126	105	10 -145					
13C-PCB-127	109	10 -145					
13C-PCB-138	117	10 -145					
13C-PCB-141	96.0	10 -145					
13C-PCB-153	128	10 -145					
13C-PCB-155	76.4	10 -145					
13C-PCB-156	102	10 -145					
13C-PCB-157	100	10 -145					
13C-PCB-159	97.5	10 -145					
13C-PCB-167	101	10 -145					
13C-PCB-169	91.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-07
Project:	120711-01.07 Task 1	Sample Size:	2.17 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.68	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 06:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.28			J	PCB-44	3160			
PCB-2	1.98			J	PCB-45	126			
PCB-3	ND		1.12		PCB-46	88.0			
PCB-4/10	27.8				PCB-47	3780			
PCB-5/8	28.4				PCB-48/75	495			
PCB-6	15.5				PCB-50	9.47			
PCB-7/9	12.4				PCB-51	2430			
PCB-11	85.9				PCB-52/69	22900			E
PCB-12/13	ND	3.13			PCB-53	1520			
PCB-14	ND	2.79			PCB-54	377			
PCB-15	97.0				PCB-55	211			
PCB-16/32	828				PCB-56/60	2800			
PCB-17	103				PCB-57	194			
PCB-18	818				PCB-58	70.8			
PCB-19	62.4				PCB-61/70	7080			
PCB-20/21/33	262				PCB-62	ND	2.72		
PCB-22	450				PCB-63	503			
PCB-23	ND	0.341			PCB-65	ND	2.63		
PCB-24/27	105				PCB-66/76	9250			
PCB-25	219				PCB-67	314			
PCB-26	848				PCB-68	142			
PCB-28	5110				PCB-73	53.7			
PCB-29	6.72				PCB-74	6180			
PCB-30	ND	0.986			PCB-77	1050			
PCB-31	1930				PCB-78	ND	7.52		
PCB-34	24.2				PCB-79	1030			
PCB-35	1.30			J	PCB-80	ND	6.14		
PCB-36	2.22			J	PCB-81	37.5			
PCB-37	572				PCB-82	224			
PCB-38	213				PCB-83	8.62			
PCB-39	2.34				PCB-84/92	4920			
PCB-40	130				PCB-85/116	1470			
PCB-41/64/71/72	4880				PCB-86	ND	3.39		
PCB-42/59	697				PCB-87/117/125	5420			
PCB-43/49	12800				PCB-88/91	4360			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-07
Project:	120711-01.07 Task 1	Sample Size:	2.17 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.68	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 06:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.1				PCB-136	2030			
PCB-90/101	35900			E	PCB-137	1430			
PCB-93	ND	3.00			PCB-138/163/164	39600			E
PCB-94	49.3				PCB-139/149	18300			E
PCB-95/98/102	9380				PCB-140	150			
PCB-96	347				PCB-141	3840			
PCB-97	3870				PCB-144	1510			
PCB-99	26700			E	PCB-145	2.15			J
PCB-100	3560				PCB-146/165	7750			
PCB-103	2730				PCB-147	4880			
PCB-104	289				PCB-148	503			
PCB-105	8610			E	PCB-150	543			
PCB-106/118	26100			E	PCB-151	10400			E
PCB-107/109	2470				PCB-152	153			
PCB-108/112	329				PCB-153	69000			E
PCB-110	13400			E	PCB-154	8780			E
PCB-111/115	559				PCB-155	196			
PCB-113	27.7				PCB-156	2940			
PCB-114	474				PCB-157	514			
PCB-119	2790				PCB-158/160	3720			
PCB-120	209				PCB-159	ND	8.09		
PCB-121	ND	1.78			PCB-166	79.1			
PCB-122	115				PCB-167	1620			
PCB-123	447				PCB-168	193			
PCB-124	606				PCB-169	6.68			
PCB-126	173				PCB-170	9100			E
PCB-127	ND	5.04			PCB-171	2550			
PCB-128/162	3000				PCB-172	1420			
PCB-129	168				PCB-173	21.3			
PCB-130	1380				PCB-174	1430			
PCB-131	ND	4.21			PCB-175	504			
PCB-132/161	1320				PCB-176	304			
PCB-133/142	809				PCB-177	3640			
PCB-134/143	473				PCB-178	3370			
PCB-135	1060				PCB-179	2470			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-07
Project:	120711-01.07 Task 1	Sample Size:	2.17 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.68	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 06:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	27300			E	Total octaCB	20500			
PCB-181	67.6				Total nonaCB	1570			
PCB-182/187	29200			E	DecaCB	203			
PCB-183	8740			E	Total PCB	554000			
PCB-184	42.1								
PCB-185	499								
PCB-186	ND	1.19							
PCB-188	389								
PCB-189	326								
PCB-190	2370								
PCB-191	441								
PCB-192	ND	1.85							
PCB-193	1700								
PCB-194	4310								
PCB-195	1620								
PCB-196/203	7210								
PCB-197	250								
PCB-198	139								
PCB-199	4470								
PCB-200	79.9								
PCB-201	736								
PCB-202	1440								
PCB-204	4.26								
PCB-205	249								
PCB-206	1170								
PCB-207	184								
PCB-208	221								
PCB-209	203								
Total monoCB	4.26		5.37						
Total diCB	267								
Total triCB	11600								
Total tetraCB	82400								
Total pentaCB	156000								
Total hexaCB	186000								
Total heptaCB	95900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-07
Project:	120711-01.07 Task 1	Sample Size:	2.17 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.68	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 06:52
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	78.1	5 -145		13C-PCB-170	81.8	10 -145	
13C-PCB-3	77.8	5 -145		13C-PCB-180	91.2	10 -145	
13C-PCB-4	77.0	5 -145		13C-PCB-188	83.3	10 -145	
13C-PCB-11	83.8	5 -145		13C-PCB-189	85.4	10 -145	
13C-PCB-9	84.4	5 -145		13C-PCB-194	82.1	10 -145	
13C-PCB-19	55.3	5 -145		13C-PCB-202	70.2	10 -145	
13C-PCB-28	76.1	5 -145		13C-PCB-206	72.8	10 -145	
13C-PCB-32	59.0	5 -145		13C-PCB-208	67.1	10 -145	
13C-PCB-37	74.3	5 -145		13C-PCB-209	85.2	10 -145	
13C-PCB-47	77.9	5 -145		CRS 13C-PCB-79	93.0	10 -145	
13C-PCB-52	88.9	5 -145		13C-PCB-178	79.3	10 -145	
13C-PCB-54	78.8	5 -145					
13C-PCB-70	85.1	5 -145					
13C-PCB-77	85.4	10 -145					
13C-PCB-80	83.6	10 -145					
13C-PCB-81	81.6	10 -145					
13C-PCB-95	77.7	10 -145					
13C-PCB-97	81.5	10 -145					
13C-PCB-101	94.8	10 -145					
13C-PCB-104	78.9	10 -145					
13C-PCB-105	100	10 -145					
13C-PCB-114	99.5	10 -145					
13C-PCB-118	97.0	10 -145					
13C-PCB-123	81.4	10 -145					
13C-PCB-126	94.2	10 -145					
13C-PCB-127	98.7	10 -145					
13C-PCB-138	102	10 -145					
13C-PCB-141	90.0	10 -145					
13C-PCB-153	111	10 -145					
13C-PCB-155	70.7	10 -145					
13C-PCB-156	94.0	10 -145					
13C-PCB-157	95.6	10 -145					
13C-PCB-159	95.3	10 -145					
13C-PCB-167	91.7	10 -145					
13C-PCB-169	88.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-08
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	4.10	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 07:57
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.61			J	PCB-44	2940			
PCB-2	1.53			J	PCB-45	91.5			
PCB-3	0.857			J	PCB-46	53.1			
PCB-4/10	19.1				PCB-47	3510			
PCB-5/8	20.3				PCB-48/75	824			
PCB-6	10.7				PCB-50	ND		6.78	
PCB-7/9	9.91				PCB-51	1870			
PCB-11	63.1				PCB-52/69	30400			E
PCB-12/13	ND	3.28			PCB-53	1080			
PCB-14	ND	2.93			PCB-54	304			
PCB-15	78.0				PCB-55	194			
PCB-16/32	626				PCB-56/60	4370			
PCB-17	62.8				PCB-57	287			
PCB-18	595				PCB-58	ND	1.82		
PCB-19	36.5				PCB-61/70	6970			
PCB-20/21/33	129				PCB-62	ND	2.22		
PCB-22	302				PCB-63	1060			
PCB-23	ND	0.287			PCB-65	3.62			
PCB-24/27	58.5				PCB-66/76	16200			E
PCB-25	217				PCB-67	492			
PCB-26	848				PCB-68	254			
PCB-28	6900				PCB-73	35.8			
PCB-29	6.02				PCB-74	13000			E
PCB-30	ND		0.970		PCB-77	1350			
PCB-31	1650				PCB-78	ND	1.89		
PCB-34	19.2				PCB-79	2080			
PCB-35	ND	0.309			PCB-80	ND	1.54		
PCB-36	2.36			J	PCB-81	55.7			
PCB-37	573				PCB-82	170			
PCB-38	189				PCB-83	14.9			
PCB-39	ND	0.300			PCB-84/92	5150			
PCB-40	86.4				PCB-85/116	1220			
PCB-41/64/71/72	5410				PCB-86	ND	4.32		
PCB-42/59	723				PCB-87/117/125	8850			
PCB-43/49	18200			E	PCB-88/91	3710			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-08
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	4.10	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 07:57
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.3				PCB-136	1610			
PCB-90/101	58600			E	PCB-137	2970			
PCB-93	ND	4.10			PCB-138/163/164	76000			E
PCB-94	ND	4.01			PCB-139/149	11900			
PCB-95/98/102	7250				PCB-140	232			
PCB-96	330				PCB-141	4400			
PCB-97	4500				PCB-144	2190			
PCB-99	50700			E	PCB-145	ND	1.43		
PCB-100	4480				PCB-146/165	13200			
PCB-103	3510				PCB-147	5280			
PCB-104	268				PCB-148	952			
PCB-105	18100			E	PCB-150	343			
PCB-106/118	55000			E	PCB-151	17900			E
PCB-107/109	4960				PCB-152	142			
PCB-108/112	295				PCB-153	128000			E
PCB-110	11100			E	PCB-154	14100			E
PCB-111/115	1330				PCB-155	292			
PCB-113	ND	2.43			PCB-156	5840			
PCB-114	1060				PCB-157	1120			
PCB-119	3560				PCB-158/160	7460			
PCB-120	419				PCB-159	ND	4.50		
PCB-121	106				PCB-166	189			
PCB-122	90.0				PCB-167	3160			
PCB-123	934				PCB-168	288			
PCB-124	674				PCB-169	8.56			
PCB-126	293				PCB-170	16900			E
PCB-127	ND	11.0			PCB-171	4290			
PCB-128/162	6090				PCB-172	2070			
PCB-129	120				PCB-173	11.8			
PCB-130	2410				PCB-174	695			
PCB-131	ND	4.79			PCB-175	791			
PCB-132/161	617				PCB-176	173			
PCB-133/142	1090				PCB-177	3300			
PCB-134/143	357				PCB-178	4150			
PCB-135	862				PCB-179	1700			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-08
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	4.10	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 07:57
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	51200			E	Total octaCB	35900			
PCB-181	118				Total nonaCB	3050			
PCB-182/187	39200			E	DecaCB	464			
PCB-183	16100			E	Total PCB	869000			
PCB-184	91.1								
PCB-185	356								
PCB-186	ND	2.21							
PCB-188	492								
PCB-189	648								
PCB-190	4210								
PCB-191	724								
PCB-192	ND	2.14							
PCB-193	2410								
PCB-194	8060			E					
PCB-195	2950								
PCB-196/203	15000			E					
PCB-197	450								
PCB-198	207								
PCB-199	5890								
PCB-200	42.3								
PCB-201	996								
PCB-202	1890								
PCB-204	8.95								
PCB-205	431								
PCB-206	2410								
PCB-207	363								
PCB-208	273								
PCB-209	464								
Total monoCB	3.99								
Total diCB	201								
Total triCB	12200								
Total tetraCB	112000								
Total pentaCB	247000								
Total hexaCB	309000								
Total heptaCB	150000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-08
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	4.10	QC Batch:	B5A0007
				Date Analyzed :	10-Jan-15 07:57
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	72.2	5 -145		13C-PCB-170	100	10 -145	
13C-PCB-3	74.7	5 -145		13C-PCB-180	109	10 -145	
13C-PCB-4	75.5	5 -145		13C-PCB-188	89.6	10 -145	
13C-PCB-11	89.0	5 -145		13C-PCB-189	105	10 -145	
13C-PCB-9	84.5	5 -145		13C-PCB-194	90.2	10 -145	
13C-PCB-19	57.2	5 -145		13C-PCB-202	81.9	10 -145	
13C-PCB-28	90.7	5 -145		13C-PCB-206	89.1	10 -145	
13C-PCB-32	65.8	5 -145		13C-PCB-208	81.7	10 -145	
13C-PCB-37	89.4	5 -145		13C-PCB-209	21.9	10 -145	
13C-PCB-47	80.7	5 -145		CRS 13C-PCB-79	113	10 -145	
13C-PCB-52	93.3	5 -145		13C-PCB-178	93.0	10 -145	
13C-PCB-54	83.9	5 -145					
13C-PCB-70	89.3	5 -145					
13C-PCB-77	97.4	10 -145					
13C-PCB-80	90.6	10 -145					
13C-PCB-81	94.6	10 -145					
13C-PCB-95	80.3	10 -145					
13C-PCB-97	85.9	10 -145					
13C-PCB-101	102	10 -145					
13C-PCB-104	76.1	10 -145					
13C-PCB-105	115	10 -145					
13C-PCB-114	98.7	10 -145					
13C-PCB-118	111	10 -145					
13C-PCB-123	88.2	10 -145					
13C-PCB-126	104	10 -145					
13C-PCB-127	103	10 -145					
13C-PCB-138	114	10 -145					
13C-PCB-141	94.8	10 -145					
13C-PCB-153	123	10 -145					
13C-PCB-155	72.9	10 -145					
13C-PCB-156	108	10 -145					
13C-PCB-157	105	10 -145					
13C-PCB-159	96.1	10 -145					
13C-PCB-167	97.6	10 -145					
13C-PCB-169	104	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-09	Date Received:	13-Nov-2014 8:49
Project:	120711-01.07 Task 1	Sample Size:	2.23 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.62	Date Analyzed :	13-Jan-15 15:04	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.30				PCB-44	3680			
PCB-2	2.53				PCB-45	74.2			
PCB-3	1.17			J	PCB-46	96.0			
PCB-4/10	13.2				PCB-47	1750			
PCB-5/8	24.5				PCB-48/75	544			
PCB-6	7.50				PCB-50	5.16			
PCB-7/9	14.5				PCB-51	1920			
PCB-11	75.9				PCB-52/69	39500			E
PCB-12/13	1.93			J	PCB-53	2420			
PCB-14	ND	1.85			PCB-54	507			
PCB-15	97.8				PCB-55	212			
PCB-16/32	378				PCB-56/60	2710			
PCB-17	45.6				PCB-57	302			
PCB-18	389				PCB-58	112			
PCB-19	34.6				PCB-61/70	7500			
PCB-20/21/33	119				PCB-62	ND	2.21		
PCB-22	166				PCB-63	836			
PCB-23	ND	0.189			PCB-65	1.70			J
PCB-24/27	52.9				PCB-66/76	8090			
PCB-25	217				PCB-67	290			
PCB-26	1150				PCB-68	233			
PCB-28	6870			E	PCB-73	99.5			
PCB-29	4.73				PCB-74	10200			E
PCB-30	0.700			J	PCB-77	1410			
PCB-31	1900				PCB-78	ND	1.96		
PCB-34	18.5				PCB-79	1150			
PCB-35	0.911			J	PCB-80	ND	1.68		
PCB-36	2.61				PCB-81	84.3			
PCB-37	671				PCB-82	66.8			
PCB-38	50.8				PCB-83	ND		8.51	
PCB-39	2.38				PCB-84/92	7630			
PCB-40	52.5				PCB-85/116	194			
PCB-41/64/71/72	3340				PCB-86	ND	1.05		
PCB-42/59	635				PCB-87/117/125	6960			
PCB-43/49	21300			E	PCB-88/91	4690			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-09	Date Received:	13-Nov-2014 8:49
Project:	120711-01.07 Task 1	Sample Size:	2.23 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.62	Date Analyzed :	13-Jan-15 15:04	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		8.73		PCB-136	2650			
PCB-90/101	51600			E	PCB-137	2100			
PCB-93	ND	0.927			PCB-138/163/164	57500			E
PCB-94	ND	0.946			PCB-139/149	18800			E
PCB-95/98/102	11200				PCB-140	109			
PCB-96	448				PCB-141	5850			
PCB-97	2690				PCB-144	2130			
PCB-99	37300			E	PCB-145	1.93			J
PCB-100	3020				PCB-146/165	13100			
PCB-103	4190				PCB-147	6110			
PCB-104	342				PCB-148	718			
PCB-105	12200			E	PCB-150	660			
PCB-106/118	36900			E	PCB-151	16200			E
PCB-107/109	3310				PCB-152	237			
PCB-108/112	329				PCB-153	84500			E
PCB-110	4280				PCB-154	11000			E
PCB-111/115	809				PCB-155	240			
PCB-113	ND	0.728			PCB-156	4490			
PCB-114	704				PCB-157	734			
PCB-119	2080				PCB-158/160	5290			
PCB-120	292				PCB-159	ND	6.15		
PCB-121	89.5				PCB-166	135			
PCB-122	31.4				PCB-167	2360			
PCB-123	640				PCB-168	300			
PCB-124	730				PCB-169	9.00			
PCB-126	220				PCB-170	12400			E
PCB-127	ND	3.05			PCB-171	3150			
PCB-128/162	3550				PCB-172	2070			
PCB-129	84.5				PCB-173	23.5			
PCB-130	2260				PCB-174	1460			
PCB-131	ND	8.37			PCB-175	704			
PCB-132/161	1130				PCB-176	344			
PCB-133/142	1400				PCB-177	5100			
PCB-134/143	780				PCB-178	4790			
PCB-135	1600				PCB-179	3290			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-09
Project:	120711-01.07 Task 1	Sample Size:	2.23 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.62	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 15:04
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	35600			E	Total octaCB	27600			
PCB-181	103				Total nonaCB	2260			
PCB-182/187	36300			E	DecaCB	391			
PCB-183	11600			E	Total PCB	715000			
PCB-184	57.1								
PCB-185	674								
PCB-186	ND	0.553							
PCB-188	484								
PCB-189	462								
PCB-190	2960								
PCB-191	557								
PCB-192	ND	0.604							
PCB-193	2250								
PCB-194	5340								
PCB-195	2220								
PCB-196/203	9720								
PCB-197	356								
PCB-198	197								
PCB-199	6420								
PCB-200	97.6								
PCB-201	1010								
PCB-202	1930								
PCB-204	5.94								
PCB-205	287								
PCB-206	1660								
PCB-207	268								
PCB-208	336								
PCB-209	391								
Total monoCB	6.01								
Total diCB	235								
Total triCB	12100								
Total tetraCB	109000								
Total pentaCB	193000								
Total hexaCB	246000								
Total heptaCB	124000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-09
Project:	120711-01.07 Task 1	Sample Size:	2.23 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.62	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 15:04
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.9	5 -145		13C-PCB-170	93.9	10 -145	
13C-PCB-3	67.9	5 -145		13C-PCB-180	99.5	10 -145	
13C-PCB-4	67.8	5 -145		13C-PCB-188	90.6	10 -145	
13C-PCB-11	84.6	5 -145		13C-PCB-189	94.0	10 -145	
13C-PCB-9	77.8	5 -145		13C-PCB-194	91.4	10 -145	
13C-PCB-19	76.2	5 -145		13C-PCB-202	89.2	10 -145	
13C-PCB-28	91.2	5 -145		13C-PCB-206	91.3	10 -145	
13C-PCB-32	84.6	5 -145		13C-PCB-208	92.1	10 -145	
13C-PCB-37	89.1	5 -145		13C-PCB-209	104	10 -145	
13C-PCB-47	83.1	5 -145		CRS 13C-PCB-79	107	10 -145	
13C-PCB-52	84.3	5 -145		13C-PCB-178	104	10 -145	
13C-PCB-54	85.0	5 -145					
13C-PCB-70	89.3	5 -145					
13C-PCB-77	93.7	10 -145					
13C-PCB-80	88.5	10 -145					
13C-PCB-81	92.5	10 -145					
13C-PCB-95	85.0	10 -145					
13C-PCB-97	89.9	10 -145					
13C-PCB-101	90.9	10 -145					
13C-PCB-104	79.9	10 -145					
13C-PCB-105	97.4	10 -145					
13C-PCB-114	94.4	10 -145					
13C-PCB-118	94.1	10 -145					
13C-PCB-123	89.2	10 -145					
13C-PCB-126	97.7	10 -145					
13C-PCB-127	94.7	10 -145					
13C-PCB-138	98.7	10 -145					
13C-PCB-141	92.6	10 -145					
13C-PCB-153	97.0	10 -145					
13C-PCB-155	85.7	10 -145					
13C-PCB-156	96.1	10 -145					
13C-PCB-157	92.7	10 -145					
13C-PCB-159	92.7	10 -145					
13C-PCB-167	91.4	10 -145					
13C-PCB-169	89.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-10
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.74	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 16:08
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.60				PCB-44	3210			
PCB-2	2.46				PCB-45	155			
PCB-3	1.41			J	PCB-46	110			
PCB-4/10	24.1				PCB-47	3590			
PCB-5/8	30.7				PCB-48/75	562			
PCB-6	15.4				PCB-50	11.6			
PCB-7/9	14.3				PCB-51	2710			
PCB-11	78.1				PCB-52/69	26900			E
PCB-12/13	ND	2.01			PCB-53	2040			
PCB-14	ND	1.79			PCB-54	513			
PCB-15	87.3				PCB-55	185			
PCB-16/32	780				PCB-56/60	3350			
PCB-17	103				PCB-57	222			
PCB-18	782				PCB-58	123			
PCB-19	53.8				PCB-61/70	6290			
PCB-20/21/33	230				PCB-62	ND	1.13		
PCB-22	339				PCB-63	715			
PCB-23	ND	0.685			PCB-65	2.36			
PCB-24/27	80.6				PCB-66/76	11400			
PCB-25	247				PCB-67	274			
PCB-26	991				PCB-68	183			
PCB-28	5240				PCB-73	57.9			
PCB-29	7.41				PCB-74	8510			E
PCB-30	1.05			J	PCB-77	1090			
PCB-31	1580				PCB-78	ND	1.03		
PCB-34	23.0				PCB-79	1010			
PCB-35	ND		1.16		PCB-80	ND	0.0861		
PCB-36	2.13			J	PCB-81	65.2			
PCB-37	522				PCB-82	171			
PCB-38	129				PCB-83	ND	0.766		
PCB-39	1.98			J	PCB-84/92	5920			
PCB-40	123				PCB-85/116	804			
PCB-41/64/71/72	5090				PCB-86	ND	1.14		
PCB-42/59	769				PCB-87/117/125	6080			
PCB-43/49	16300			E	PCB-88/91	3830			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-10
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.74	Date Received:	13-Nov-2014 8:49
				Date Extracted:	03-Jan-2015 6:49
				Date Analyzed :	13-Jan-15 16:08 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.8				PCB-136	2090			
PCB-90/101	40100			E	PCB-137	1910			
PCB-93	ND	0.949			PCB-138/163/164	53200			E
PCB-94	62.0				PCB-139/149	14400			E
PCB-95/98/102	9120				PCB-140	178			
PCB-96	413				PCB-141	4290			
PCB-97	3850				PCB-144	1660			
PCB-99	32100			E	PCB-145	2.73			
PCB-100	3310				PCB-146/165	11900			
PCB-103	2820				PCB-147	4640			
PCB-104	323				PCB-148	581			
PCB-105	11100			E	PCB-150	461			
PCB-106/118	33200			E	PCB-151	13900			E
PCB-107/109	2940				PCB-152	190			
PCB-108/112	321				PCB-153	83400			E
PCB-110	10500			E	PCB-154	8560			E
PCB-111/115	740				PCB-155	198			
PCB-113	ND	0.758			PCB-156	4010			
PCB-114	640				PCB-157	666			
PCB-119	2600				PCB-158/160	5460			
PCB-120	225				PCB-159	ND	12.6		
PCB-121	59.8				PCB-166	130			
PCB-122	82.5				PCB-167	2230			
PCB-123	611				PCB-168	297			
PCB-124	540				PCB-169	8.68			
PCB-126	204				PCB-170	12400			E
PCB-127	ND	3.19			PCB-171	3770			
PCB-128/162	4610				PCB-172	1980			
PCB-129	163				PCB-173	19.9			
PCB-130	1950				PCB-174	1380			
PCB-131	ND	16.3			PCB-175	662			
PCB-132/161	1500				PCB-176	301			
PCB-133/142	1250				PCB-177	4750			
PCB-134/143	727				PCB-178	4310			
PCB-135	1320				PCB-179	2810			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-10 Date Received: 13-Nov-2014 8:49
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007 Date Extracted: 03-Jan-2015 6:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.74	Date Analyzed :	13-Jan-15 16:08 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	36800			E	Total octaCB	26500			
PCB-181	116				Total nonaCB	2210			
PCB-182/187	32300			E	DecaCB	344			
PCB-183	11100			E	Total PCB	655000			
PCB-184	56.4								
PCB-185	555								
PCB-186	ND	0.625							
PCB-188	400								
PCB-189	486								
PCB-190	2980								
PCB-191	612								
PCB-192	ND	0.755							
PCB-193	2290								
PCB-194	5880								
PCB-195	2320								
PCB-196/203	9130								
PCB-197	325								
PCB-198	146								
PCB-199	5560								
PCB-200	80.9								
PCB-201	895								
PCB-202	1810								
PCB-204	5.85								
PCB-205	300								
PCB-206	1670								
PCB-207	247								
PCB-208	297								
PCB-209	344								
Total monoCB	6.48								
Total diCB	250								
Total triCB	11100								
Total tetraCB	95500								
Total pentaCB	173000								
Total hexaCB	226000								
Total heptaCB	120000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-10
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.74	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 16:08
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.3	5 -145		13C-PCB-170	88.7	10 -145	
13C-PCB-3	69.7	5 -145		13C-PCB-180	89.7	10 -145	
13C-PCB-4	69.6	5 -145		13C-PCB-188	89.3	10 -145	
13C-PCB-11	78.1	5 -145		13C-PCB-189	82.8	10 -145	
13C-PCB-9	76.4	5 -145		13C-PCB-194	91.9	10 -145	
13C-PCB-19	68.9	5 -145		13C-PCB-202	90.2	10 -145	
13C-PCB-28	97.6	5 -145		13C-PCB-206	94.8	10 -145	
13C-PCB-32	73.3	5 -145		13C-PCB-208	95.7	10 -145	
13C-PCB-37	95.4	5 -145		13C-PCB-209	114	10 -145	
13C-PCB-47	82.8	5 -145		CRS 13C-PCB-79	91.8	10 -145	
13C-PCB-52	86.6	5 -145		13C-PCB-178	90.7	10 -145	
13C-PCB-54	82.3	5 -145					
13C-PCB-70	88.9	5 -145					
13C-PCB-77	88.5	10 -145					
13C-PCB-80	87.7	10 -145					
13C-PCB-81	87.8	10 -145					
13C-PCB-95	88.4	10 -145					
13C-PCB-97	91.2	10 -145					
13C-PCB-101	92.0	10 -145					
13C-PCB-104	83.4	10 -145					
13C-PCB-105	94.5	10 -145					
13C-PCB-114	94.5	10 -145					
13C-PCB-118	95.6	10 -145					
13C-PCB-123	90.9	10 -145					
13C-PCB-126	93.2	10 -145					
13C-PCB-127	94.4	10 -145					
13C-PCB-138	95.7	10 -145					
13C-PCB-141	92.5	10 -145					
13C-PCB-153	93.3	10 -145					
13C-PCB-155	88.8	10 -145					
13C-PCB-156	93.5	10 -145					
13C-PCB-157	91.5	10 -145					
13C-PCB-159	89.6	10 -145					
13C-PCB-167	90.8	10 -145					
13C-PCB-169	83.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-11
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	9.20	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 17:13
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.08			J	PCB-44	2970			
PCB-2	2.50				PCB-45	152			
PCB-3	0.987			J	PCB-46	93.4			
PCB-4/10	21.3				PCB-47	5100			
PCB-5/8	25.2				PCB-48/75	670			
PCB-6	12.8				PCB-50	12.7			
PCB-7/9	11.9				PCB-51	3390			
PCB-11	71.6				PCB-52/69	26600			E
PCB-12/13	ND	2.09			PCB-53	1800			
PCB-14	ND	1.87			PCB-54	383			
PCB-15	93.6				PCB-55	256			
PCB-16/32	893				PCB-56/60	2980			
PCB-17	93.2				PCB-57	217			
PCB-18	695				PCB-58	135			
PCB-19	38.8				PCB-61/70	8610			
PCB-20/21/33	239				PCB-62	ND	1.77		
PCB-22	431				PCB-63	513			
PCB-23	ND	0.334			PCB-65	1.48			J
PCB-24/27	74.7				PCB-66/76	10600			
PCB-25	252				PCB-67	312			
PCB-26	906				PCB-68	160			
PCB-28	4970				PCB-73	96.3			
PCB-29	8.60				PCB-74	6520			
PCB-30	1.25			J	PCB-77	1090			
PCB-31	2100				PCB-78	ND	1.51		
PCB-34	21.5				PCB-79	929			
PCB-35	0.802			J	PCB-80	ND	1.39		
PCB-36	2.45			J	PCB-81	57.2			
PCB-37	666				PCB-82	285			
PCB-38	186				PCB-83	5.88			
PCB-39	2.05			J	PCB-84/92	6280			
PCB-40	163				PCB-85/116	1320			
PCB-41/64/71/72	5810				PCB-86	ND	1.76		
PCB-42/59	866				PCB-87/117/125	5430			
PCB-43/49	15900			E	PCB-88/91	5090			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-11
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	QC Batch:	B5A0007
Date Collected:	10-Oct-2014 0:00	%Lipids:	9.20	Date Received:	13-Nov-2014 8:49
				Date Extracted:	03-Jan-2015 6:49
				Date Analyzed :	13-Jan-15 17:13
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.7				PCB-136	2520			
PCB-90/101	36900			E	PCB-137	1510			
PCB-93	ND	1.57			PCB-138/163/164	38700			E
PCB-94	ND	1.60			PCB-139/149	24300			E
PCB-95/98/102	11700				PCB-140	182			
PCB-96	374				PCB-141	4700			
PCB-97	4150				PCB-144	1500			
PCB-99	26300			E	PCB-145	2.62			
PCB-100	4030				PCB-146/165	9190			
PCB-103	3160				PCB-147	5720			
PCB-104	366				PCB-148	577			
PCB-105	8100			E	PCB-150	737			
PCB-106/118	24500			E	PCB-151	11100			E
PCB-107/109	2250				PCB-152	173			
PCB-108/112	361				PCB-153	65800			E
PCB-110	12100			E	PCB-154	9070			E
PCB-111/115	505				PCB-155	197			
PCB-113	65.5				PCB-156	3020			
PCB-114	452				PCB-157	465			
PCB-119	2760				PCB-158/160	3920			
PCB-120	187				PCB-159	ND	1.47		
PCB-121	66.3				PCB-166	82.5			
PCB-122	122				PCB-167	1550			
PCB-123	411				PCB-168	235			
PCB-124	645				PCB-169	5.56			
PCB-126	155				PCB-170	8110			E
PCB-127	ND	1.87			PCB-171	2630			
PCB-128/162	3470				PCB-172	1500			
PCB-129	258				PCB-173	30.6			
PCB-130	1630				PCB-174	2240			
PCB-131	ND	1.99			PCB-175	536			
PCB-132/161	2160				PCB-176	415			
PCB-133/142	1090				PCB-177	4940			
PCB-134/143	762				PCB-178	3910			
PCB-135	1720				PCB-179	3470			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-11
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	9.20	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 17:13
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	24600			E	Total octaCB	18700			
PCB-181	89.5				Total nonaCB	1280			
PCB-182/187	31500			E	DecaCB	174			
PCB-183	8890			E	Total PCB	581000			
PCB-184	44.0								
PCB-185	663								
PCB-186	ND	0.504							
PCB-188	426								
PCB-189	318								
PCB-190	2140								
PCB-191	412								
PCB-192	ND	0.533							
PCB-193	1700								
PCB-194	3560								
PCB-195	1570								
PCB-196/203	6190								
PCB-197	227								
PCB-198	141								
PCB-199	4500								
PCB-200	98.6								
PCB-201	739								
PCB-202	1490								
PCB-204	3.17								
PCB-205	199								
PCB-206	920								
PCB-207	150								
PCB-208	213								
PCB-209	174								
Total monoCB	5.56								
Total diCB	236								
Total triCB	11600								
Total tetraCB	96400								
Total pentaCB	158000								
Total hexaCB	196000								
Total heptaCB	98500								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-11
Project:	120711-01.07 Task 1	Sample Size:	2.01 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	9.20	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 17:13
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	48.6	5 -145		13C-PCB-170	97.4	10 -145	
13C-PCB-3	57.5	5 -145		13C-PCB-180	102	10 -145	
13C-PCB-4	60.5	5 -145		13C-PCB-188	91.3	10 -145	
13C-PCB-11	86.6	5 -145		13C-PCB-189	96.5	10 -145	
13C-PCB-9	72.9	5 -145		13C-PCB-194	98.7	10 -145	
13C-PCB-19	70.4	5 -145		13C-PCB-202	96.9	10 -145	
13C-PCB-28	101	5 -145		13C-PCB-206	102	10 -145	
13C-PCB-32	83.4	5 -145		13C-PCB-208	104	10 -145	
13C-PCB-37	109	5 -145		13C-PCB-209	112	10 -145	
13C-PCB-47	92.1	5 -145		CRS 13C-PCB-79	109	10 -145	
13C-PCB-52	92.5	5 -145		13C-PCB-178	104	10 -145	
13C-PCB-54	86.0	5 -145					
13C-PCB-70	97.8	5 -145					
13C-PCB-77	109	10 -145					
13C-PCB-80	96.6	10 -145					
13C-PCB-81	107	10 -145					
13C-PCB-95	89.3	10 -145					
13C-PCB-97	97.5	10 -145					
13C-PCB-101	95.1	10 -145					
13C-PCB-104	86.4	10 -145					
13C-PCB-105	102	10 -145					
13C-PCB-114	99.8	10 -145					
13C-PCB-118	102	10 -145					
13C-PCB-123	97.3	10 -145					
13C-PCB-126	106	10 -145					
13C-PCB-127	104	10 -145					
13C-PCB-138	104	10 -145					
13C-PCB-141	99.4	10 -145					
13C-PCB-153	102	10 -145					
13C-PCB-155	92.5	10 -145					
13C-PCB-156	102	10 -145					
13C-PCB-157	97.5	10 -145					
13C-PCB-159	100	10 -145					
13C-PCB-167	100	10 -145					
13C-PCB-169	96.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-12	Date Received:	13-Nov-2014 8:49
Project:	120711-01.07 Task 1	Sample Size:	2.22 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.26	Date Analyzed :	13-Jan-15 18:17	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.12			J	PCB-44	2130			
PCB-2	1.76			J	PCB-45	100			
PCB-3	0.978			J	PCB-46	79.9			
PCB-4/10	17.9				PCB-47	2620			
PCB-5/8	27.0				PCB-48/75	416			
PCB-6	10.4				PCB-50	6.45			
PCB-7/9	11.8				PCB-51	2140			
PCB-11	60.0				PCB-52/69	18800			E
PCB-12/13	ND	4.23			PCB-53	1740			
PCB-14	ND	3.78			PCB-54	341			
PCB-15	75.1				PCB-55	153			
PCB-16/32	555				PCB-56/60	2220			
PCB-17	70.1				PCB-57	148			
PCB-18	504				PCB-58	97.2			
PCB-19	35.1				PCB-61/70	6260			
PCB-20/21/33	192				PCB-62	ND	2.26		
PCB-22	279				PCB-63	451			
PCB-23	ND	2.20			PCB-65	1.48			J
PCB-24/27	62.7				PCB-66/76	8130			
PCB-25	195				PCB-67	199			
PCB-26	729				PCB-68	113			
PCB-28	4660				PCB-68	113			
PCB-29	5.38				PCB-73	61.8			
PCB-30	0.789			J	PCB-74	5740			
PCB-31	1640				PCB-77	954			
PCB-34	19.3				PCB-78	ND	1.99		
PCB-35	ND	2.34			PCB-79	677			
PCB-36	1.89			J	PCB-80	ND	1.65		
PCB-37	514				PCB-81	59.8			
PCB-38	99.3				PCB-82	132			
PCB-39	2.03			J	PCB-83	6.55			
PCB-40	97.9				PCB-84/92	4620			
PCB-41/64/71/72	4030				PCB-85/116	620			
PCB-42/59	503				PCB-86	ND	1.33		
PCB-43/49	11700				PCB-87/117/125	4540			
					PCB-88/91	3210			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-12
Project:	120711-01.07 Task 1	Sample Size:	2.22 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.26	QC Batch:	B5A0007
				Date Analyzed:	13-Jan-15 18:17
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.87				PCB-136	1720			
PCB-90/101	28800			E	PCB-137	1080			
PCB-93	ND	1.18			PCB-138/163/164	33700			E
PCB-94	62.8				PCB-139/149	15100			E
PCB-95/98/102	8260				PCB-140	111			
PCB-96	300				PCB-141	3750			
PCB-97	3140				PCB-144	1300			
PCB-99	19600			E	PCB-145	2.02			J
PCB-100	2140				PCB-146/165	6840			
PCB-103	2040				PCB-147	3150			
PCB-104	237				PCB-148	382			
PCB-105	7360			E	PCB-150	406			
PCB-106/118	21800			E	PCB-151	8000			E
PCB-107/109	1920				PCB-152	127			
PCB-108/112	317				PCB-153	51000			E
PCB-110	8160			E	PCB-154	5000			
PCB-111/115	500				PCB-155	112			
PCB-113	ND	0.874			PCB-156	2620			
PCB-114	421				PCB-157	418			
PCB-119	1690				PCB-158/160	3290			
PCB-120	160				PCB-159	ND	12.1		
PCB-121	26.4				PCB-166	83.6			
PCB-122	72.8				PCB-167	1290			
PCB-123	399				PCB-168	133			
PCB-124	519				PCB-169	7.01			
PCB-126	136				PCB-170	6580			
PCB-127	ND	1.93			PCB-171	2080			
PCB-128/162	2890				PCB-172	1240			
PCB-129	172				PCB-173	24.1			
PCB-130	1450				PCB-174	1540			
PCB-131	ND	15.9			PCB-175	403			
PCB-132/161	1380				PCB-176	314			
PCB-133/142	788				PCB-177	3900			
PCB-134/143	567				PCB-178	2700			
PCB-135	1170				PCB-179	2280			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-WO-WS-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-12
Project:	120711-01.07 Task 1	Sample Size:	2.22 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.26	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 18:17
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	20000			E	Total octaCB	14700			
PCB-181	47.6				Total nonaCB	1240			
PCB-182/187	20400			E	DecaCB	196			
PCB-183	6580				Total PCB	437000			
PCB-184	33.7								
PCB-185	493								
PCB-186	ND	4.85							
PCB-188	232								
PCB-189	259								
PCB-190	1660								
PCB-191	341								
PCB-192	ND	5.45							
PCB-193	1290								
PCB-194	2890								
PCB-195	1190								
PCB-196/203	4840								
PCB-197	180								
PCB-198	124								
PCB-199	3560								
PCB-200	76.6								
PCB-201	560								
PCB-202	1090								
PCB-204	3.82								
PCB-205	152								
PCB-206	894								
PCB-207	141								
PCB-208	202								
PCB-209	196								
Total monoCB	4.86								
Total diCB	202								
Total triCB	9570								
Total tetraCB	70000								
Total pentaCB	121000								
Total hexaCB	148000								
Total heptaCB	72400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-12
Project:	120711-01.07 Task 1	Sample Size:	2.22 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.26	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 18:17
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	52.8	5 -145		13C-PCB-170	90.5	10 -145	
13C-PCB-3	62.9	5 -145		13C-PCB-180	92.8	10 -145	
13C-PCB-4	62.6	5 -145		13C-PCB-188	89.9	10 -145	
13C-PCB-11	80.9	5 -145		13C-PCB-189	86.3	10 -145	
13C-PCB-9	72.0	5 -145		13C-PCB-194	94.3	10 -145	
13C-PCB-19	69.4	5 -145		13C-PCB-202	90.4	10 -145	
13C-PCB-28	84.5	5 -145		13C-PCB-206	94.0	10 -145	
13C-PCB-32	78.4	5 -145		13C-PCB-208	96.2	10 -145	
13C-PCB-37	85.6	5 -145		13C-PCB-209	104	10 -145	
13C-PCB-47	88.5	5 -145		CRS 13C-PCB-79	104	10 -145	
13C-PCB-52	87.0	5 -145		13C-PCB-178	99.6	10 -145	
13C-PCB-54	89.1	5 -145					
13C-PCB-70	92.6	5 -145					
13C-PCB-77	96.1	10 -145					
13C-PCB-80	93.9	10 -145					
13C-PCB-81	95.7	10 -145					
13C-PCB-95	86.6	10 -145					
13C-PCB-97	90.4	10 -145					
13C-PCB-101	92.6	10 -145					
13C-PCB-104	80.0	10 -145					
13C-PCB-105	98.4	10 -145					
13C-PCB-114	96.2	10 -145					
13C-PCB-118	95.4	10 -145					
13C-PCB-123	91.4	10 -145					
13C-PCB-126	95.9	10 -145					
13C-PCB-127	97.7	10 -145					
13C-PCB-138	99.4	10 -145					
13C-PCB-141	95.4	10 -145					
13C-PCB-153	99.2	10 -145					
13C-PCB-155	88.0	10 -145					
13C-PCB-156	95.3	10 -145					
13C-PCB-157	91.0	10 -145					
13C-PCB-159	94.5	10 -145					
13C-PCB-167	93.7	10 -145					
13C-PCB-169	87.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-13
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.00	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 19:22
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.00			J	PCB-44	3140			
PCB-2	1.44			J	PCB-45	140			
PCB-3	0.891			J	PCB-46	92.4			
PCB-4/10	21.9				PCB-47	3370			
PCB-5/8	27.8				PCB-48/75	591			
PCB-6	13.0				PCB-50	11.1			
PCB-7/9	10.8				PCB-51	2210			
PCB-11	55.6				PCB-52/69	22600			E
PCB-12/13	ND	1.64			PCB-53	1540			
PCB-14	ND	1.46			PCB-54	323			
PCB-15	67.0				PCB-55	175			
PCB-16/32	690				PCB-56/60	2750			
PCB-17	95.9				PCB-57	172			
PCB-18	665				PCB-58	113			
PCB-19	47.6				PCB-61/70	6530			
PCB-20/21/33	210				PCB-62	ND	7.08		
PCB-22	325				PCB-63	532			
PCB-23	ND	0.125			PCB-65	ND		1.52	
PCB-24/27	73.7				PCB-66/76	9910			
PCB-25	215				PCB-67	248			
PCB-26	871				PCB-68	147			
PCB-28	5610				PCB-73	45.4			
PCB-29	5.97				PCB-74	6530			
PCB-30	0.839			J	PCB-77	1020			
PCB-31	1740				PCB-78	ND	6.21		
PCB-34	17.9				PCB-79	758			
PCB-35	ND	0.614			PCB-80	ND	4.99		
PCB-36	1.68			J	PCB-81	66.2			
PCB-37	537				PCB-82	185			
PCB-38	124				PCB-83	7.62			
PCB-39	1.71			J	PCB-84/92	5020			
PCB-40	140				PCB-85/116	846			
PCB-41/64/71/72	5150				PCB-86	ND	1.32		
PCB-42/59	788				PCB-87/117/125	5190			
PCB-43/49	12800				PCB-88/91	3680			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-13
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	QC Batch:	B5A0007
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.00	Date Received:	13-Nov-2014 8:49
				Date Extracted:	03-Jan-2015 6:49
				Date Analyzed :	13-Jan-15 19:22
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	10.8				PCB-136	1640			
PCB-90/101	32600			E	PCB-137	1260			
PCB-93	ND	1.17			PCB-138/163/164	36700			E
PCB-94	42.0				PCB-139/149	14700			E
PCB-95/98/102	8370				PCB-140	139			
PCB-96	305				PCB-141	4000			
PCB-97	3690				PCB-144	1350			
PCB-99	22600			E	PCB-145	ND		1.70	
PCB-100	2700				PCB-146/165	7850			
PCB-103	2290				PCB-147	3400			
PCB-104	234				PCB-148	430			
PCB-105	8090			E	PCB-150	393			
PCB-106/118	24500			E	PCB-151	8670			E
PCB-107/109	2100				PCB-152	111			
PCB-108/112	320				PCB-153	56300			E
PCB-110	10000			E	PCB-154	5830			
PCB-111/115	558				PCB-155	137			
PCB-113	30.1				PCB-156	2870			
PCB-114	465				PCB-157	478			
PCB-119	1960				PCB-158/160	3810			
PCB-120	156				PCB-159	ND	2.20		
PCB-121	ND	0.695			PCB-166	99.0			
PCB-122	85.3				PCB-167	1460			
PCB-123	436				PCB-168	169			
PCB-124	534				PCB-169	7.04			
PCB-126	158				PCB-170	7310			
PCB-127	ND	2.37			PCB-171	2290			
PCB-128/162	3370				PCB-172	1300			
PCB-129	206				PCB-173	21.1			
PCB-130	1640				PCB-174	1440			
PCB-131	ND	3.03			PCB-175	449			
PCB-132/161	1430				PCB-176	288			
PCB-133/142	935				PCB-177	3970			
PCB-134/143	606				PCB-178	3060			
PCB-135	1120				PCB-179	2290			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-13
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.00	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 19:22
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	21600			E	Total octaCB	15800			
PCB-181	54.4				Total nonaCB	1290			
PCB-182/187	22900			E	DecaCB	208			
PCB-183	7230				Total PCB	488000			
PCB-184	40.2								
PCB-185	502								
PCB-186	ND	0.817							
PCB-188	267								
PCB-189	275								
PCB-190	1850								
PCB-191	366								
PCB-192	ND	0.911							
PCB-193	1400								
PCB-194	3100								
PCB-195	1240								
PCB-196/203	5330								
PCB-197	190								
PCB-198	143								
PCB-199	3790								
PCB-200	62.9								
PCB-201	595								
PCB-202	1170								
PCB-204	3.92								
PCB-205	165								
PCB-206	945								
PCB-207	146								
PCB-208	202								
PCB-209	208								
Total monoCB	4.33								
Total diCB	196								
Total triCB	11200								
Total tetraCB	81900								
Total pentaCB	137000								
Total hexaCB	161000								
Total heptaCB	78900								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-13
Project:	120711-01.07 Task 1	Sample Size:	2.05 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.00	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 19:22
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	54.1	5 -145		13C-PCB-170	86.7	10 -145	
13C-PCB-3	61.8	5 -145		13C-PCB-180	91.8	10 -145	
13C-PCB-4	62.6	5 -145		13C-PCB-188	87.7	10 -145	
13C-PCB-11	82.1	5 -145		13C-PCB-189	84.3	10 -145	
13C-PCB-9	73.0	5 -145		13C-PCB-194	92.8	10 -145	
13C-PCB-19	71.7	5 -145		13C-PCB-202	89.4	10 -145	
13C-PCB-28	80.5	5 -145		13C-PCB-206	92.2	10 -145	
13C-PCB-32	79.7	5 -145		13C-PCB-208	95.8	10 -145	
13C-PCB-37	87.0	5 -145		13C-PCB-209	99.6	10 -145	
13C-PCB-47	82.5	5 -145		CRS 13C-PCB-79	102	10 -145	
13C-PCB-52	87.6	5 -145		13C-PCB-178	99.2	10 -145	
13C-PCB-54	81.3	5 -145					
13C-PCB-70	90.2	5 -145					
13C-PCB-77	91.8	10 -145					
13C-PCB-80	93.3	10 -145					
13C-PCB-81	92.8	10 -145					
13C-PCB-95	83.7	10 -145					
13C-PCB-97	88.8	10 -145					
13C-PCB-101	89.5	10 -145					
13C-PCB-104	80.6	10 -145					
13C-PCB-105	95.1	10 -145					
13C-PCB-114	96.4	10 -145					
13C-PCB-118	95.7	10 -145					
13C-PCB-123	86.6	10 -145					
13C-PCB-126	96.5	10 -145					
13C-PCB-127	95.7	10 -145					
13C-PCB-138	96.2	10 -145					
13C-PCB-141	92.1	10 -145					
13C-PCB-153	96.1	10 -145					
13C-PCB-155	87.7	10 -145					
13C-PCB-156	91.9	10 -145					
13C-PCB-157	90.8	10 -145					
13C-PCB-159	91.2	10 -145					
13C-PCB-167	93.1	10 -145					
13C-PCB-169	86.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-14
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.33	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 20:27
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.62				PCB-44	2230			
PCB-2	2.61				PCB-45	353			
PCB-3	1.06			J	PCB-46	109			
PCB-4/10	36.7				PCB-47	9340			E
PCB-5/8	43.6				PCB-48/75	1400			
PCB-6	31.6				PCB-50	38.4			
PCB-7/9	16.2				PCB-51	4430			
PCB-11	72.7				PCB-52/69	23100			E
PCB-12/13	ND	2.98			PCB-53	1750			
PCB-14	ND	2.65			PCB-54	346			
PCB-15	107				PCB-55	216			
PCB-16/32	1730				PCB-56/60	5670			
PCB-17	448				PCB-57	171			
PCB-18	1050				PCB-58	115			
PCB-19	54.1				PCB-61/70	8250			
PCB-20/21/33	456				PCB-62	ND	3.30		
PCB-22	982				PCB-63	564			
PCB-23	ND	0.276			PCB-65	1.30			J
PCB-24/27	91.0				PCB-66/76	16700			E
PCB-25	281				PCB-67	280			
PCB-26	765				PCB-68	151			
PCB-28	5860				PCB-73	79.4			
PCB-29	8.36				PCB-74	7690			E
PCB-30	1.42			J	PCB-77	1040			
PCB-31	1760				PCB-78	ND	2.87		
PCB-34	20.2				PCB-79	868			
PCB-35	0.997			J	PCB-80	ND	2.53		
PCB-36	2.48				PCB-81	64.9			
PCB-37	631				PCB-82	1180			
PCB-38	316				PCB-83	ND	0.750		
PCB-39	2.37				PCB-84/92	5770			
PCB-40	548				PCB-85/116	4730			
PCB-41/64/71/72	7950				PCB-86	ND	1.12		
PCB-42/59	1690				PCB-87/117/125	6070			
PCB-43/49	16300			E	PCB-88/91	4150			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-14
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.33	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 20:27
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	47.0				PCB-136	1990			
PCB-90/101	36100			E	PCB-137	1550			
PCB-93	ND	0.933			PCB-138/163/164	44800			E
PCB-94	57.2				PCB-139/149	17000			E
PCB-95/98/102	9600				PCB-140	229			
PCB-96	350				PCB-141	4830			
PCB-97	5320				PCB-144	1590			
PCB-99	28200			E	PCB-145	3.71			
PCB-100	2830				PCB-146/165	8920			
PCB-103	2090				PCB-147	3460			
PCB-104	279				PCB-148	343			
PCB-105	10300			E	PCB-150	410			
PCB-106/118	32400			E	PCB-151	11300			E
PCB-107/109	2590				PCB-152	155			
PCB-108/112	355				PCB-153	67900			E
PCB-110	18200			E	PCB-154	5970			
PCB-111/115	525				PCB-155	137			
PCB-113	ND	0.703			PCB-156	3260			
PCB-114	574				PCB-157	675			
PCB-119	2660				PCB-158/160	4470			
PCB-120	182				PCB-159	ND	2.90		
PCB-121	ND	0.554			PCB-166	115			
PCB-122	190				PCB-167	1900			
PCB-123	601				PCB-168	197			
PCB-124	744				PCB-169	5.79			
PCB-126	160				PCB-170	9280			E
PCB-127	ND	2.10			PCB-171	2850			
PCB-128/162	4520				PCB-172	1590			
PCB-129	306				PCB-173	21.2			
PCB-130	2110				PCB-174	1560			
PCB-131	ND	3.86			PCB-175	516			
PCB-132/161	2010				PCB-176	358			
PCB-133/142	1000				PCB-177	4370			
PCB-134/143	753				PCB-178	3330			
PCB-135	1410				PCB-179	2850			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-14	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.33	Date Analyzed :	13-Jan-15 20:27	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	26200			E	Total octaCB	20300			
PCB-181	62.7				Total nonaCB	1810			
PCB-182/187	24000			E	DecaCB	335			
PCB-183	8180			E	Total PCB	609000			
PCB-184	37.2								
PCB-185	591								
PCB-186	ND	0.668							
PCB-188	284								
PCB-189	355								
PCB-190	2110								
PCB-191	435								
PCB-192	ND	0.709							
PCB-193	1550								
PCB-194	4230								
PCB-195	1530								
PCB-196/203	7040								
PCB-197	249								
PCB-198	147								
PCB-199	4750								
PCB-200	87.0								
PCB-201	720								
PCB-202	1320								
PCB-204	4.23								
PCB-205	211								
PCB-206	1330								
PCB-207	202								
PCB-208	272								
PCB-209	335								
Total monoCB	6.30								
Total diCB	308								
Total triCB	14500								
Total tetraCB	111000								
Total pentaCB	176000								
Total hexaCB	193000								
Total heptaCB	90600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-14
Project:	120711-01.07 Task 1	Sample Size:	2.15 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	6.33	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 20:27
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.4	5 -145		13C-PCB-170	97.6	10 -145	
13C-PCB-3	66.9	5 -145		13C-PCB-180	101	10 -145	
13C-PCB-4	65.5	5 -145		13C-PCB-188	94.2	10 -145	
13C-PCB-11	81.7	5 -145		13C-PCB-189	93.6	10 -145	
13C-PCB-9	72.5	5 -145		13C-PCB-194	93.4	10 -145	
13C-PCB-19	67.5	5 -145		13C-PCB-202	91.6	10 -145	
13C-PCB-28	86.7	5 -145		13C-PCB-206	97.2	10 -145	
13C-PCB-32	78.6	5 -145		13C-PCB-208	97.2	10 -145	
13C-PCB-37	87.2	5 -145		13C-PCB-209	103	10 -145	
13C-PCB-47	87.6	5 -145		CRS 13C-PCB-79	111	10 -145	
13C-PCB-52	81.6	5 -145		13C-PCB-178	106	10 -145	
13C-PCB-54	80.6	5 -145					
13C-PCB-70	90.7	5 -145					
13C-PCB-77	92.1	10 -145					
13C-PCB-80	94.8	10 -145					
13C-PCB-81	99.0	10 -145					
13C-PCB-95	86.8	10 -145					
13C-PCB-97	90.3	10 -145					
13C-PCB-101	93.4	10 -145					
13C-PCB-104	79.7	10 -145					
13C-PCB-105	100	10 -145					
13C-PCB-114	100	10 -145					
13C-PCB-118	98.9	10 -145					
13C-PCB-123	94.1	10 -145					
13C-PCB-126	99.9	10 -145					
13C-PCB-127	98.9	10 -145					
13C-PCB-138	100	10 -145					
13C-PCB-141	95.4	10 -145					
13C-PCB-153	102	10 -145					
13C-PCB-155	89.6	10 -145					
13C-PCB-156	102	10 -145					
13C-PCB-157	93.2	10 -145					
13C-PCB-159	96.0	10 -145					
13C-PCB-167	96.0	10 -145					
13C-PCB-169	95.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-15
Project:	120711-01.07 Task 1	Sample Size:	2.03 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.04	QC Batch:	B5A0007
			Date Analyzed : 13-Jan-15 21:31 Column: ZB-1 Analyst: MAS		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.71			J	PCB-44	2960			
PCB-2	1.70			J	PCB-45	149			
PCB-3	0.734			J	PCB-46	106			
PCB-4/10	20.0				PCB-47	3310			
PCB-5/8	26.1				PCB-48/75	632			
PCB-6	11.1				PCB-50	9.78			
PCB-7/9	13.2				PCB-51	2780			
PCB-11	57.0				PCB-52/69	28400			E
PCB-12/13	ND	1.51			PCB-53	1830			
PCB-14	ND	1.35			PCB-54	400			
PCB-15	72.6				PCB-55	207			
PCB-16/32	672				PCB-56/60	3200			
PCB-17	73.2				PCB-57	205			
PCB-18	634				PCB-58	132			
PCB-19	46.2				PCB-61/70	6720			
PCB-20/21/33	179				PCB-62	ND	2.69		
PCB-22	272				PCB-63	696			
PCB-23	ND	0.217			PCB-65	2.42			J
PCB-24/27	69.4				PCB-66/76	10800			
PCB-25	215				PCB-67	215			
PCB-26	876				PCB-68	172			
PCB-28	5530				PCB-73	66.6			
PCB-29	6.76				PCB-74	8730			E
PCB-30	0.738			J	PCB-77	1180			
PCB-31	1780				PCB-78	ND	2.48		
PCB-34	18.2				PCB-79	1040			
PCB-35	ND	3.07			PCB-80	ND	2.12		
PCB-36	1.83			J	PCB-81	73.3			
PCB-37	522				PCB-82	131			
PCB-38	127				PCB-83	9.80			
PCB-39	1.77			J	PCB-84/92	5920			
PCB-40	84.5				PCB-85/116	660			
PCB-41/64/71/72	5020				PCB-86	ND	1.51		
PCB-42/59	634				PCB-87/117/125	6660			
PCB-43/49	17500			E	PCB-88/91	4110			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-15
Project:	120711-01.07 Task 1	Sample Size:	2.03 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.04	QC Batch:	B5A0007
			Date Analyzed : 13-Jan-15 21:31 Column: ZB-1 Analyst: MAS		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	16.6				PCB-136	2180			
PCB-90/101	42200			E	PCB-137	1870			
PCB-93	ND	1.36			PCB-138/163/164	49500			E
PCB-94	56.7				PCB-139/149	15800			E
PCB-95/98/102	9450				PCB-140	160			
PCB-96	390				PCB-141	4980			
PCB-97	4040				PCB-144	1770			
PCB-99	30400			E	PCB-145	2.70			
PCB-100	3110				PCB-146/165	10100			
PCB-103	3010				PCB-147	4380			
PCB-104	286				PCB-148	527			
PCB-105	11200			E	PCB-150	480			
PCB-106/118	32900			E	PCB-151	12300			E
PCB-107/109	2890				PCB-152	184			
PCB-108/112	332				PCB-153	76500			E
PCB-110	9320			E	PCB-154	7660			E
PCB-111/115	756				PCB-155	179			
PCB-113	55.1				PCB-156	3990			
PCB-114	665				PCB-157	717			
PCB-119	2300				PCB-158/160	4960			
PCB-120	244				PCB-159	ND	5.56		
PCB-121	62.4				PCB-166	121			
PCB-122	83.3				PCB-167	2010			
PCB-123	593				PCB-168	196			
PCB-124	586				PCB-169	8.83			
PCB-126	202				PCB-170	10000			E
PCB-127	ND	9.64			PCB-171	3170			
PCB-128/162	4460				PCB-172	1750			
PCB-129	173				PCB-173	23.2			
PCB-130	2080				PCB-174	1380			
PCB-131	ND	1.88			PCB-175	608			
PCB-132/161	1470				PCB-176	340			
PCB-133/142	1150				PCB-177	4850			
PCB-134/143	703				PCB-178	3940			
PCB-135	1310				PCB-179	2810			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-15
Project:	120711-01.07 Task 1	Sample Size:	2.03 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.04	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 21:31
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	30200			E	Total octaCB	22000			
PCB-181	90.8				Total nonaCB	1880			
PCB-182/187	30300			E	DecaCB	309			
PCB-183	9890			E	Total PCB	623000			
PCB-184	56.2								
PCB-185	568								
PCB-186	ND	0.619							
PCB-188	355								
PCB-189	395								
PCB-190	2480								
PCB-191	500								
PCB-192	ND	1.81							
PCB-193	1930								
PCB-194	4390								
PCB-195	1790								
PCB-196/203	7610								
PCB-197	277								
PCB-198	146								
PCB-199	5150								
PCB-200	76.0								
PCB-201	810								
PCB-202	1570								
PCB-204	5.31								
PCB-205	229								
PCB-206	1390								
PCB-207	215								
PCB-208	278								
PCB-209	309								
Total monoCB	4.14								
Total diCB	200								
Total triCB	11000								
Total tetraCB	97200								
Total pentaCB	173000								
Total hexaCB	212000								
Total heptaCB	106000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-WO-WS-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-15
Project:	120711-01.07 Task 1	Sample Size:	2.03 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Oct-2014 0:00	%Lipids:	7.04	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 21:31
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	73.7	5 -145		13C-PCB-170	93.1	10 -145	
13C-PCB-3	77.6	5 -145		13C-PCB-180	94.8	10 -145	
13C-PCB-4	73.9	5 -145		13C-PCB-188	91.0	10 -145	
13C-PCB-11	85.7	5 -145		13C-PCB-189	88.5	10 -145	
13C-PCB-9	80.5	5 -145		13C-PCB-194	99.5	10 -145	
13C-PCB-19	76.6	5 -145		13C-PCB-202	91.3	10 -145	
13C-PCB-28	103	5 -145		13C-PCB-206	97.2	10 -145	
13C-PCB-32	81.3	5 -145		13C-PCB-208	100	10 -145	
13C-PCB-37	91.8	5 -145		13C-PCB-209	106	10 -145	
13C-PCB-47	94.6	5 -145		CRS 13C-PCB-79	114	10 -145	
13C-PCB-52	87.8	5 -145		13C-PCB-178	104	10 -145	
13C-PCB-54	93.9	5 -145					
13C-PCB-70	106	5 -145					
13C-PCB-77	105	10 -145					
13C-PCB-80	97.9	10 -145					
13C-PCB-81	103	10 -145					
13C-PCB-95	91.2	10 -145					
13C-PCB-97	97.2	10 -145					
13C-PCB-101	97.2	10 -145					
13C-PCB-104	82.3	10 -145					
13C-PCB-105	105	10 -145					
13C-PCB-114	100	10 -145					
13C-PCB-118	98.8	10 -145					
13C-PCB-123	93.6	10 -145					
13C-PCB-126	99.5	10 -145					
13C-PCB-127	98.2	10 -145					
13C-PCB-138	103	10 -145					
13C-PCB-141	95.5	10 -145					
13C-PCB-153	103	10 -145					
13C-PCB-155	91.9	10 -145					
13C-PCB-156	97.9	10 -145					
13C-PCB-157	92.2	10 -145					
13C-PCB-159	96.7	10 -145					
13C-PCB-167	96.3	10 -145					
13C-PCB-169	90.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-SS-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-16
Project:	120711-01.07 Task 1	Sample Size:	2.08 g	Date Received:	13-Nov-2014 8:49
Date Collected:	13-Oct-2014 0:00	%Lipids:	4.38	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 22:36
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.86				PCB-44	4260			
PCB-2	0.833			J	PCB-45	64.2			
PCB-3	1.39			J	PCB-46	92.6			
PCB-4/10	29.9				PCB-47	1500			
PCB-5/8	40.5				PCB-48/75	608			
PCB-6	17.4				PCB-50	5.37			
PCB-7/9	8.36			J	PCB-51	176			
PCB-11	26.3				PCB-52/69	12000			
PCB-12/13	1.47			J	PCB-53	698			
PCB-14	ND	1.34			PCB-54	13.3			
PCB-15	56.4				PCB-55	164			
PCB-16/32	379				PCB-56/60	1570			
PCB-17	64.9				PCB-57	82.1			
PCB-18	407				PCB-58	57.1			
PCB-19	44.3				PCB-61/70	4110			
PCB-20/21/33	95.9				PCB-62	ND	0.799		
PCB-22	76.9				PCB-63	776			
PCB-23	0.494			J	PCB-65	ND	0.774		
PCB-24/27	61.0				PCB-66/76	10800			
PCB-25	121				PCB-67	250			
PCB-26	365				PCB-68	212			
PCB-28	3300				PCB-73	14.6			
PCB-29	1.29			J	PCB-74	9190			E
PCB-30	ND	0.306			PCB-77	1410			
PCB-31	547				PCB-78	ND	0.917		
PCB-34	12.9				PCB-79	1230			
PCB-35	ND	0.747			PCB-80	ND	0.725		
PCB-36	0.670			J	PCB-81	40.9			
PCB-37	221				PCB-82	185			
PCB-38	55.4				PCB-83	10.3			
PCB-39	0.877			J	PCB-84/92	9020			
PCB-40	38.8				PCB-85/116	690			
PCB-41/64/71/72	3730				PCB-86	ND	0.981		
PCB-42/59	558				PCB-87/117/125	9870			
PCB-43/49	10100				PCB-88/91	3320			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-SS-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-16
Project:	120711-01.07 Task 1	Sample Size:	2.08 g	Date Received:	13-Nov-2014 8:49
Date Collected:	13-Oct-2014 0:00	%Lipids:	4.38	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 22:36
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	33.2				PCB-136	2750			
PCB-90/101	54100			E	PCB-137	2800			
PCB-93	ND	0.888			PCB-138/163/164	74300			E
PCB-94	30.5				PCB-139/149	20300			E
PCB-95/98/102	12500				PCB-140	219			
PCB-96	100				PCB-141	5080			
PCB-97	5910				PCB-144	2000			
PCB-99	37900			E	PCB-145	6.14			
PCB-100	325				PCB-146/165	15100			E
PCB-103	812				PCB-147	2690			
PCB-104	5.59				PCB-148	111			
PCB-105	19000			E	PCB-150	180			
PCB-106/118	59900			E	PCB-151	10600			E
PCB-107/109	5950				PCB-152	27.4			
PCB-108/112	925				PCB-153	83200			E
PCB-110	21200			E	PCB-154	2250			
PCB-111/115	907				PCB-155	50.1			
PCB-113	46.9				PCB-156	6930			
PCB-114	907				PCB-157	1740			
PCB-119	1440				PCB-158/160	7300			
PCB-120	380				PCB-159	ND	10.4		
PCB-121	ND	0.528			PCB-166	289			
PCB-122	93.6				PCB-167	4040			
PCB-123	1200				PCB-168	130			
PCB-124	533				PCB-169	9.54			
PCB-126	246				PCB-170	11800			E
PCB-127	ND	6.14			PCB-171	3170			
PCB-128/162	8350				PCB-172	1950			
PCB-129	179				PCB-173	53.5			
PCB-130	5460				PCB-174	1240			
PCB-131	ND	1.64			PCB-175	517			
PCB-132/161	3370				PCB-176	516			
PCB-133/142	1750				PCB-177	6430			
PCB-134/143	1710				PCB-178	3370			
PCB-135	2110				PCB-179	2900			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-SS-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-16	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	2.08 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	13-Oct-2014 0:00	%Lipids:	4.38	Date Analyzed :	13-Jan-15 22:36	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	30200			E	Total octaCB	22200			
PCB-181	88.4				Total nonaCB	3230			
PCB-182/187	25500			E	DecaCB	640			
PCB-183	8980			E	Total PCB	711000			
PCB-184	46.4								
PCB-185	480								
PCB-186	ND	0.376							
PCB-188	237								
PCB-189	515								
PCB-190	2270								
PCB-191	386								
PCB-192	ND	1.64							
PCB-193	1570								
PCB-194	4670								
PCB-195	1460								
PCB-196/203	7360								
PCB-197	258								
PCB-198	150								
PCB-199	5010								
PCB-200	87.2								
PCB-201	875								
PCB-202	2130								
PCB-204	11.6								
PCB-205	198								
PCB-206	2380								
PCB-207	287								
PCB-208	558								
PCB-209	640								
Total monoCB	6.08								
Total diCB	180								
Total triCB	5750								
Total tetraCB	63700								
Total pentaCB	247000								
Total hexaCB	265000								
Total heptaCB	102000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-WO-SS-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-16
Project:	120711-01.07 Task 1	Sample Size:	2.08 g	Date Received:	13-Nov-2014 8:49
Date Collected:	13-Oct-2014 0:00	%Lipids:	4.38	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 22:36
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	51.0	5 -145		13C-PCB-170	96.7	10 -145	
13C-PCB-3	65.4	5 -145		13C-PCB-180	98.7	10 -145	
13C-PCB-4	63.1	5 -145		13C-PCB-188	97.2	10 -145	
13C-PCB-11	82.4	5 -145		13C-PCB-189	89.5	10 -145	
13C-PCB-9	74.0	5 -145		13C-PCB-194	92.2	10 -145	
13C-PCB-19	71.1	5 -145		13C-PCB-202	96.3	10 -145	
13C-PCB-28	70.1	5 -145		13C-PCB-206	93.3	10 -145	
13C-PCB-32	83.9	5 -145		13C-PCB-208	95.2	10 -145	
13C-PCB-37	83.2	5 -145		13C-PCB-209	101	10 -145	
13C-PCB-47	85.4	5 -145		CRS 13C-PCB-79	110	10 -145	
13C-PCB-52	84.6	5 -145		13C-PCB-178	104	10 -145	
13C-PCB-54	83.3	5 -145					
13C-PCB-70	90.7	5 -145					
13C-PCB-77	98.1	10 -145					
13C-PCB-80	90.4	10 -145					
13C-PCB-81	92.4	10 -145					
13C-PCB-95	86.2	10 -145					
13C-PCB-97	93.1	10 -145					
13C-PCB-101	93.0	10 -145					
13C-PCB-104	78.9	10 -145					
13C-PCB-105	103	10 -145					
13C-PCB-114	101	10 -145					
13C-PCB-118	100	10 -145					
13C-PCB-123	93.3	10 -145					
13C-PCB-126	99.6	10 -145					
13C-PCB-127	102	10 -145					
13C-PCB-138	101	10 -145					
13C-PCB-141	98.8	10 -145					
13C-PCB-153	99.6	10 -145					
13C-PCB-155	90.2	10 -145					
13C-PCB-156	102	10 -145					
13C-PCB-157	98.5	10 -145					
13C-PCB-159	93.8	10 -145					
13C-PCB-167	97.3	10 -145					
13C-PCB-169	92.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-17	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	1.02 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	10-Dec-2014 0:00	%Lipids:	4.61	Date Analyzed :	13-Jan-15 23:40	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.56			J	PCB-44	2640			
PCB-2	0.636			J	PCB-45	118			
PCB-3	1.13			J	PCB-46	51.5			
PCB-4/10	11.2			J	PCB-47	1930			
PCB-5/8	11.7			J	PCB-48/75	287			
PCB-6	ND	3.18			PCB-50	3.47			J
PCB-7/9	ND	3.15			PCB-51	30.7			
PCB-11	28.2				PCB-52/69	5420			
PCB-12/13	ND	3.29			PCB-53	196			
PCB-14	ND	2.93			PCB-54	1.27			J
PCB-15	ND	2.48			PCB-55	115			
PCB-16/32	52.9				PCB-56/60	2030			
PCB-17	86.0				PCB-57	62.7			
PCB-18	323				PCB-58	31.6			
PCB-19	22.0				PCB-61/70	10400			
PCB-20/21/33	54.8				PCB-62	ND	1.29		
PCB-22	185				PCB-63	486			
PCB-23	2.12			J	PCB-65	ND		3.93	
PCB-24/27	19.1				PCB-66/76	7400			
PCB-25	60.2				PCB-67	177			
PCB-26	154				PCB-68	250			
PCB-28	1230				PCB-73	11.3			
PCB-29	0.874			J	PCB-74	3570			
PCB-30	ND	0.818			PCB-77	253			
PCB-31	874				PCB-78	ND	2.08		
PCB-34	3.64			J	PCB-79	739			
PCB-35	ND	0.703			PCB-80	ND	1.70		
PCB-36	ND	0.345			PCB-81	73.9			
PCB-37	6.22				PCB-82	145			
PCB-38	67.2				PCB-83	12.4			
PCB-39	7.37				PCB-84/92	7580			
PCB-40	163				PCB-85/116	8800			
PCB-41/64/71/72	2650				PCB-86	ND	2.49		
PCB-42/59	511				PCB-87/117/125	6550			
PCB-43/49	3030				PCB-88/91	1780			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-17
Project:	120711-01.07 Task 1	Sample Size:	1.02 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Dec-2014 0:00	%Lipids:	4.61	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 23:40
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	48.0				PCB-136	1410			
PCB-90/101	29800			E	PCB-137	4410			
PCB-93	ND	2.11			PCB-138/163/164	115000			E
PCB-94	64.3				PCB-139/149	23800			
PCB-95/98/102	10100				PCB-140	617			
PCB-96	14.9				PCB-141	9490			
PCB-97	4130				PCB-144	1430			
PCB-99	19900			E	PCB-145	1.75			J
PCB-100	109				PCB-146/165	23600			
PCB-103	147				PCB-147	1580			
PCB-104	0.999			J	PCB-148	163			
PCB-105	16500			E	PCB-150	46.3			
PCB-106/118	43300			E	PCB-151	7340			
PCB-107/109	6030				PCB-152	28.6			
PCB-108/112	986				PCB-153	137000			E
PCB-110	19900			E	PCB-154	1130			
PCB-111/115	644				PCB-155	102			
PCB-113	ND	1.53			PCB-156	7080			
PCB-114	1070				PCB-157	2030			
PCB-119	895				PCB-158/160	6220			
PCB-120	426				PCB-159	ND	4.27		
PCB-121	ND	1.25			PCB-166	436			
PCB-122	85.1				PCB-167	4370			
PCB-123	906				PCB-168	147			
PCB-124	1890				PCB-169	77.3			
PCB-126	302				PCB-170	22300			E
PCB-127	30.0				PCB-171	5960			
PCB-128/162	14900				PCB-172	6530			
PCB-129	460				PCB-173	6.16			
PCB-130	6370				PCB-174	7680			
PCB-131	14.3				PCB-175	1270			
PCB-132/161	4030				PCB-176	471			
PCB-133/142	3390				PCB-177	12200			
PCB-134/143	1260				PCB-178	9000			
PCB-135	6780				PCB-179	4340			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-17	Date Received:	13-Nov-2014 8:49		
Project:	120711-01.07 Task 1	Sample Size:	1.02 g	QC Batch:	B5A0007	Date Extracted:	03-Jan-2015 6:49		
Date Collected:	10-Dec-2014 0:00	%Lipids:	4.61	Date Analyzed :	13-Jan-15 23:40	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	64700			E	Total octaCB	61200			
PCB-181	194				Total nonaCB	6730			
PCB-182/187	52800			E	DecaCB	871			
PCB-183	17400			E	Total PCB	901000			
PCB-184	371								
PCB-185	1570								
PCB-186	4.63			J					
PCB-188	312								
PCB-189	1270								
PCB-190	5560								
PCB-191	776								
PCB-192	28.3								
PCB-193	4350								
PCB-194	11800								
PCB-195	3580								
PCB-196/203	19600								
PCB-197	1160								
PCB-198	893								
PCB-199	16600			E					
PCB-200	195								
PCB-201	2400								
PCB-202	4150								
PCB-204	128								
PCB-205	739								
PCB-206	4240								
PCB-207	1080								
PCB-208	1410								
PCB-209	871								
Total monoCB	3.33								
Total diCB	51.1								
Total triCB	3150								
Total tetraCB	42600								
Total pentaCB	182000								
Total hexaCB	385000								
Total heptaCB	219000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400893-17
Project:	120711-01.07 Task 1	Sample Size:	1.02 g	Date Received:	13-Nov-2014 8:49
Date Collected:	10-Dec-2014 0:00	%Lipids:	4.61	QC Batch:	B5A0007
				Date Analyzed :	13-Jan-15 23:40
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	63.3	5 -145		13C-PCB-170	98.7	10 -145	
13C-PCB-3	70.9	5 -145		13C-PCB-180	99.6	10 -145	
13C-PCB-4	70.1	5 -145		13C-PCB-188	94.4	10 -145	
13C-PCB-11	86.5	5 -145		13C-PCB-189	92.2	10 -145	
13C-PCB-9	78.6	5 -145		13C-PCB-194	99.7	10 -145	
13C-PCB-19	24.7	5 -145		13C-PCB-202	95.4	10 -145	
13C-PCB-28	91.6	5 -145		13C-PCB-206	100	10 -145	
13C-PCB-32	85.6	5 -145		13C-PCB-208	93.6	10 -145	
13C-PCB-37	96.4	5 -145		13C-PCB-209	104	10 -145	
13C-PCB-47	94.0	5 -145		CRS 13C-PCB-79	107	10 -145	
13C-PCB-52	86.1	5 -145		13C-PCB-178	100	10 -145	
13C-PCB-54	87.7	5 -145					
13C-PCB-70	99.1	5 -145					
13C-PCB-77	94.1	10 -145					
13C-PCB-80	99.6	10 -145					
13C-PCB-81	97.0	10 -145					
13C-PCB-95	93.3	10 -145					
13C-PCB-97	101	10 -145					
13C-PCB-101	102	10 -145					
13C-PCB-104	85.4	10 -145					
13C-PCB-105	96.9	10 -145					
13C-PCB-114	97.5	10 -145					
13C-PCB-118	101	10 -145					
13C-PCB-123	93.7	10 -145					
13C-PCB-126	102	10 -145					
13C-PCB-127	95.9	10 -145					
13C-PCB-138	97.7	10 -145					
13C-PCB-141	93.2	10 -145					
13C-PCB-153	93.6	10 -145					
13C-PCB-155	97.1	10 -145					
13C-PCB-156	101	10 -145					
13C-PCB-157	94.9	10 -145					
13C-PCB-159	103	10 -145					
13C-PCB-167	97.9	10 -145					
13C-PCB-169	95.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400893-01	IB-WO-SS-04-05-20141012	26.2	15-Dec-2014	B4L0069
1400893-02	IB-WO-SS-05-05-20141012	27.0	15-Dec-2014	B4L0069
1400893-03	IB-WO-SS-06-05-20141012	26.1	15-Dec-2014	B4L0069
1400893-04	IB-WO-WS-07-05-20141012	28.2	15-Dec-2014	B4L0069
1400893-05	IB-WO-WS-08-05-20141012	28.8	15-Dec-2014	B4L0069
1400893-06	IB-WO-WS-09-05-20141012	27.1	15-Dec-2014	B4L0069
1400893-07	CS-WO-WS-01-03-20141010	29.0	15-Dec-2014	B4L0069
1400893-08	CS-WO-WS-02-03-20141010	28.6	15-Dec-2014	B4L0069
1400893-09	CS-WO-WS-03-03-20141010	30.6	15-Dec-2014	B4L0069
1400893-10	CS-WO-WS-05-03-20141010	29.7	15-Dec-2014	B4L0069
1400893-11	CS-WO-WS-06-03-20141010	29.0	15-Dec-2014	B4L0069
1400893-12	CS-WO-WS-07-03-20141010	29.1	15-Dec-2014	B4L0069
1400893-13	CS-WO-WS-08-03-20141010	28.2	15-Dec-2014	B4L0069
1400893-14	CS-WO-WS-09-03-20141010	30.7	15-Dec-2014	B4L0069
1400893-15	CS-WO-WS-10-03-20141010	28.8	15-Dec-2014	B4L0069

Sample ID	Lab ID	Total Length (cm)	Standard Length (cm)	Mass (g)
IB-WO-WS-07-05-20141012	1400893-04	20.0	16.9	99.45
IB-WO-WS-08-05-20141012	1400893-05	21.8	16.1	111.04
IB-WO-WS-09-05-20141012	1400893-06	21.9	16.3	108.57
FH-WO-SS-09-08-20141013	1400893-16	11.4	9.1	18.61

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014																		
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01.07 Task 1																		
Project Manager: Chris Stransky																		
Phone Number: (858) 300 4350																		
Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes: section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x						Scales already collected.
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x		x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x		x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4												x		
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21												x		# of Archive unknown b/c of final sorting
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x		x				x		Scales already collected. Skin-Off Fillets + Offal from this replicate.
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x		x		x				Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x			x	x					Scales already collected from one fish in this rep.
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x			x	x					Scales already collected from one fish in this rep.
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from both fish in this Rep #5.
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1												x		
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.

ANCHOR QEA 1400893
0.2c, 0.4c, -2.1c

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 MKO
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (low-res) 8270 Consensus - is conducted on sample ID: FF/OF - sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish														
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch.	1	x		x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch.	1	x		x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch.	1	x	x	x	x	x	x	x	x			x	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.	
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch.	6											x		
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x		Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x		Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x		Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g	
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x		Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x		Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x			x		Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.	
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x			x		Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.	
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	1	x	x	x	x	x	x	x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	6											x		
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x		x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

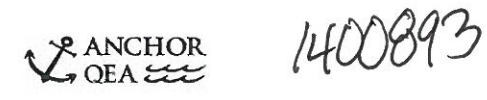
Relinquished By: Via Email Company: Anchor QEA
Signature/Printed Name: _____ Date/Time: _____

Received By: Kellie B. Woodruff Vista Company: 12/04/14 10:01
Signature/Printed Name: _____ Date/Time: _____

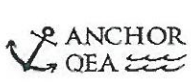

Relinquished By: _____ Company: _____
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Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate PCBs (high res) epa 1668C PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE % Solids (Total Solids) % Lipids (Total Lipids) Fish Fillet Prep (Maximize Issue) Offal Prep Whole Body Fish Prep Prep Sample aliquot to ship to Physis (CAN Stable Isotope) Tweezer off 10 pectoral area scales, measure and use envelope Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish. Archive: No testing / keep frozen See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire trial will be tested for chemistry and no cloth will be kept on this specific replicate.										Comments/Preservation				
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize Issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CAN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive: No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire trial will be tested for chemistry and no cloth will be kept on this specific replicate.	Comments/Preservation
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13												x		
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
128	CS-FF/OF-WS-04-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x	x	x	x	x	x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1												x		
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3												x		
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1												x		L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1												x		Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 1101
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments			
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270. Consensus - Is complete fish, but list Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7														Lab pic 028. Contains A1-A7. Orig. archive.
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x				x					x				TAKE SCALES. Analyze this sample only for lipids and PCBs
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected of both fish in replicate. Note size of fish the Otolith comes from
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x				x					Scales already collected.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x				x					Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4													x	4 plus possibly another 4 more archive fish
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.



1400893

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/23/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: Christine Benedict Vista Company: 12/14/14 1100
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

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 ⊗ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/03/14 1607</u>	Initials: <u>UBAB KL</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A.5</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.4</u> (uncorrected)	Time: <u>0920</u>		Thermometer ID: IR-1
Temp °C: <u>0.20.4</u> (corrected)			

UBAB 12/5/14

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>1 of 9</u> Trk # <u>7718 4040 1759</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <u>UBAB 12/5/14</u>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

COC ID
CS-W0-WS-01-03-2014 1010
 -02-
 -03- 12/5/14
 -04- UBAB
 -05-
 -06-
 -07-
 -08-
 -09-
 -10-

Sample Label ID
CS-W0-06-03

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893

TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/03/17 1607</u>	Initials: <u>UBAB</u> <u>KL</u>	Location: <u>WF-2</u> Shelf/Rack: <u>A-5</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
		<input checked="" type="radio"/> Return	<input type="radio"/> Dispose

Comments:

COC ID

Sample Label ID

LB-WD-SS-04-05-20141012
 ↓ -05- ↓
 -06- ↓

LB-WD-SS-05-05-20141015

LB-WD-WS-07-05-20141012
 ↓ -08- ↓
 -09- ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>CBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/03/14 1607</u>	Initials: <u>CBAB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>A5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: <u>-2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		✓ <u>12/15/14</u>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		COC	Sample Container
		None	
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

COC ID

FH-WO-SS-09-08-2014 1013

Chain of Custody Anomaly/Sample Acceptance Form



AMEC Earth & Environmental
 Chris Stransky
 chris.stransky@amec.com
 (858) 300-4350

Workorder Number: 1400893
 Date Received: 25-Nov-14 16:07
 Documented by/date: B. Benedict 12/05/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

Sample IDs on Chain of Custody do not match Sample Container Labels

Chain of Custody ID	Container Label ID
IB-WO-SS-04-05-20141012	LB-WO-SS-04-05-20141012
IB-WO-SS-05-05-20141012	LB-WO-SS-05-05-20141012
IB-WO-SS-06-05-20141012	LB-WO-SS-06-05-20141012
IB-WO-WS-07-05-20141012	LB-WO-WS-07-05-20141012
IB-WO-WS-08-05-20141012	LB-WO-WS-08-05-20141012
IB-WO-WS-09-05-20141012	LB-WO-WS-09-05-20141012
CS-WO-WS-06-03-20141010	CS-WO-06-03

Client Authorization

Proceed with Analysis: YES NO Signature and Date SM 1/19/15

Client Comments/Instructions per email, COC nomenclature is correct

January 15, 2015

Vista Project I.D.: 1400900

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400900

Case Narrative

Sample Condition on Receipt:

Twenty fish samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

As requested, scales were removed from sample "FH-FF-WC-01-08-20141013" and "FH-FF-WC-02-08-20141013". The physical measurements of each scaled fish are included in the report. Heads were removed from all fish, to be shipped to Southern California Marine Institute. For sample "FH-FF-WC-06-08-20141013", the mass of the fish from which the head was collected was 141.6g. For sample "FH-FF-WC-07-08-20141013", the head was collected from the fish with a Total Length of 22.5cm and a Standard Length of 18.5cm.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Ten samples required re-extraction; the extracts overheated in the original extraction due to a chiller malfunction.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

The recoveries of all labeled standards in the QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "FH-FF-CH-01-08-20141013" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed

with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400900-01	FH-FF-CH-01-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-02	FH-FF-CH-02-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-03	FH-FF-CH-03-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-04	FH-FF-CH-04-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-05	FH-FF-CH-05-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-06	FH-FF-CH-06-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-07	FH-FF-CH-08-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-08	FH-FF-CH-09-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-09	FH-FF-CH-10-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-10	FH-FF-WC-01-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-11	FH-FF-WC-02-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-12	FH-FF-WC-03-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-13	FH-FF-WC-04-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-14	FH-FF-WC-05-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-15	FH-FF-WC-06-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-16	FH-FF-WC-07-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-17	FH-FF-WC-08-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-18	FH-FF-WC-09-08-20141013	13-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-19	OA-FF-CH-01-06-20141011	11-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil
1400900-20	OA-FF-CH-02-06-20141011	11-Oct-14 00:00	13-Nov-14 12:34	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0139	Lab Sample: B4L0139-BLK1
Sample Size: 10.0 g	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 00:37 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.160			PCB-43/49	ND	0.189		
PCB-2	ND	0.190			PCB-44	ND	0.231		
PCB-3	ND	0.184			PCB-45	ND	0.218		
PCB-4/10	ND	0.173			PCB-46	ND	0.221		
PCB-5/8	ND	0.143			PCB-47	ND	0.192		
PCB-6	ND	0.140			PCB-48/75	ND	0.167		
PCB-7/9	ND	0.139			PCB-50	ND	0.182		
PCB-11	ND		0.786		PCB-51	ND	0.182		
PCB-12/13	ND	0.142			PCB-52/69	ND	0.165		
PCB-14	ND	0.127			PCB-53	ND	0.177		
PCB-15	ND	0.130			PCB-54	ND	0.147		
PCB-16/32	ND	0.0694			PCB-55	ND	0.128		
PCB-17	ND	0.0794			PCB-56/60	ND	0.131		
PCB-18	ND		0.279		PCB-57	ND	0.131		
PCB-19	ND	0.0873			PCB-58	ND	0.132		
PCB-20/21/33	ND	0.104			PCB-61/70	ND	0.135		
PCB-22	ND	0.104			PCB-62	ND	0.168		
PCB-23	ND	0.104			PCB-63	ND	0.130		
PCB-24/27	ND	0.0607			PCB-65	ND	0.163		
PCB-25	ND	0.102			PCB-66/76	ND	0.128		
PCB-26	ND	0.106			PCB-67	ND	0.136		
PCB-28	ND	0.200			PCB-68	ND	0.146		
PCB-29	ND	0.103			PCB-73	ND	0.153		
PCB-30	ND	0.0618			PCB-74	ND	0.121		
PCB-31	ND	0.0965			PCB-77	ND	0.130		
PCB-34	ND	0.109			PCB-78	ND	0.134		
PCB-35	ND	0.113			PCB-79	ND	0.127		
PCB-36	ND	0.113			PCB-80	ND	0.112		
PCB-37	ND	0.111			PCB-81	ND	0.120		
PCB-38	ND	0.114			PCB-82	ND	0.547		
PCB-39	ND	0.109			PCB-83	ND	0.375		
PCB-40	ND	0.266			PCB-84/92	ND	0.486		
PCB-41/64/71/72	ND	0.166			PCB-85/116	ND	0.438		
PCB-42/59	ND	0.179			PCB-86	ND	0.558		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0139	Lab Sample: B4L0139-BLK1
Sample Size: 10.0 g	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 00:37 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.366			PCB-133/142	ND	0.148		
PCB-88/91	ND	0.536			PCB-134/143	ND	0.151		
PCB-89	ND	0.502			PCB-135	ND	0.345		
PCB-90/101	ND	0.429			PCB-136	ND	0.248		
PCB-93	ND	0.483			PCB-137	ND	0.141		
PCB-94	ND	0.493			PCB-138/163/164	ND	0.121		
PCB-95/98/102	ND	0.450			PCB-139/149	ND	0.319		
PCB-96	ND	0.375			PCB-140	ND	0.343		
PCB-97	ND	0.457			PCB-141	ND	0.155		
PCB-99	ND	0.397			PCB-144	ND	0.328		
PCB-100	ND	0.409			PCB-145	ND	0.246		
PCB-103	ND	0.439			PCB-146/165	ND	0.121		
PCB-104	ND	0.326			PCB-147	ND	0.325		
PCB-105	ND	0.128			PCB-148	ND	0.363		
PCB-106/118	ND	0.315			PCB-150	ND	0.253		
PCB-107/109	ND	0.331			PCB-151	ND	0.333		
PCB-108/112	ND	0.443			PCB-152	ND	0.245		
PCB-110	ND	0.339			PCB-153	ND		0.217	
PCB-111/115	ND	0.325			PCB-154	ND	0.304		
PCB-113	ND	0.378			PCB-155	ND	0.237		
PCB-114	ND	0.121			PCB-156	ND	0.100		
PCB-119	ND	0.331			PCB-157	ND	0.111		
PCB-120	ND	0.320			PCB-158/160	ND	0.115		
PCB-121	ND	0.287			PCB-159	ND	0.109		
PCB-122	ND	0.132			PCB-166	ND	0.114		
PCB-123	ND	0.332			PCB-167	ND	0.108		
PCB-124	ND	0.305			PCB-168	ND	0.102		
PCB-126	ND	0.132			PCB-169	ND	0.106		
PCB-127	ND	0.130			PCB-170	ND	0.141		
PCB-128/162	ND	0.125			PCB-171	ND	0.139		
PCB-129	ND	0.160			PCB-172	ND	0.149		
PCB-130	ND	0.178			PCB-173	ND	0.157		
PCB-131	ND	0.153			PCB-174	ND	0.136		
PCB-132/161	ND	0.126			PCB-175	ND	0.150		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0139	Lab Sample: B4L0139-BLK1
Sample Size: 10.0 g	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 00:37 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.107			Total triCB	ND		0.279	
PCB-177	ND	0.147			Total tetraCB	ND	0.266		
PCB-178	ND	0.155			Total pentaCB	ND	0.558		
PCB-179	ND	0.111			Total hexaCB	ND		0.217	
PCB-180	ND	0.127			Total heptaCB	ND	0.157		
PCB-181	ND	0.134			Total octaCB	0.242			
PCB-182/187	ND	0.143			Total nonaCB	ND	0.138		
PCB-183	ND	0.134			DecaCB	ND		0.260	
PCB-184	ND	0.117			Total PCB	0.242			
PCB-185	ND	0.135							
PCB-186	ND	0.114							
PCB-188	ND	0.103							
PCB-189	ND	0.0928							
PCB-190	ND	0.105							
PCB-191	ND	0.109							
PCB-192	ND	0.119							
PCB-193	ND	0.110							
PCB-194	ND	0.0618							
PCB-195	0.242			J					
PCB-196/203	ND	0.319							
PCB-197	ND	0.230							
PCB-198	ND	0.331							
PCB-199	ND	0.338							
PCB-200	ND	0.242							
PCB-201	ND	0.223							
PCB-202	ND	0.237							
PCB-204	ND	0.248							
PCB-205	ND	0.0545							
PCB-206	ND	0.138							
PCB-207	ND	0.102							
PCB-208	ND	0.0972							
PCB-209	ND		0.260						
Total monoCB	ND	0.190							
Total diCB	ND		0.786						

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0139	Lab Sample: B4L0139-BLK1
Sample Size: 10.0 g	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 00:37 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	63.5	5 - 145		13C-PCB-157	83.5	10 - 145	
13C-PCB-3	60.4	5 - 145		13C-PCB-159	83.6	10 - 145	
13C-PCB-4	64.3	5 - 145		13C-PCB-167	81.7	10 - 145	
13C-PCB-11	69.5	5 - 145		13C-PCB-169	85.8	10 - 145	
13C-PCB-9	65.7	5 - 145		13C-PCB-170	72.9	10 - 145	
13C-PCB-19	52.7	5 - 145		13C-PCB-180	72.4	10 - 145	
13C-PCB-28	71.4	5 - 145		13C-PCB-188	64.9	10 - 145	
13C-PCB-32	56.5	5 - 145		13C-PCB-189	74.2	10 - 145	
13C-PCB-37	74.3	5 - 145		13C-PCB-194	79.1	10 - 145	
13C-PCB-47	70.8	5 - 145		13C-PCB-202	61.7	10 - 145	
13C-PCB-52	74.2	5 - 145		13C-PCB-206	70.6	10 - 145	
13C-PCB-54	71.8	5 - 145		13C-PCB-208	64.8	10 - 145	
13C-PCB-70	81.4	5 - 145		13C-PCB-209	75.3	10 - 145	
13C-PCB-77	84.9	10 - 145		CRS 13C-PCB-79	80.0	10 - 145	
13C-PCB-80	83.8	10 - 145		13C-PCB-178	67.1	10 - 145	
13C-PCB-81	85.5	10 - 145					
13C-PCB-95	72.2	10 - 145					
13C-PCB-97	76.5	10 - 145					
13C-PCB-101	74.9	10 - 145					
13C-PCB-104	69.5	10 - 145					
13C-PCB-105	91.1	10 - 145					
13C-PCB-114	91.8	10 - 145					
13C-PCB-118	80.4	10 - 145					
13C-PCB-123	81.1	10 - 145					
13C-PCB-126	96.2	10 - 145					
13C-PCB-127	91.5	10 - 145					
13C-PCB-138	79.5	10 - 145					
13C-PCB-141	78.7	10 - 145					
13C-PCB-153	76.4	10 - 145					
13C-PCB-155	61.4	10 - 145					
13C-PCB-156	85.1	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0142	Lab Sample: B4L0142-BLK1
Sample Size: 10.0 g	Date Extracted: 28-Dec-2014 6:44	Date Analyzed: 31-Dec-14 03:33 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.393			PCB-43/49	ND	0.256		
PCB-2	ND	0.344			PCB-44	ND	0.291		
PCB-3	ND	0.333			PCB-45	ND	0.295		
PCB-4/10	ND	1.17			PCB-46	ND	0.299		
PCB-5/8	ND	0.866			PCB-47	ND	0.242		
PCB-6	ND	0.848			PCB-48/75	ND	0.210		
PCB-7/9	ND	0.842			PCB-50	ND	0.267		
PCB-11	ND	0.675			PCB-51	ND	0.247		
PCB-12/13	ND	0.712			PCB-52/69	ND	0.223		
PCB-14	ND	0.635			PCB-53	ND	0.240		
PCB-15	ND	0.648			PCB-54	ND	0.216		
PCB-16/32	ND	0.156			PCB-55	ND	0.182		
PCB-17	ND	0.179			PCB-56/60	ND	0.185		
PCB-18	ND	0.187			PCB-57	ND	0.189		
PCB-19	ND	0.217			PCB-58	ND	0.191		
PCB-20/21/33	ND	0.188			PCB-61/70	ND	0.195		
PCB-22	ND	0.187			PCB-62	ND	0.212		
PCB-23	ND	0.188			PCB-63	ND	0.188		
PCB-24/27	ND	0.137			PCB-65	ND	0.205		
PCB-25	ND	0.184			PCB-66/76	ND	0.185		
PCB-26	ND	0.191			PCB-67	ND	0.196		
PCB-28	0.184			J	PCB-68	ND	0.184		
PCB-29	ND	0.186			PCB-73	ND	0.208		
PCB-30	ND	0.154			PCB-74	ND	0.175		
PCB-31	ND	0.174			PCB-77	ND	0.192		
PCB-34	ND	0.196			PCB-78	ND	0.193		
PCB-35	ND	0.188			PCB-79	ND	0.179		
PCB-36	ND	0.188			PCB-80	ND	0.158		
PCB-37	ND	0.186			PCB-81	ND	0.173		
PCB-38	ND	0.191			PCB-82	ND	0.687		
PCB-39	ND	0.182			PCB-83	ND	0.481		
PCB-40	ND	0.334			PCB-84/92	ND	0.626		
PCB-41/64/71/72	ND		0.215		PCB-85/116	ND	0.562		
PCB-42/59	ND	0.225			PCB-86	ND	0.715		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B4L0142
Date Extracted: 28-Dec-2014 6:44Lab Sample: B4L0142-BLK1
Date Analyzed: 31-Dec-14 03:33 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.469			PCB-133/142	ND	0.241		
PCB-88/91	ND	0.680			PCB-134/143	ND	0.246		
PCB-89	ND	0.647			PCB-135	ND	0.502		
PCB-90/101	ND	0.553			PCB-136	ND	0.361		
PCB-93	ND	0.613			PCB-137	ND	0.220		
PCB-94	ND	0.626			PCB-138/163/164	ND	0.200		
PCB-95/98/102	ND	0.571			PCB-139/149	ND	0.464		
PCB-96	ND	0.485			PCB-140	ND	0.499		
PCB-97	ND	0.586			PCB-141	ND	0.241		
PCB-99	ND	0.511			PCB-144	ND	0.478		
PCB-100	ND	0.528			PCB-145	ND	0.358		
PCB-103	ND	0.568			PCB-146/165	ND	0.197		
PCB-104	ND	0.421			PCB-147	ND	0.472		
PCB-105	ND	0.213			PCB-148	ND	0.528		
PCB-106/118	ND	0.412			PCB-150	ND	0.368		
PCB-107/109	ND	0.415			PCB-151	ND	0.484		
PCB-108/112	ND	0.568			PCB-152	ND	0.356		
PCB-110	ND	0.435			PCB-153	ND	0.193		
PCB-111/115	ND	0.417			PCB-154	ND	0.443		
PCB-113	ND	0.487			PCB-155	ND	0.346		
PCB-114	ND	0.201			PCB-156	ND	0.176		
PCB-119	ND	0.425			PCB-157	ND	0.184		
PCB-120	ND	0.410			PCB-158/160	ND	0.190		
PCB-121	ND	0.364			PCB-159	ND	0.183		
PCB-122	ND	0.220			PCB-166	ND	0.191		
PCB-123	ND	0.416			PCB-167	ND	0.191		
PCB-124	ND	0.383			PCB-168	ND	0.166		
PCB-126	ND	0.222			PCB-169	ND	0.192		
PCB-127	ND	0.211			PCB-170	ND	0.198		
PCB-128/162	ND	0.209			PCB-171	ND	0.192		
PCB-129	ND	0.265			PCB-172	ND	0.206		
PCB-130	ND	0.278			PCB-173	ND	0.217		
PCB-131	ND	0.249			PCB-174	ND	0.188		
PCB-132/161	ND	0.205			PCB-175	ND	0.206		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0142	Lab Sample: B4L0142-BLK1
Sample Size: 10.0 g	Date Extracted: 28-Dec-2014 6:44	Date Analyzed: 31-Dec-14 03:33 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.146			Total triCB	0.184			
PCB-177	ND	0.203			Total tetraCB	ND		0.215	
PCB-178	ND	0.213			Total pentaCB	ND		0.715	
PCB-179	ND	0.153			Total hexaCB	ND		0.528	
PCB-180	ND	0.176			Total heptaCB	ND		0.217	
PCB-181	ND	0.185			Total octaCB	ND		0.384	
PCB-182/187	ND	0.197			Total nonaCB	ND		0.246	
PCB-183	ND	0.184			DecaCB	ND		0.154	
PCB-184	ND	0.161			Total PCB	0.184			
PCB-185	ND	0.188							
PCB-186	ND	0.156							
PCB-188	ND	0.142							
PCB-189	ND	0.139							
PCB-190	ND	0.147							
PCB-191	ND	0.151							
PCB-192	ND	0.165							
PCB-193	ND	0.152							
PCB-194	ND	0.137							
PCB-195	ND	0.143							
PCB-196/203	ND	0.362							
PCB-197	ND	0.261							
PCB-198	ND	0.377							
PCB-199	ND	0.384							
PCB-200	ND	0.275							
PCB-201	ND	0.254							
PCB-202	ND	0.269							
PCB-204	ND	0.282							
PCB-205	ND	0.121							
PCB-206	ND	0.246							
PCB-207	ND	0.156							
PCB-208	ND	0.149							
PCB-209	ND	0.154							
Total monoCB	ND	0.393							
Total diCB	ND	1.17							

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0142	Lab Sample: B4L0142-BLK1
Sample Size: 10.0 g	Date Extracted: 28-Dec-2014 6:44	Date Analyzed: 31-Dec-14 03:33 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	39.1	5 - 145		13C-PCB-157	98.9	10 - 145	
13C-PCB-3	49.2	5 - 145		13C-PCB-159	96.3	10 - 145	
13C-PCB-4	52.3	5 - 145		13C-PCB-167	95.5	10 - 145	
13C-PCB-11	75.2	5 - 145		13C-PCB-169	99.6	10 - 145	
13C-PCB-9	59.6	5 - 145		13C-PCB-170	101	10 - 145	
13C-PCB-19	60.8	5 - 145		13C-PCB-180	101	10 - 145	
13C-PCB-28	72.2	5 - 145		13C-PCB-188	89.2	10 - 145	
13C-PCB-32	73.4	5 - 145		13C-PCB-189	95.4	10 - 145	
13C-PCB-37	86.0	5 - 145		13C-PCB-194	95.7	10 - 145	
13C-PCB-47	85.9	5 - 145		13C-PCB-202	81.3	10 - 145	
13C-PCB-52	87.8	5 - 145		13C-PCB-206	96.2	10 - 145	
13C-PCB-54	77.5	5 - 145		13C-PCB-208	86.8	10 - 145	
13C-PCB-70	92.7	5 - 145		13C-PCB-209	111	10 - 145	
13C-PCB-77	92.3	10 - 145		CRS 13C-PCB-79	96.9	10 - 145	
13C-PCB-80	95.1	10 - 145		13C-PCB-178	90.4	10 - 145	
13C-PCB-81	92.4	10 - 145					
13C-PCB-95	97.6	10 - 145					
13C-PCB-97	97.4	10 - 145					
13C-PCB-101	96.5	10 - 145					
13C-PCB-104	92.3	10 - 145					
13C-PCB-105	95.6	10 - 145					
13C-PCB-114	94.3	10 - 145					
13C-PCB-118	105	10 - 145					
13C-PCB-123	104	10 - 145					
13C-PCB-126	98.6	10 - 145					
13C-PCB-127	96.7	10 - 145					
13C-PCB-138	96.0	10 - 145					
13C-PCB-141	97.4	10 - 145					
13C-PCB-153	94.8	10 - 145					
13C-PCB-155	81.6	10 - 145					
13C-PCB-156	94.6	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0139
Date Extracted: 26-Dec-2014 11:08

Lab Sample: B4L0139-BS1
Date Analyzed: 30-Dec-14 02:47 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	123	100	123	60 - 135	IS 13C-PCB-1	65.8	15 - 145
PCB-3	122	100	122	60 - 135	IS 13C-PCB-3	71.9	15 - 145
PCB-4/10	528	400	132	60 - 135	IS 13C-PCB-4	72.1	15 - 145
PCB-15	260	200	130	60 - 135	IS 13C-PCB-11	77.2	15 - 145
PCB-19	127	100	127	60 - 135	IS 13C-PCB-9	71.1	15 - 145
PCB-37	121	100	121	60 - 135	IS 13C-PCB-19	58.8	15 - 145
PCB-54	114	100	114	60 - 135	IS 13C-PCB-28	67.6	15 - 145
PCB-77	115	100	115	60 - 135	IS 13C-PCB-32	63.0	15 - 145
PCB-81	115	100	115	60 - 135	IS 13C-PCB-37	76.7	15 - 145
PCB-104	125	100	125	60 - 135	IS 13C-PCB-47	85.0	15 - 145
PCB-105	126	100	126	60 - 135	IS 13C-PCB-52	80.5	15 - 145
PCB-106/118	246	200	123	60 - 135	IS 13C-PCB-54	85.3	15 - 145
PCB-114	124	100	124	60 - 135	IS 13C-PCB-70	88.0	15 - 145
PCB-123	127	100	127	60 - 135	IS 13C-PCB-77	90.2	40 - 145
PCB-126	125	100	125	60 - 135	IS 13C-PCB-80	90.1	40 - 145
PCB-155	126	100	126	60 - 135	IS 13C-PCB-81	91.8	40 - 145
PCB-156	118	100	118	60 - 135	IS 13C-PCB-95	85.2	40 - 145
PCB-157	118	100	118	60 - 135	IS 13C-PCB-97	89.4	40 - 145
PCB-167	121	100	121	60 - 135	IS 13C-PCB-101	85.8	40 - 145
PCB-169	124	100	124	60 - 135	IS 13C-PCB-104	83.1	40 - 145
PCB-188	116	100	116	60 - 135	IS 13C-PCB-105	108	40 - 145
PCB-189	125	100	125	60 - 135	IS 13C-PCB-114	109	40 - 145
PCB-202	115	100	115	60 - 135	IS 13C-PCB-118	94.7	40 - 145
PCB-205	129	100	129	60 - 135	IS 13C-PCB-123	94.2	40 - 145
PCB-206	120	100	120	60 - 135	IS 13C-PCB-126	115	40 - 145
PCB-208	121	100	121	60 - 135	IS 13C-PCB-127	112	40 - 145
PCB-209	123	100	123	60 - 135	IS 13C-PCB-138	94.8	40 - 145
					IS 13C-PCB-141	93.6	40 - 145
					IS 13C-PCB-153	93.3	40 - 145
					IS 13C-PCB-155	70.0	40 - 145
					IS 13C-PCB-156	100	40 - 145
					IS 13C-PCB-157	102	40 - 145
					IS 13C-PCB-159	94.2	40 - 145
					IS 13C-PCB-167	97.0	40 - 145
					IS 13C-PCB-169	101	40 - 145
					IS 13C-PCB-170	88.7	40 - 145
					IS 13C-PCB-180	89.1	40 - 145
					IS 13C-PCB-188	76.8	40 - 145
					IS 13C-PCB-189	90.2	40 - 145
					IS 13C-PCB-194	93.1	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0139
Date Extracted: 26-Dec-2014 11:08

Lab Sample: B4L0139-BS1
Date Analyzed: 30-Dec-14 02:47 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	76.8	40 - 145
					IS 13C-PCB-206	88.5	40 - 145
					IS 13C-PCB-208	78.2	40 - 145
					IS 13C-PCB-209	95.7	40 - 145
					CRS 13C-PCB-79	96.4	40 - 145
					CRS 13C-PCB-178	88.3	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0142
Date Extracted: 28-Dec-2014 6:44

Lab Sample: B4L0142-BS1
Date Analyzed: 31-Dec-14 01:23 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	106	100	106	60 - 135	IS 13C-PCB-1	50.0	15 - 145
PCB-3	109	100	109	60 - 135	IS 13C-PCB-3	58.0	15 - 145
PCB-4/10	461	400	115	60 - 135	IS 13C-PCB-4	63.6	15 - 145
PCB-15	227	200	114	60 - 135	IS 13C-PCB-9	69.0	15 - 145
PCB-19	111	100	111	60 - 135	IS 13C-PCB-11	78.1	15 - 145
PCB-37	107	100	107	60 - 135	IS 13C-PCB-19	67.7	15 - 145
PCB-54	102	100	102	60 - 135	IS 13C-PCB-28	73.0	15 - 145
PCB-77	119	100	119	60 - 135	IS 13C-PCB-32	68.7	15 - 145
PCB-81	116	100	116	60 - 135	IS 13C-PCB-37	82.2	15 - 145
PCB-104	118	100	118	60 - 135	IS 13C-PCB-47	95.9	15 - 145
PCB-105	121	100	121	60 - 135	IS 13C-PCB-52	99.8	15 - 145
PCB-106/118	238	200	119	60 - 135	IS 13C-PCB-54	99.9	15 - 145
PCB-114	115	100	115	60 - 135	IS 13C-PCB-70	99.4	15 - 145
PCB-123	121	100	121	60 - 135	IS 13C-PCB-77	96.5	40 - 145
PCB-126	120	100	120	60 - 135	IS 13C-PCB-80	99.5	40 - 145
PCB-155	123	100	123	60 - 135	IS 13C-PCB-81	95.6	40 - 145
PCB-156	128	100	128	60 - 135	IS 13C-PCB-95	88.0	40 - 145
PCB-157	130	100	130	60 - 135	IS 13C-PCB-97	91.3	40 - 145
PCB-167	127	100	127	60 - 135	IS 13C-PCB-101	92.2	40 - 145
PCB-169	129	100	129	60 - 135	IS 13C-PCB-104	87.9	40 - 145
PCB-188	117	100	117	60 - 135	IS 13C-PCB-105	106	40 - 145
PCB-189	125	100	125	60 - 135	IS 13C-PCB-114	106	40 - 145
PCB-202	119	100	119	60 - 135	IS 13C-PCB-118	88.6	40 - 145
PCB-205	125	100	125	60 - 135	IS 13C-PCB-123	88.4	40 - 145
PCB-206	117	100	117	60 - 135	IS 13C-PCB-126	119	40 - 145
PCB-208	115	100	115	60 - 135	IS 13C-PCB-127	107	40 - 145
PCB-209	123	100	123	60 - 135	IS 13C-PCB-138	96.0	40 - 145
					IS 13C-PCB-141	96.6	40 - 145
					IS 13C-PCB-153	95.2	40 - 145
					IS 13C-PCB-155	77.9	40 - 145
					IS 13C-PCB-156	95.8	40 - 145
					IS 13C-PCB-157	96.4	40 - 145
					IS 13C-PCB-159	97.1	40 - 145
					IS 13C-PCB-167	95.4	40 - 145
					IS 13C-PCB-169	96.9	40 - 145
					IS 13C-PCB-170	85.0	40 - 145
					IS 13C-PCB-180	85.0	40 - 145
					IS 13C-PCB-188	85.6	40 - 145
					IS 13C-PCB-189	85.5	40 - 145
					IS 13C-PCB-194	90.4	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0142
Date Extracted: 28-Dec-2014 6:44

Lab Sample: B4L0142-BS1
Date Analyzed: 31-Dec-14 01:23 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	75.3	40 - 145
					IS 13C-PCB-206	96.7	40 - 145
					IS 13C-PCB-208	91.0	40 - 145
					IS 13C-PCB-209	109	40 - 145
					CRS 13C-PCB-79	101	40 - 145
					CRS 13C-PCB-178	94.5	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: FH-FF-CH-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-01
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0774	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 04:56
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.387		PCB-44	37.3			
PCB-2	ND	0.147			PCB-45	10.4			
PCB-3	ND		0.172		PCB-46	ND		0.284	
PCB-4/10	3.62				PCB-47	230			
PCB-5/8	15.3				PCB-48/75	56.8			
PCB-6	3.20				PCB-50	0.925			
PCB-7/9	1.16			J	PCB-51	16.5			
PCB-11	2.40				PCB-52/69	566			
PCB-12/13	ND	0.0650			PCB-53	31.0			
PCB-14	ND	0.0579			PCB-54	1.55			
PCB-15	0.507			J	PCB-55	6.98			
PCB-16/32	33.2				PCB-56/60	115			
PCB-17	20.7				PCB-57	2.79			
PCB-18	45.1				PCB-58	1.79			
PCB-19	3.22				PCB-61/70	167			
PCB-20/21/33	25.0				PCB-62	ND	0.141		
PCB-22	31.5				PCB-63	17.7			
PCB-23	ND	0.100			PCB-65	ND	0.137		
PCB-24/27	3.84				PCB-66/76	499			
PCB-25	6.25				PCB-67	3.53			
PCB-26	20.7				PCB-68	5.15			
PCB-28	153				PCB-73	0.899			
PCB-29	0.334			J	PCB-74	178			
PCB-30	ND	0.102			PCB-77	5.06			
PCB-31	55.8				PCB-78	0.361			J
PCB-34	1.18				PCB-79	34.9			
PCB-35	ND	0.106			PCB-80	ND	0.112		
PCB-36	ND	0.106			PCB-81	6.54			
PCB-37	0.416			J	PCB-82	22.0			
PCB-38	8.86				PCB-83	ND	0.103		
PCB-39	ND	0.103			PCB-84/92	332			
PCB-40	3.09				PCB-85/116	299			
PCB-41/64/71/72	288				PCB-86	ND	0.153		
PCB-42/59	67.3				PCB-87/117/125	426			
PCB-43/49	470				PCB-88/91	197			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-01
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0774	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed :	30-Dec-14 04:56
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.88				PCB-136	58.3			
PCB-90/101	1980				PCB-137	83.6			
PCB-93	ND	0.130			PCB-138/163/164	2140			
PCB-94	1.96				PCB-139/149	1080			
PCB-95/98/102	442				PCB-140	8.36			
PCB-96	2.66				PCB-141	245			
PCB-97	333				PCB-144	71.5			
PCB-99	1160				PCB-145	ND	0.216		
PCB-100	17.8				PCB-146/165	393			
PCB-103	28.0				PCB-147	61.3			
PCB-104	0.813				PCB-148	4.76			
PCB-105	560				PCB-150	4.40			
PCB-106/118	1650				PCB-151	324			
PCB-107/109	173				PCB-152	1.38			
PCB-108/112	7.48				PCB-153	2700			E
PCB-110	1310				PCB-154	70.9			
PCB-111/115	27.4				PCB-155	1.88			
PCB-113	ND	0.0912			PCB-156	127			
PCB-114	10.4				PCB-157	36.0			
PCB-119	62.0				PCB-158/160	177			
PCB-120	8.21				PCB-159	28.9			
PCB-121	ND	0.0772			PCB-166	5.86			
PCB-122	0.911				PCB-167	69.4			
PCB-123	11.7				PCB-168	4.06			
PCB-124	12.1				PCB-169	0.250			J
PCB-126	5.67				PCB-170	300			
PCB-127	ND	0.116			PCB-171	87.9			
PCB-128/162	274				PCB-172	67.1			
PCB-129	30.8				PCB-173	3.04			
PCB-130	134				PCB-174	163			
PCB-131	ND	0.335			PCB-175	18.5			
PCB-132/161	124				PCB-176	24.0			
PCB-133/142	44.5				PCB-177	161			
PCB-134/143	21.9				PCB-178	124			
PCB-135	62.6				PCB-179	55.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-01	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0774	Date Analyzed :	30-Dec-14 04:56	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	770				Total octaCB	747			B
PCB-181	ND	0.0860			Total nonaCB	121			
PCB-182/187	812				DecaCB	41.3			
PCB-183	275				Total PCB	24700			B
PCB-184	1.25								
PCB-185	24.5								
PCB-186	ND	0.0770							
PCB-188	5.64								
PCB-189	11.0								
PCB-190	58.0								
PCB-191	12.7								
PCB-192	ND	0.0767							
PCB-193	54.5								
PCB-194	131								
PCB-195	41.9			B					
PCB-196/203	216								
PCB-197	8.82								
PCB-198	7.09								
PCB-199	227								
PCB-200	13.1								
PCB-201	31.1								
PCB-202	64.8								
PCB-204	ND	0.163							
PCB-205	6.29								
PCB-206	77.3								
PCB-207	12.3								
PCB-208	31.5								
PCB-209	41.3								
Total monoCB	ND		0.559						
Total diCB	26.1								
Total triCB	409								
Total tetraCB	2820								
Total pentaCB	9080								
Total hexaCB	8380								
Total heptaCB	3030								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-01
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0774	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 04:56
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.4	5 -145		13C-PCB-170	82.3	10 -145	
13C-PCB-3	63.3	5 -145		13C-PCB-180	81.3	10 -145	
13C-PCB-4	65.0	5 -145		13C-PCB-188	69.9	10 -145	
13C-PCB-11	74.8	5 -145		13C-PCB-189	83.5	10 -145	
13C-PCB-9	68.0	5 -145		13C-PCB-194	79.3	10 -145	
13C-PCB-19	51.9	5 -145		13C-PCB-202	65.5	10 -145	
13C-PCB-28	60.9	5 -145		13C-PCB-206	72.0	10 -145	
13C-PCB-32	54.3	5 -145		13C-PCB-208	64.4	10 -145	
13C-PCB-37	70.4	5 -145		13C-PCB-209	78.5	10 -145	
13C-PCB-47	74.6	5 -145		CRS 13C-PCB-79	84.9	10 -145	
13C-PCB-52	76.5	5 -145		13C-PCB-178	78.9	10 -145	
13C-PCB-54	75.0	5 -145					
13C-PCB-70	77.5	5 -145					
13C-PCB-77	76.2	10 -145					
13C-PCB-80	76.2	10 -145					
13C-PCB-81	75.7	10 -145					
13C-PCB-95	73.5	10 -145					
13C-PCB-97	78.4	10 -145					
13C-PCB-101	81.8	10 -145					
13C-PCB-104	75.6	10 -145					
13C-PCB-105	95.8	10 -145					
13C-PCB-114	96.0	10 -145					
13C-PCB-118	88.2	10 -145					
13C-PCB-123	82.4	10 -145					
13C-PCB-126	97.5	10 -145					
13C-PCB-127	96.2	10 -145					
13C-PCB-138	86.2	10 -145					
13C-PCB-141	82.4	10 -145					
13C-PCB-153	85.7	10 -145					
13C-PCB-155	64.9	10 -145					
13C-PCB-156	87.0	10 -145					
13C-PCB-157	89.6	10 -145					
13C-PCB-159	85.1	10 -145					
13C-PCB-167	83.9	10 -145					
13C-PCB-169	90.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: FH-FF-CH-01-08-20141013	QC Batch: B4L0139	Lab Sample: B4L0139-DUP1
Source LabNumber: 1400900-01	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 03:52 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.293		PCB-41/64/71/72	181			
PCB-2	ND	0.144			PCB-42/59	43.0			
PCB-3	ND		0.124		PCB-43/49	288			
PCB-4/10	2.03				PCB-44	25.8			
PCB-5/8	10.0				PCB-45	7.01			
PCB-6	2.26				PCB-46	0.400			J
PCB-7/9	0.624			J	PCB-47	149			
PCB-11	1.55				PCB-48/75	36.4			
PCB-12/13	ND	0.0656			PCB-50	0.590			
PCB-14	ND	0.0586			PCB-51	10.5			
PCB-15	0.496			J	PCB-52/69	362			
PCB-16/32	21.8				PCB-53	20.9			
PCB-17	13.7				PCB-54	0.963			
PCB-18	28.9				PCB-55	4.81			
PCB-19	2.13				PCB-56/60	73.7			
PCB-20/21/33	15.6				PCB-57	1.77			
PCB-22	16.6				PCB-58	0.867			
PCB-23	ND	0.0420			PCB-61/70	109			
PCB-24/27	2.61				PCB-62	ND	0.0963		
PCB-25	3.10				PCB-63	11.1			
PCB-26	11.8				PCB-65	ND	0.0933		
PCB-28	103				PCB-66/76	348			
PCB-29	0.193			J	PCB-67	2.65			
PCB-30	ND	0.0450			PCB-68	3.10			
PCB-31	27.2				PCB-73	0.570			
PCB-34	0.592				PCB-74	111			
PCB-35	ND	0.0556			PCB-77	2.56			
PCB-36	ND	0.0556			PCB-78	ND		0.203	
PCB-37	0.324			J	PCB-79	20.9			
PCB-38	5.77				PCB-80	ND	0.0807		
PCB-39	ND	0.0539			PCB-81	3.32			
PCB-40	1.92				PCB-82	14.8			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate**EPA Method 1668C**

Source Client ID: FH-FF-CH-01-08-20141013	QC Batch: B4L0139	Lab Sample: B4L0139-DUP1
Source LabNumber: 1400900-01	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 03:52 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	ND	0.187			PCB-127	ND	0.138		
PCB-84/92	212				PCB-128/162	177			
PCB-85/116	186				PCB-129	20.6			
PCB-86	ND	0.278			PCB-130	85.2			
PCB-87/117/125	265				PCB-131	ND	0.138		
PCB-88/91	120				PCB-132/161	74.4			
PCB-89	0.750				PCB-133/142	28.0			
PCB-90/101	1260				PCB-134/143	13.3			
PCB-93	ND	0.240			PCB-135	44.8			
PCB-94	1.32				PCB-136	36.5			
PCB-95/98/102	278				PCB-137	52.5			
PCB-96	1.65				PCB-138/163/164	1310			
PCB-97	208				PCB-139/149	663			
PCB-99	757				PCB-140	5.74			
PCB-100	10.9				PCB-141	152			
PCB-103	16.3				PCB-144	39.8			
PCB-104	ND		0.476		PCB-145	ND	0.0910		
PCB-105	359				PCB-146/165	246			
PCB-106/118	1100				PCB-147	37.4			
PCB-107/109	108				PCB-148	2.73			
PCB-108/112	4.67				PCB-150	2.92			
PCB-110	812				PCB-151	198			
PCB-111/115	18.4				PCB-152	0.568			
PCB-113	ND	0.185			PCB-153	1700			E
PCB-114	6.77				PCB-154	44.5			
PCB-119	37.8				PCB-155	1.22			
PCB-120	5.37				PCB-156	79.7			
PCB-121	ND	0.143			PCB-157	22.4			
PCB-122	0.643				PCB-158/160	113			
PCB-123	8.59				PCB-159	18.2			
PCB-124	7.73				PCB-166	3.84			
PCB-126	4.03				PCB-167	43.2			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: FH-FF-CH-01-08-20141013	QC Batch: B4L0139	Lab Sample: B4L0139-DUP1
Source LabNumber: 1400900-01	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 03:52 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	2.44				PCB-201	18.5			
PCB-169	0.340			J	PCB-202	39.6			
PCB-170	188				PCB-204	ND	0.177		
PCB-171	58.1				PCB-205	3.76			
PCB-172	41.0				PCB-206	47.5			
PCB-173	1.95				PCB-207	7.55			
PCB-174	101				PCB-208	19.4			
PCB-175	10.6				PCB-209	25.2			
PCB-176	15.4				Total monoCB	ND		0.417	
PCB-177	105				Total diCB	17.0			
PCB-178	76.7				Total triCB	254			
PCB-179	35.0				Total tetraCB	1820			
PCB-180	480				Total pentaCB	5810			
PCB-181	0.874				Total hexaCB	5220			
PCB-182/187	504				Total heptaCB	1900			
PCB-183	174				Total octaCB	443		451	B
PCB-184	ND		0.727		Total nonaCB	74.5			
PCB-185	16.4				DecaCB	25.2			
PCB-186	ND	0.0595			Total PCB	15600			B
PCB-188	3.13								
PCB-189	6.56								
PCB-190	36.5								
PCB-191	8.04								
PCB-192	ND	0.0601							
PCB-193	34.0								
PCB-194	80.2								
PCB-195	26.5			B					
PCB-196/203	127								
PCB-197	5.51								
PCB-198	4.42								
PCB-199	137								
PCB-200	ND		7.98						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: FH-FF-CH-01-08-20141013	QC Batch: B4L0139	Lab Sample: B4L0139-DUP1
Source LabNumber: 1400900-01	Date Extracted: 26-Dec-2014 11:08	Date Analyzed: 30-Dec-14 03:52 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.8	5-145		13C-PCB-156	89.0	10-145	
13C-PCB-3	72.2	5-145		13C-PCB-157	89.9	10-145	
13C-PCB-4	73.1	5-145		13C-PCB-159	87.5	10-145	
13C-PCB-11	80.9	5-145		13C-PCB-167	87.7	10-145	
13C-PCB-9	74.5	5-145		13C-PCB-169	94.0	10-145	
13C-PCB-19	58.8	5-145		13C-PCB-170	81.6	10-145	
13C-PCB-28	85.1	5-145		13C-PCB-180	79.5	10-145	
13C-PCB-32	60.3	5-145		13C-PCB-188	71.2	10-145	
13C-PCB-37	78.2	5-145		13C-PCB-189	80.7	10-145	
13C-PCB-47	82.8	5-145		13C-PCB-194	84.0	10-145	
13C-PCB-52	86.0	5-145		13C-PCB-202	66.7	10-145	
13C-PCB-54	87.1	5-145		13C-PCB-206	79.0	10-145	
13C-PCB-70	85.1	5-145		13C-PCB-208	71.8	10-145	
13C-PCB-77	85.2	10-145		13C-PCB-209	87.7	10-145	
13C-PCB-80	84.3	10-145		CRS 13C-PCB-79	88.6	10-145	
13C-PCB-81	85.8	10-145		13C-PCB-178	80.4	10-145	
13C-PCB-95	80.5	10-145					
13C-PCB-97	85.8	10-145					
13C-PCB-101	84.2	10-145					
13C-PCB-104	84.8	10-145					
13C-PCB-105	94.2	10-145					
13C-PCB-114	96.8	10-145					
13C-PCB-118	87.7	10-145					
13C-PCB-123	84.6	10-145					
13C-PCB-126	102	10-145					
13C-PCB-127	94.6	10-145					
13C-PCB-138	85.8	10-145					
13C-PCB-141	84.0	10-145					
13C-PCB-153	86.7	10-145					
13C-PCB-155	69.1	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-02
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 06:01
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.624				PCB-44	89.3			
PCB-2	ND	0.236			PCB-45	17.7			
PCB-3	ND	0.229			PCB-46	1.63			
PCB-4/10	6.61				PCB-47	221			
PCB-5/8	25.0				PCB-48/75	58.8			
PCB-6	5.85				PCB-50	0.918			
PCB-7/9	1.63			J	PCB-51	18.5			
PCB-11	1.64				PCB-52/69	601			
PCB-12/13	ND	1.58			PCB-53	43.3			
PCB-14	ND	1.41			PCB-54	2.01			
PCB-15	0.919			J	PCB-55	9.14			
PCB-16/32	43.5				PCB-56/60	124			
PCB-17	28.5				PCB-57	3.57			
PCB-18	65.2				PCB-58	1.93			
PCB-19	6.33				PCB-61/70	190			
PCB-20/21/33	32.1				PCB-62	ND	0.452		
PCB-22	33.4				PCB-63	16.1			
PCB-23	ND	0.378			PCB-65	ND	0.438		
PCB-24/27	7.55				PCB-66/76	509			
PCB-25	8.68				PCB-67	4.95			
PCB-26	21.3				PCB-68	4.40			
PCB-28	174				PCB-73	0.846			
PCB-29	0.352			J	PCB-74	161			
PCB-30	ND	0.227			PCB-77	6.44			
PCB-31	63.5				PCB-78	ND	0.430		
PCB-34	0.984				PCB-79	38.3			
PCB-35	ND	0.418			PCB-80	ND	0.348		
PCB-36	ND	0.418			PCB-81	3.05			
PCB-37	1.18				PCB-82	42.5			
PCB-38	9.76				PCB-83	0.481			J
PCB-39	ND	0.405			PCB-84/92	437			
PCB-40	8.03				PCB-85/116	330			
PCB-41/64/71/72	260				PCB-86	1.67			
PCB-42/59	83.8				PCB-87/117/125	489			
PCB-43/49	495				PCB-88/91	247			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-02	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	Date Analyzed :	30-Dec-14 06:01	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.33				PCB-136	103			
PCB-90/101	2280				PCB-137	93.2			
PCB-93	ND	0.520			PCB-138/163/164	2490			
PCB-94	3.67				PCB-139/149	1710			
PCB-95/98/102	733				PCB-140	8.25			
PCB-96	3.78				PCB-141	318			
PCB-97	441				PCB-144	93.1			
PCB-99	1260				PCB-145	ND	0.662		
PCB-100	22.1				PCB-146/165	459			
PCB-103	35.7				PCB-147	93.0			
PCB-104	1.78				PCB-148	7.53			
PCB-105	603				PCB-150	ND		7.07	
PCB-106/118	1880				PCB-151	488			
PCB-107/109	201				PCB-152	1.73			
PCB-108/112	15.3				PCB-153	3070			E
PCB-110	1480				PCB-154	94.1			
PCB-111/115	28.9				PCB-155	2.70			
PCB-113	2.86				PCB-156	136			
PCB-114	10.7				PCB-157	38.5			
PCB-119	70.9				PCB-158/160	207			
PCB-120	10.5				PCB-159	ND	0.414		
PCB-121	ND	0.309			PCB-166	7.24			
PCB-122	1.66				PCB-167	75.7			
PCB-123	12.6				PCB-168	3.84			
PCB-124	16.7				PCB-169	0.380			J
PCB-126	6.74				PCB-170	342			
PCB-127	ND	0.427			PCB-171	101			
PCB-128/162	319				PCB-172	79.2			
PCB-129	43.8				PCB-173	4.09			
PCB-130	171				PCB-174	247			
PCB-131	ND	0.522			PCB-175	22.5			
PCB-132/161	207				PCB-176	37.0			
PCB-133/142	60.3				PCB-177	252			
PCB-134/143	40.7				PCB-178	146			
PCB-135	116				PCB-179	90.8			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-02
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	QC Batch:	B4L0139
				Date Analyzed:	30-Dec-14 06:01
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	919				Total octaCB	803			B
PCB-181	2.07				Total nonaCB	121			
PCB-182/187	969				DecaCB	38.7			
PCB-183	319				Total PCB	29300			B
PCB-184	1.68								
PCB-185	33.8								
PCB-186	ND	0.270							
PCB-188	5.07								
PCB-189	11.9								
PCB-190	66.4								
PCB-191	13.9								
PCB-192	ND	0.280							
PCB-193	61.8								
PCB-194	141								
PCB-195	45.4			B					
PCB-196/203	223								
PCB-197	9.09								
PCB-198	7.16								
PCB-199	254								
PCB-200	17.4								
PCB-201	30.5								
PCB-202	68.7								
PCB-204	0.311			J					
PCB-205	6.85								
PCB-206	76.7								
PCB-207	12.1								
PCB-208	32.5								
PCB-209	38.7								
Total monoCB	0.624								
Total diCB	41.7								
Total triCB	497								
Total tetraCB	2970								
Total pentaCB	10700								
Total hexaCB	10500								
Total heptaCB	3730								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-02
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 06:01
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	38.1	5 -145		13C-PCB-170	70.6	10 -145	
13C-PCB-3	43.9	5 -145		13C-PCB-180	68.6	10 -145	
13C-PCB-4	46.9	5 -145		13C-PCB-188	60.2	10 -145	
13C-PCB-11	57.7	5 -145		13C-PCB-189	68.6	10 -145	
13C-PCB-9	51.2	5 -145		13C-PCB-194	66.8	10 -145	
13C-PCB-19	39.7	5 -145		13C-PCB-202	55.3	10 -145	
13C-PCB-28	58.1	5 -145		13C-PCB-206	65.2	10 -145	
13C-PCB-32	43.8	5 -145		13C-PCB-208	56.0	10 -145	
13C-PCB-37	60.5	5 -145		13C-PCB-209	71.6	10 -145	
13C-PCB-47	66.3	5 -145		CRS 13C-PCB-79	81.5	10 -145	
13C-PCB-52	64.4	5 -145		13C-PCB-178	72.1	10 -145	
13C-PCB-54	56.9	5 -145					
13C-PCB-70	68.4	5 -145					
13C-PCB-77	71.6	10 -145					
13C-PCB-80	69.2	10 -145					
13C-PCB-81	69.5	10 -145					
13C-PCB-95	63.7	10 -145					
13C-PCB-97	68.8	10 -145					
13C-PCB-101	70.8	10 -145					
13C-PCB-104	64.5	10 -145					
13C-PCB-105	81.7	10 -145					
13C-PCB-114	80.1	10 -145					
13C-PCB-118	73.4	10 -145					
13C-PCB-123	71.6	10 -145					
13C-PCB-126	81.5	10 -145					
13C-PCB-127	83.0	10 -145					
13C-PCB-138	72.3	10 -145					
13C-PCB-141	69.6	10 -145					
13C-PCB-153	75.0	10 -145					
13C-PCB-155	53.7	10 -145					
13C-PCB-156	75.4	10 -145					
13C-PCB-157	75.1	10 -145					
13C-PCB-159	72.0	10 -145					
13C-PCB-167	72.6	10 -145					
13C-PCB-169	76.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-03
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0389	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 07:06
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.259		PCB-44	33.1			
PCB-2	ND	0.306			PCB-45	10.6			
PCB-3	ND	0.297			PCB-46	0.487			
PCB-4/10	2.71				PCB-47	136			
PCB-5/8	10.0				PCB-48/75	35.1			
PCB-6	2.46				PCB-50	0.701			
PCB-7/9	ND	1.22			PCB-51	12.2			
PCB-11	0.830			J	PCB-52/69	378			
PCB-12/13	ND	1.19			PCB-53	22.8			
PCB-14	ND	1.06			PCB-54	1.35			
PCB-15	0.339			J	PCB-55	5.24			
PCB-16/32	25.0				PCB-56/60	67.8			
PCB-17	17.1				PCB-57	1.48			
PCB-18	35.9				PCB-58	ND		0.782	
PCB-19	3.53				PCB-61/70	109			
PCB-20/21/33	16.5				PCB-62	ND	0.103		
PCB-22	18.4				PCB-63	9.64			
PCB-23	0.124			J	PCB-65	ND	0.100		
PCB-24/27	4.08				PCB-66/76	319			
PCB-25	3.27				PCB-67	1.96			
PCB-26	13.4				PCB-68	2.53			
PCB-28	90.6				PCB-73	0.511			
PCB-29	0.186			J	PCB-74	102			
PCB-30	ND	0.0812			PCB-77	ND		1.74	
PCB-31	34.3				PCB-78	ND	0.224		
PCB-34	ND		0.470		PCB-79	19.3			
PCB-35	ND	0.364			PCB-80	ND	0.179		
PCB-36	ND	0.364			PCB-81	1.31			
PCB-37	ND	0.311			PCB-82	18.0			
PCB-38	5.91				PCB-83	0.343			J
PCB-39	ND	0.353			PCB-84/92	206			
PCB-40	1.78				PCB-85/116	176			
PCB-41/64/71/72	184				PCB-86	1.19			
PCB-42/59	49.9				PCB-87/117/125	260			
PCB-43/49	285				PCB-88/91	132			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-03	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0389	Date Analyzed:	30-Dec-14 07:06	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.34				PCB-136	41.6			
PCB-90/101	1160				PCB-137	43.4			
PCB-93	ND	0.549			PCB-138/163/164	1040			
PCB-94	1.65				PCB-139/149	667			
PCB-95/98/102	369				PCB-140	3.84			
PCB-96	2.32				PCB-141	133			
PCB-97	227				PCB-144	38.0			
PCB-99	628				PCB-145	ND	0.342		
PCB-100	10.6				PCB-146/165	182			
PCB-103	16.2				PCB-147	36.7			
PCB-104	0.744				PCB-148	3.00			
PCB-105	320				PCB-150	3.18			
PCB-106/118	943				PCB-151	181			
PCB-107/109	89.1				PCB-152	0.827			
PCB-108/112	5.30				PCB-153	1250			
PCB-110	788				PCB-154	35.2			
PCB-111/115	16.5				PCB-155	ND		0.840	
PCB-113	2.25				PCB-156	63.1			
PCB-114	7.16				PCB-157	17.4			
PCB-119	33.1				PCB-158/160	91.2			
PCB-120	3.80				PCB-159	ND	0.246		
PCB-121	ND	0.326			PCB-166	3.52			
PCB-122	ND	0.345			PCB-167	32.1			
PCB-123	6.18				PCB-168	1.83			
PCB-124	7.87				PCB-169	ND	0.449		
PCB-126	3.58				PCB-170	147			
PCB-127	ND	0.334			PCB-171	45.8			
PCB-128/162	150				PCB-172	33.0			
PCB-129	20.1				PCB-173	1.75			
PCB-130	67.1				PCB-174	99.8			
PCB-131	ND	0.314			PCB-175	9.33			
PCB-132/161	89.9				PCB-176	14.1			
PCB-133/142	23.2				PCB-177	95.2			
PCB-134/143	15.9				PCB-178	61.5			
PCB-135	42.5				PCB-179	38.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-03	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0389	Date Analyzed :	30-Dec-14 07:06	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	365				Total octaCB	358		362	B
PCB-181	0.569				Total nonaCB	59.6			
PCB-182/187	385				DecaCB	19.5			
PCB-183	132				Total PCB	13700			B
PCB-184	0.580								
PCB-185	13.7								
PCB-186	ND	0.303							
PCB-188	2.66								
PCB-189	4.94								
PCB-190	29.3								
PCB-191	5.95								
PCB-192	ND	0.334							
PCB-193	24.3								
PCB-194	59.6								
PCB-195	20.4			B					
PCB-196/203	104								
PCB-197	ND		3.60						
PCB-198	3.45								
PCB-199	114								
PCB-200	7.22								
PCB-201	15.2								
PCB-202	31.7								
PCB-204	ND	0.217							
PCB-205	2.69								
PCB-206	37.7								
PCB-207	5.84								
PCB-208	16.1								
PCB-209	19.5								
Total monoCB	ND		0.259						
Total diCB	16.4								
Total triCB	268		269						
Total tetraCB	1790								
Total pentaCB	5430								
Total hexaCB	4280								
Total heptaCB	1510								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-03
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0389	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 07:06
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	47.7	5 -145		13C-PCB-170	78.2	10 -145	
13C-PCB-3	52.8	5 -145		13C-PCB-180	77.9	10 -145	
13C-PCB-4	56.9	5 -145		13C-PCB-188	69.0	10 -145	
13C-PCB-11	65.6	5 -145		13C-PCB-189	80.6	10 -145	
13C-PCB-9	59.6	5 -145		13C-PCB-194	80.1	10 -145	
13C-PCB-19	47.1	5 -145		13C-PCB-202	65.3	10 -145	
13C-PCB-28	68.0	5 -145		13C-PCB-206	76.1	10 -145	
13C-PCB-32	50.8	5 -145		13C-PCB-208	69.9	10 -145	
13C-PCB-37	71.7	5 -145		13C-PCB-209	84.7	10 -145	
13C-PCB-47	76.1	5 -145		CRS 13C-PCB-79	87.3	10 -145	
13C-PCB-52	77.3	5 -145		13C-PCB-178	74.5	10 -145	
13C-PCB-54	72.7	5 -145					
13C-PCB-70	80.5	5 -145					
13C-PCB-77	79.6	10 -145					
13C-PCB-80	79.8	10 -145					
13C-PCB-81	78.6	10 -145					
13C-PCB-95	76.5	10 -145					
13C-PCB-97	78.7	10 -145					
13C-PCB-101	79.9	10 -145					
13C-PCB-104	73.0	10 -145					
13C-PCB-105	90.4	10 -145					
13C-PCB-114	88.8	10 -145					
13C-PCB-118	81.3	10 -145					
13C-PCB-123	79.0	10 -145					
13C-PCB-126	95.0	10 -145					
13C-PCB-127	88.9	10 -145					
13C-PCB-138	83.4	10 -145					
13C-PCB-141	80.6	10 -145					
13C-PCB-153	83.4	10 -145					
13C-PCB-155	65.2	10 -145					
13C-PCB-156	84.6	10 -145					
13C-PCB-157	85.6	10 -145					
13C-PCB-159	81.3	10 -145					
13C-PCB-167	82.0	10 -145					
13C-PCB-169	90.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-04
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0195	QC Batch:	B4L0139
				Date Analyzed:	30-Dec-14 08:11
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.313			J	PCB-44	43.3			
PCB-2	ND	0.157			PCB-45	12.4			
PCB-3	0.118			J	PCB-46	0.534			
PCB-4/10	3.19				PCB-47	162			
PCB-5/8	12.2				PCB-48/75	42.9			
PCB-6	2.91				PCB-50	0.745			
PCB-7/9	0.694			J	PCB-51	13.2			
PCB-11	1.06				PCB-52/69	467			
PCB-12/13	ND	0.964			PCB-53	29.1			
PCB-14	ND	0.860			PCB-54	1.29			
PCB-15	ND	0.797			PCB-55	5.81			
PCB-16/32	30.5				PCB-56/60	87.2			
PCB-17	22.1				PCB-57	2.01			
PCB-18	47.8				PCB-58	1.40			
PCB-19	3.90				PCB-61/70	153			
PCB-20/21/33	22.1				PCB-62	ND	0.411		
PCB-22	21.9				PCB-63	13.2			
PCB-23	ND	0.265			PCB-65	ND	0.398		
PCB-24/27	4.19				PCB-66/76	406			
PCB-25	4.75				PCB-67	3.12			
PCB-26	16.2				PCB-68	3.60			
PCB-28	125				PCB-73	0.461			J
PCB-29	0.219			J	PCB-74	141			
PCB-30	ND	0.0793			PCB-77	2.37			
PCB-31	43.2				PCB-78	ND	0.394		
PCB-34	1.00				PCB-79	23.8			
PCB-35	ND	0.287			PCB-80	ND	0.320		
PCB-36	ND	0.287			PCB-81	1.42			
PCB-37	0.466			J	PCB-82	23.2			
PCB-38	7.10				PCB-83	0.475			J
PCB-39	ND	0.279			PCB-84/92	257			
PCB-40	2.63				PCB-85/116	228			
PCB-41/64/71/72	216				PCB-86	ND	2.91		
PCB-42/59	63.2				PCB-87/117/125	324			
PCB-43/49	358				PCB-88/91	159			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-04
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0195	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 08:11
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.30				PCB-136	47.9			
PCB-90/101	1480				PCB-137	61.9			
PCB-93	ND	0.544			PCB-138/163/164	1320			
PCB-94	1.92				PCB-139/149	784			
PCB-95/98/102	411				PCB-140	4.91			
PCB-96	2.15				PCB-141	172			
PCB-97	263				PCB-144	49.9			
PCB-99	798				PCB-145	ND	0.410		
PCB-100	12.6				PCB-146/165	226			
PCB-103	19.7				PCB-147	43.8			
PCB-104	0.622				PCB-148	3.53			
PCB-105	406				PCB-150	3.92			
PCB-106/118	1250				PCB-151	221			
PCB-107/109	111				PCB-152	ND		0.660	
PCB-108/112	6.33				PCB-153	1580			E
PCB-110	979				PCB-154	42.9			
PCB-111/115	19.4				PCB-155	0.957			
PCB-113	1.47				PCB-156	85.3			
PCB-114	11.1				PCB-157	22.9			
PCB-119	40.9				PCB-158/160	120			
PCB-120	4.35				PCB-159	ND	0.312		
PCB-121	ND	0.323			PCB-166	4.11			
PCB-122	ND	0.475			PCB-167	40.1			
PCB-123	10.6				PCB-168	2.44			
PCB-124	10.2				PCB-169	ND	0.260		
PCB-126	4.35				PCB-170	186			
PCB-127	ND	0.466			PCB-171	54.0			
PCB-128/162	184				PCB-172	37.3			
PCB-129	24.2				PCB-173	1.58			
PCB-130	86.2				PCB-174	114			
PCB-131	ND	0.396			PCB-175	11.5			
PCB-132/161	107				PCB-176	16.1			
PCB-133/142	27.9				PCB-177	110			
PCB-134/143	17.1				PCB-178	69.9			
PCB-135	52.2				PCB-179	43.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-04
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0195	QC Batch:	B4L0139
				Date Analyzed:	30-Dec-14 08:11
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	460				Total octaCB	397		404	B
PCB-181	1.30				Total nonaCB	60.2			
PCB-182/187	474				DecaCB	18.4			
PCB-183	161				Total PCB	17100			B
PCB-184	0.884								
PCB-185	16.4								
PCB-186	ND	0.364							
PCB-188	3.31								
PCB-189	6.17								
PCB-190	35.3								
PCB-191	7.20								
PCB-192	ND	0.394							
PCB-193	28.1								
PCB-194	71.8								
PCB-195	23.7			B					
PCB-196/203	116								
PCB-197	4.87								
PCB-198	4.22								
PCB-199	122								
PCB-200	ND		7.52						
PCB-201	15.6								
PCB-202	35.3								
PCB-204	ND	0.220							
PCB-205	3.40								
PCB-206	38.1								
PCB-207	6.14								
PCB-208	16.0								
PCB-209	18.4								
Total monoCB	0.431								
Total diCB	20.1								
Total triCB	350								
Total tetraCB	2260								
Total pentaCB	6840								
Total hexaCB	5330								
Total heptaCB	1840								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-04
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0195	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 08:11
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	61.1	5 -145		13C-PCB-170	78.8	10 -145	
13C-PCB-3	63.3	5 -145		13C-PCB-180	79.7	10 -145	
13C-PCB-4	68.0	5 -145		13C-PCB-188	68.2	10 -145	
13C-PCB-11	72.5	5 -145		13C-PCB-189	79.4	10 -145	
13C-PCB-9	70.2	5 -145		13C-PCB-194	75.5	10 -145	
13C-PCB-19	52.9	5 -145		13C-PCB-202	65.2	10 -145	
13C-PCB-28	78.3	5 -145		13C-PCB-206	70.9	10 -145	
13C-PCB-32	54.3	5 -145		13C-PCB-208	66.2	10 -145	
13C-PCB-37	80.9	5 -145		13C-PCB-209	82.7	10 -145	
13C-PCB-47	79.9	5 -145		CRS 13C-PCB-79	85.5	10 -145	
13C-PCB-52	80.8	5 -145		13C-PCB-178	76.7	10 -145	
13C-PCB-54	81.5	5 -145					
13C-PCB-70	81.1	5 -145					
13C-PCB-77	82.6	10 -145					
13C-PCB-80	83.2	10 -145					
13C-PCB-81	81.3	10 -145					
13C-PCB-95	76.0	10 -145					
13C-PCB-97	79.0	10 -145					
13C-PCB-101	78.5	10 -145					
13C-PCB-104	76.6	10 -145					
13C-PCB-105	90.1	10 -145					
13C-PCB-114	88.0	10 -145					
13C-PCB-118	79.8	10 -145					
13C-PCB-123	81.9	10 -145					
13C-PCB-126	90.6	10 -145					
13C-PCB-127	90.2	10 -145					
13C-PCB-138	83.8	10 -145					
13C-PCB-141	79.1	10 -145					
13C-PCB-153	84.8	10 -145					
13C-PCB-155	63.8	10 -145					
13C-PCB-156	84.0	10 -145					
13C-PCB-157	86.4	10 -145					
13C-PCB-159	80.7	10 -145					
13C-PCB-167	83.3	10 -145					
13C-PCB-169	85.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-05
Project:		Sample Size:	10.4 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 09:16
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.159			J	PCB-44	11.8			
PCB-2	ND	0.181			PCB-45	3.14			
PCB-3	ND	0.175			PCB-46	ND	0.261		
PCB-4/10	1.01			J	PCB-47	48.8			
PCB-5/8	4.98				PCB-48/75	13.9			
PCB-6	1.24				PCB-50	0.172			J
PCB-7/9	ND	0.873			PCB-51	4.22			
PCB-11	0.674			J	PCB-52/69	132			
PCB-12/13	ND	0.953			PCB-53	8.87			
PCB-14	ND	0.851			PCB-54	0.351			J
PCB-15	ND	0.349			PCB-55	1.67			
PCB-16/32	10.0				PCB-56/60	29.1			
PCB-17	6.68				PCB-57	0.569			
PCB-18	15.1				PCB-58	0.401			J
PCB-19	1.15				PCB-61/70	39.6			
PCB-20/21/33	6.69				PCB-62	ND	0.404		
PCB-22	8.92				PCB-63	4.20			
PCB-23	ND	0.186			PCB-65	ND	0.391		
PCB-24/27	1.42				PCB-66/76	125			
PCB-25	1.47				PCB-67	0.834			
PCB-26	5.70				PCB-68	0.843			
PCB-28	39.3				PCB-73	0.236			J
PCB-29	ND	0.183			PCB-74	45.8			
PCB-30	ND	0.0738			PCB-77	0.841			
PCB-31	14.4				PCB-78	ND	0.410		
PCB-34	ND		0.192		PCB-79	7.61			
PCB-35	ND	0.208			PCB-80	ND	0.339		
PCB-36	ND	0.208			PCB-81	0.554			
PCB-37	ND	0.132			PCB-82	6.73			
PCB-38	2.19				PCB-83	ND	0.363		
PCB-39	ND	0.202			PCB-84/92	75.9			
PCB-40	0.739				PCB-85/116	64.7			
PCB-41/64/71/72	66.3				PCB-86	ND	0.540		
PCB-42/59	18.5				PCB-87/117/125	93.4			
PCB-43/49	110				PCB-88/91	46.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-05
Project:		Sample Size:	10.4 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	30-Dec-14 09:16
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.481				PCB-136	13.7			
PCB-90/101	434				PCB-137	20.2			
PCB-93	ND	0.383			PCB-138/163/164	407			
PCB-94	0.879				PCB-139/149	216			
PCB-95/98/102	112				PCB-140	1.71			
PCB-96	0.754				PCB-141	50.8			
PCB-97	75.7				PCB-144	13.2			
PCB-99	252				PCB-145	ND	0.329		
PCB-100	3.59				PCB-146/165	73.7			
PCB-103	5.84				PCB-147	13.3			
PCB-104	ND	0.220			PCB-148	1.15			
PCB-105	125				PCB-150	1.39			
PCB-106/118	380				PCB-151	63.4			
PCB-107/109	34.2				PCB-152	ND	0.328		
PCB-108/112	1.52				PCB-153	486			
PCB-110	288				PCB-154	13.6			
PCB-111/115	5.79				PCB-155	ND	0.198		
PCB-113	0.523				PCB-156	27.5			
PCB-114	3.42				PCB-157	7.39			
PCB-119	13.2				PCB-158/160	38.8			
PCB-120	1.37				PCB-159	ND	0.245		
PCB-121	ND	0.303			PCB-166	1.18			
PCB-122	0.271			J	PCB-167	13.6			
PCB-123	3.30				PCB-168	0.864			
PCB-124	3.03				PCB-169	ND	0.244		
PCB-126	1.40				PCB-170	55.5			
PCB-127	ND	0.277			PCB-171	17.3			
PCB-128/162	58.6				PCB-172	12.3			
PCB-129	7.16				PCB-173	ND		0.549	
PCB-130	24.9				PCB-174	32.4			
PCB-131	ND	0.341			PCB-175	ND		3.13	
PCB-132/161	32.0				PCB-176	4.91			
PCB-133/142	8.72				PCB-177	33.8			
PCB-134/143	5.99				PCB-178	21.8			
PCB-135	15.1				PCB-179	13.3			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-05	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.4 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	30-Dec-14 09:16	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	143				Total octaCB	127			B
PCB-181	ND		0.257		Total nonaCB	23.1			
PCB-182/187	140				DecaCB	7.82			
PCB-183	49.2				Total PCB	5160			B
PCB-184	0.283			J					
PCB-185	5.53								
PCB-186	ND	0.118							
PCB-188	1.10								
PCB-189	1.89								
PCB-190	10.5								
PCB-191	2.39								
PCB-192	ND	0.130							
PCB-193	9.19								
PCB-194	23.0								
PCB-195	7.15			B					
PCB-196/203	36.6								
PCB-197	1.52								
PCB-198	1.05								
PCB-199	37.4								
PCB-200	2.56								
PCB-201	5.08								
PCB-202	11.4								
PCB-204	ND	0.294							
PCB-205	1.24								
PCB-206	14.7								
PCB-207	2.32								
PCB-208	6.10								
PCB-209	7.82								
Total monoCB	0.159								
Total diCB	7.90								
Total triCB	113								
Total tetraCB	675								
Total pentaCB	2030								
Total hexaCB	1620								
Total heptaCB	554		558						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-05
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 09:16
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	72.5	5 -145		13C-PCB-170	78.4	10 -145	
13C-PCB-3	74.0	5 -145		13C-PCB-180	75.1	10 -145	
13C-PCB-4	80.2	5 -145		13C-PCB-188	68.7	10 -145	
13C-PCB-11	78.4	5 -145		13C-PCB-189	78.3	10 -145	
13C-PCB-9	80.5	5 -145		13C-PCB-194	81.1	10 -145	
13C-PCB-19	60.5	5 -145		13C-PCB-202	66.3	10 -145	
13C-PCB-28	73.8	5 -145		13C-PCB-206	77.2	10 -145	
13C-PCB-32	60.5	5 -145		13C-PCB-208	69.0	10 -145	
13C-PCB-37	73.0	5 -145		13C-PCB-209	83.5	10 -145	
13C-PCB-47	83.6	5 -145		CRS 13C-PCB-79	91.1	10 -145	
13C-PCB-52	82.6	5 -145		13C-PCB-178	80.2	10 -145	
13C-PCB-54	88.5	5 -145					
13C-PCB-70	81.2	5 -145					
13C-PCB-77	86.7	10 -145					
13C-PCB-80	81.7	10 -145					
13C-PCB-81	82.2	10 -145					
13C-PCB-95	75.2	10 -145					
13C-PCB-97	81.9	10 -145					
13C-PCB-101	79.7	10 -145					
13C-PCB-104	77.7	10 -145					
13C-PCB-105	90.7	10 -145					
13C-PCB-114	89.4	10 -145					
13C-PCB-118	81.9	10 -145					
13C-PCB-123	83.2	10 -145					
13C-PCB-126	92.8	10 -145					
13C-PCB-127	94.0	10 -145					
13C-PCB-138	80.8	10 -145					
13C-PCB-141	80.0	10 -145					
13C-PCB-153	79.8	10 -145					
13C-PCB-155	66.5	10 -145					
13C-PCB-156	84.1	10 -145					
13C-PCB-157	85.2	10 -145					
13C-PCB-159	83.7	10 -145					
13C-PCB-167	82.3	10 -145					
13C-PCB-169	85.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-06
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0580	QC Batch:	B4L0139
				Date Analyzed:	30-Dec-14 10:21
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.422			J	PCB-44	59.0			
PCB-2	ND	0.156			PCB-45	13.0			
PCB-3	ND	0.151			PCB-46	0.812			
PCB-4/10	4.70				PCB-47	162			
PCB-5/8	18.7				PCB-48/75	41.0			
PCB-6	4.30				PCB-50	0.942			
PCB-7/9	1.20			J	PCB-51	13.8			
PCB-11	1.26				PCB-52/69	411			
PCB-12/13	ND	0.668			PCB-53	29.5			
PCB-14	ND	0.596			PCB-54	1.20			
PCB-15	0.567			J	PCB-55	5.82			
PCB-16/32	33.2				PCB-56/60	89.1			
PCB-17	23.9				PCB-57	2.25			
PCB-18	50.4				PCB-58	1.18			
PCB-19	4.77				PCB-61/70	130			
PCB-20/21/33	20.1				PCB-62	ND	0.296		
PCB-22	24.1				PCB-63	11.8			
PCB-23	ND	0.0609			PCB-65	ND	0.286		
PCB-24/27	5.20				PCB-66/76	373			
PCB-25	4.85				PCB-67	3.04			
PCB-26	ND	0.0618			PCB-68	2.95			
PCB-28	135				PCB-73	0.648			
PCB-29	ND		0.190		PCB-74	127			
PCB-30	ND	0.0787			PCB-77	3.11			
PCB-31	39.3				PCB-78	ND	0.302		
PCB-34	0.826				PCB-79	26.1			
PCB-35	ND	0.122			PCB-80	ND	0.248		
PCB-36	ND	0.122			PCB-81	1.66			
PCB-37	0.491				PCB-82	26.1			
PCB-38	6.85				PCB-83	0.494			
PCB-39	ND	0.119			PCB-84/92	267			
PCB-40	4.31				PCB-85/116	233			
PCB-41/64/71/72	194				PCB-86	ND	0.529		
PCB-42/59	55.3				PCB-87/117/125	329			
PCB-43/49	335				PCB-88/91	146			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-06	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0580	Date Analyzed :	30-Dec-14 10:21	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.61				PCB-136	52.6			
PCB-90/101	1500				PCB-137	66.6			
PCB-93	ND	0.295			PCB-138/163/164	1520			
PCB-94	2.30				PCB-139/149	941			
PCB-95/98/102	440				PCB-140	5.84			
PCB-96	2.70				PCB-141	194			
PCB-97	260				PCB-144	62.0			
PCB-99	858				PCB-145	ND	0.434		
PCB-100	14.8				PCB-146/165	279			
PCB-103	23.4				PCB-147	51.4			
PCB-104	0.935				PCB-148	4.47			
PCB-105	416				PCB-150	4.13			
PCB-106/118	1280				PCB-151	287			
PCB-107/109	129				PCB-152	1.20			
PCB-108/112	8.52				PCB-153	1910			E
PCB-110	978				PCB-154	54.3			
PCB-111/115	24.8				PCB-155	1.60			
PCB-113	ND	0.322			PCB-156	90.3			
PCB-114	8.70				PCB-157	24.9			
PCB-119	47.0				PCB-158/160	133			
PCB-120	5.52				PCB-159	ND	0.327		
PCB-121	ND	0.175			PCB-166	4.72			
PCB-122	ND	0.453			PCB-167	47.2			
PCB-123	7.01				PCB-168	3.34			
PCB-124	9.41				PCB-169	ND		0.246	
PCB-126	4.36				PCB-170	205			
PCB-127	ND	0.421			PCB-171	63.0			
PCB-128/162	211				PCB-172	45.1			
PCB-129	23.2				PCB-173	2.27			
PCB-130	98.2				PCB-174	129			
PCB-131	ND	0.185			PCB-175	13.2			
PCB-132/161	104				PCB-176	20.6			
PCB-133/142	34.2				PCB-177	141			
PCB-134/143	20.1				PCB-178	91.8			
PCB-135	62.8				PCB-179	47.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-06	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0580	Date Analyzed :	30-Dec-14 10:21	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	530				Total octaCB	439			B
PCB-181	1.33				Total nonaCB	63.9			
PCB-182/187	569				DecaCB	19.6			
PCB-183	194				Total PCB	18500			B
PCB-184	0.962								
PCB-185	19.4								
PCB-186	ND	0.204							
PCB-188	3.42								
PCB-189	6.31								
PCB-190	40.0								
PCB-191	8.65								
PCB-192	ND	0.356							
PCB-193	35.6								
PCB-194	77.0								
PCB-195	25.3			B					
PCB-196/203	122								
PCB-197	5.15								
PCB-198	4.39								
PCB-199	135								
PCB-200	8.82								
PCB-201	18.3								
PCB-202	40.0								
PCB-204	ND	0.364							
PCB-205	3.70								
PCB-206	40.0								
PCB-207	6.55								
PCB-208	17.4								
PCB-209	19.6								
Total monoCB	0.422								
Total diCB	30.8								
Total triCB	349								
Total tetraCB	2100								
Total pentaCB	7020								
Total hexaCB	6290								
Total heptaCB	2170								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-06
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0580	QC Batch:	B4L0139
				Date Analyzed :	30-Dec-14 10:21
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	67.8	5 -145		13C-PCB-170	78.4	10 -145	
13C-PCB-3	71.4	5 -145		13C-PCB-180	77.3	10 -145	
13C-PCB-4	74.0	5 -145		13C-PCB-188	67.1	10 -145	
13C-PCB-11	75.2	5 -145		13C-PCB-189	78.5	10 -145	
13C-PCB-9	75.6	5 -145		13C-PCB-194	82.4	10 -145	
13C-PCB-19	55.5	5 -145		13C-PCB-202	65.0	10 -145	
13C-PCB-28	82.5	5 -145		13C-PCB-206	78.1	10 -145	
13C-PCB-32	56.2	5 -145		13C-PCB-208	70.2	10 -145	
13C-PCB-37	71.8	5 -145		13C-PCB-209	85.6	10 -145	
13C-PCB-47	82.1	5 -145		CRS 13C-PCB-79	88.6	10 -145	
13C-PCB-52	81.7	5 -145		13C-PCB-178	80.5	10 -145	
13C-PCB-54	81.6	5 -145					
13C-PCB-70	83.6	5 -145					
13C-PCB-77	83.7	10 -145					
13C-PCB-80	82.5	10 -145					
13C-PCB-81	80.5	10 -145					
13C-PCB-95	77.1	10 -145					
13C-PCB-97	78.9	10 -145					
13C-PCB-101	81.4	10 -145					
13C-PCB-104	75.8	10 -145					
13C-PCB-105	87.4	10 -145					
13C-PCB-114	87.2	10 -145					
13C-PCB-118	85.5	10 -145					
13C-PCB-123	82.3	10 -145					
13C-PCB-126	90.3	10 -145					
13C-PCB-127	88.5	10 -145					
13C-PCB-138	82.8	10 -145					
13C-PCB-141	77.8	10 -145					
13C-PCB-153	81.9	10 -145					
13C-PCB-155	65.2	10 -145					
13C-PCB-156	85.8	10 -145					
13C-PCB-157	89.5	10 -145					
13C-PCB-159	82.4	10 -145					
13C-PCB-167	84.1	10 -145					
13C-PCB-169	86.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-07	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0800	Date Analyzed :	31-Dec-14 04:38	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.329			J	PCB-44	37.2			
PCB-2	ND	0.177			PCB-45	12.3			
PCB-3	ND		0.0902		PCB-46	0.540			
PCB-4/10	3.40				PCB-47	260			
PCB-5/8	14.0				PCB-48/75	57.5			
PCB-6	3.17				PCB-50	1.16			
PCB-7/9	0.756			J	PCB-51	19.6			
PCB-11	0.797			J	PCB-52/69	634			
PCB-12/13	ND	0.769			PCB-53	32.4			
PCB-14	ND	0.686			PCB-54	1.78			
PCB-15	ND	0.495			PCB-55	7.79			
PCB-16/32	36.4				PCB-56/60	123			
PCB-17	25.8				PCB-57	2.44			
PCB-18	52.5				PCB-58	1.65			
PCB-19	4.09				PCB-61/70	150			
PCB-20/21/33	21.3				PCB-62	ND	0.362		
PCB-22	37.3				PCB-63	24.5			
PCB-23	ND	0.252			PCB-65	ND	0.350		
PCB-24/27	4.78				PCB-66/76	622			
PCB-25	3.97				PCB-67	3.10			
PCB-26	20.2				PCB-68	5.43			
PCB-28	142				PCB-73	0.754			
PCB-29	0.259			J	PCB-74	259			
PCB-30	ND	0.0794			PCB-77	2.52			
PCB-31	45.6				PCB-78	ND	0.348		
PCB-34	1.13				PCB-79	42.6			
PCB-35	ND	0.250			PCB-80	ND	0.277		
PCB-36	ND	0.250			PCB-81	3.58			
PCB-37	0.324			J	PCB-82	17.6			
PCB-38	10.6				PCB-83	0.773			
PCB-39	ND	0.242			PCB-84/92	383			
PCB-40	2.44				PCB-85/116	539			
PCB-41/64/71/72	290				PCB-86	2.21			
PCB-42/59	62.1				PCB-87/117/125	533			
PCB-43/49	476				PCB-88/91	209			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-07
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0800	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	31-Dec-14 04:38
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.24				PCB-136	50.2			
PCB-90/101	2590				PCB-137	114			
PCB-93	ND	0.295			PCB-138/163/164	2630			
PCB-94	1.67				PCB-139/149	1200			
PCB-95/98/102	474				PCB-140	11.4			
PCB-96	2.33				PCB-141	298			
PCB-97	312				PCB-144	87.2			
PCB-99	1540			E	PCB-145	0.237			J
PCB-100	31.7				PCB-146/165	431			
PCB-103	36.2				PCB-147	82.8			
PCB-104	1.17				PCB-148	8.49			
PCB-105	721				PCB-150	5.63			
PCB-106/118	2330				PCB-151	366			
PCB-107/109	216				PCB-152	1.18			
PCB-108/112	6.73				PCB-153	3040			E
PCB-110	1710			E	PCB-154	109			
PCB-111/115	37.4				PCB-155	2.83			
PCB-113	ND	0.218			PCB-156	191			
PCB-114	24.4				PCB-157	46.5			
PCB-119	88.0				PCB-158/160	246			
PCB-120	9.64				PCB-159	ND	0.378		
PCB-121	ND	0.175			PCB-166	9.72			
PCB-122	ND	0.936			PCB-167	74.4			
PCB-123	25.1				PCB-168	5.31			
PCB-124	15.0				PCB-169	ND	0.410		
PCB-126	6.01				PCB-170	353			
PCB-127	ND	0.826			PCB-171	111			
PCB-128/162	370				PCB-172	67.9			
PCB-129	27.6				PCB-173	2.56			
PCB-130	152				PCB-174	163			
PCB-131	ND	0.493			PCB-175	18.2			
PCB-132/161	140				PCB-176	21.2			
PCB-133/142	47.3				PCB-177	175			
PCB-134/143	16.2				PCB-178	122			
PCB-135	70.1				PCB-179	55.1			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-07
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0800	QC Batch:	B4L0139
				Date Analyzed:	31-Dec-14 04:38
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	880				Total octaCB	711			B
PCB-181	2.73				Total nonaCB	106			
PCB-182/187	831				DecaCB	33.2			
PCB-183	303				Total PCB	29400			B
PCB-184	1.17								
PCB-185	30.1								
PCB-186	ND	0.342							
PCB-188	7.87								
PCB-189	11.2								
PCB-190	69.1								
PCB-191	14.5								
PCB-192	ND	0.394							
PCB-193	55.2								
PCB-194	119								
PCB-195	44.0			B					
PCB-196/203	211								
PCB-197	8.34								
PCB-198	5.08								
PCB-199	212								
PCB-200	12.0								
PCB-201	29.3								
PCB-202	64.4								
PCB-204	0.482			J					
PCB-205	5.78								
PCB-206	66.5								
PCB-207	10.8								
PCB-208	29.0								
PCB-209	33.2								
Total monoCB	0.329		0.420						
Total diCB	22.1								
Total triCB	406								
Total tetraCB	3140								
Total pentaCB	11900								
Total hexaCB	9820								
Total heptaCB	3290								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-07
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0800	QC Batch:	B4L0139
				Date Analyzed :	31-Dec-14 04:38
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	64.0	5 -145		13C-PCB-170	78.1	10 -145	
13C-PCB-3	72.6	5 -145		13C-PCB-180	78.8	10 -145	
13C-PCB-4	75.8	5 -145		13C-PCB-188	74.6	10 -145	
13C-PCB-11	78.8	5 -145		13C-PCB-189	78.5	10 -145	
13C-PCB-9	76.6	5 -145		13C-PCB-194	77.3	10 -145	
13C-PCB-19	70.3	5 -145		13C-PCB-202	62.8	10 -145	
13C-PCB-28	82.4	5 -145		13C-PCB-206	81.6	10 -145	
13C-PCB-32	69.0	5 -145		13C-PCB-208	75.7	10 -145	
13C-PCB-37	84.2	5 -145		13C-PCB-209	94.1	10 -145	
13C-PCB-47	81.6	5 -145		CRS 13C-PCB-79	87.8	10 -145	
13C-PCB-52	81.9	5 -145		13C-PCB-178	78.1	10 -145	
13C-PCB-54	82.6	5 -145					
13C-PCB-70	84.1	5 -145					
13C-PCB-77	86.3	10 -145					
13C-PCB-80	85.0	10 -145					
13C-PCB-81	84.9	10 -145					
13C-PCB-95	82.6	10 -145					
13C-PCB-97	80.1	10 -145					
13C-PCB-101	89.1	10 -145					
13C-PCB-104	82.8	10 -145					
13C-PCB-105	82.7	10 -145					
13C-PCB-114	80.4	10 -145					
13C-PCB-118	89.5	10 -145					
13C-PCB-123	79.9	10 -145					
13C-PCB-126	83.3	10 -145					
13C-PCB-127	84.2	10 -145					
13C-PCB-138	86.2	10 -145					
13C-PCB-141	83.2	10 -145					
13C-PCB-153	87.5	10 -145					
13C-PCB-155	66.9	10 -145					
13C-PCB-156	83.3	10 -145					
13C-PCB-157	81.9	10 -145					
13C-PCB-159	81.4	10 -145					
13C-PCB-167	83.2	10 -145					
13C-PCB-169	79.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-08
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.254	QC Batch:	B4L0139
				Date Analyzed :	31-Dec-14 05:43
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.679				PCB-44	119			
PCB-2	ND	0.233			PCB-45	35.5			
PCB-3	0.137			J	PCB-46	1.86			
PCB-4/10	9.10				PCB-47	612			
PCB-5/8	34.1				PCB-48/75	147			
PCB-6	8.46				PCB-50	2.67			
PCB-7/9	2.34				PCB-51	46.1			
PCB-11	1.33				PCB-52/69	1530			
PCB-12/13	ND	0.669			PCB-53	83.4			
PCB-14	ND	0.597			PCB-54	4.59			
PCB-15	0.683			J	PCB-55	20.5			
PCB-16/32	92.1				PCB-56/60	283			
PCB-17	61.1				PCB-57	6.07			
PCB-18	131				PCB-58	3.16			
PCB-19	12.6				PCB-61/70	424			
PCB-20/21/33	62.7				PCB-62	ND	0.415		
PCB-22	79.7				PCB-63	53.4			
PCB-23	ND	0.260			PCB-65	ND	0.402		
PCB-24/27	13.6				PCB-66/76	1410			
PCB-25	12.6				PCB-67	8.81			
PCB-26	48.6				PCB-68	13.1			
PCB-28	325				PCB-73	1.71			
PCB-29	0.556				PCB-74	562			
PCB-30	0.144			J	PCB-77	7.92			
PCB-31	147				PCB-78	ND	0.421		
PCB-34	2.26				PCB-79	115			
PCB-35	ND	0.287			PCB-80	ND	0.347		
PCB-36	ND	0.287			PCB-81	5.17			
PCB-37	1.16				PCB-82	58.0			
PCB-38	26.9				PCB-83	1.48			
PCB-39	ND	0.278			PCB-84/92	1060			
PCB-40	7.30				PCB-85/116	1100			
PCB-41/64/71/72	669				PCB-86	3.72			
PCB-42/59	154				PCB-87/117/125	1330			
PCB-43/49	1200				PCB-88/91	563			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-08	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.254	Date Analyzed :	31-Dec-14 05:43	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	3.73				PCB-136	174			
PCB-90/101	6610			E	PCB-137	295			
PCB-93	ND	0.377			PCB-138/163/164	7260			E
PCB-94	5.53				PCB-139/149	3850			E
PCB-95/98/102	1310				PCB-140	31.5			
PCB-96	6.75				PCB-141	852			
PCB-97	858				PCB-144	230			
PCB-99	3880			E	PCB-145	0.707			
PCB-100	60.9				PCB-146/165	1190			
PCB-103	88.5				PCB-147	233			
PCB-104	2.44				PCB-148	18.3			
PCB-105	1780			E	PCB-150	15.7			
PCB-106/118	5810			E	PCB-151	1190			
PCB-107/109	551				PCB-152	3.48			
PCB-108/112	22.8				PCB-153	8610			E
PCB-110	4260			E	PCB-154	250			
PCB-111/115	95.2				PCB-155	5.42			
PCB-113	ND	0.275			PCB-156	503			
PCB-114	47.7				PCB-157	125			
PCB-119	204				PCB-158/160	624			
PCB-120	28.1				PCB-159	ND	0.394		
PCB-121	ND	0.224			PCB-166	24.5			
PCB-122	ND	0.975			PCB-167	230			
PCB-123	54.3				PCB-168	12.6			
PCB-124	42.1				PCB-169	0.660			
PCB-126	16.8				PCB-170	1000			
PCB-127	ND	0.912			PCB-171	294			
PCB-128/162	996				PCB-172	191			
PCB-129	70.1				PCB-173	7.69			
PCB-130	438				PCB-174	484			
PCB-131	ND	0.494			PCB-175	55.1			
PCB-132/161	387				PCB-176	67.8			
PCB-133/142	130				PCB-177	528			
PCB-134/143	46.1				PCB-178	359			
PCB-135	252				PCB-179	178			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-08	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.254	Date Analyzed :	31-Dec-14 05:43	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2560			E	Total octaCB	2220			B
PCB-181	5.44				Total nonaCB	315			
PCB-182/187	2560				DecaCB	84.9			
PCB-183	885				Total PCB	78800			B
PCB-184	3.49								
PCB-185	81.1								
PCB-186	ND	0.965							
PCB-188	17.9								
PCB-189	34.9								
PCB-190	196								
PCB-191	39.5								
PCB-192	ND	0.951							
PCB-193	150								
PCB-194	361								
PCB-195	120			B					
PCB-196/203	672								
PCB-197	24.6								
PCB-198	18.9								
PCB-199	677								
PCB-200	39.1								
PCB-201	93.9								
PCB-202	195								
PCB-204	1.21								
PCB-205	16.2								
PCB-206	199								
PCB-207	31.3								
PCB-208	85.1								
PCB-209	84.9								
Total monoCB	0.816								
Total diCB	56.0								
Total triCB	1020								
Total tetraCB	7530								
Total pentaCB	29900								
Total hexaCB	28000								
Total heptaCB	9700								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-08
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.254	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed :	31-Dec-14 05:43
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	41.4	5 -145		13C-PCB-170	78.9	10 -145	
13C-PCB-3	49.7	5 -145		13C-PCB-180	83.1	10 -145	
13C-PCB-4	55.7	5 -145		13C-PCB-188	72.7	10 -145	
13C-PCB-11	67.3	5 -145		13C-PCB-189	76.0	10 -145	
13C-PCB-9	61.0	5 -145		13C-PCB-194	79.0	10 -145	
13C-PCB-19	54.8	5 -145		13C-PCB-202	60.5	10 -145	
13C-PCB-28	81.6	5 -145		13C-PCB-206	78.4	10 -145	
13C-PCB-32	59.2	5 -145		13C-PCB-208	72.5	10 -145	
13C-PCB-37	77.5	5 -145		13C-PCB-209	93.6	10 -145	
13C-PCB-47	75.1	5 -145		CRS 13C-PCB-79	81.5	10 -145	
13C-PCB-52	77.2	5 -145		13C-PCB-178	78.3	10 -145	
13C-PCB-54	71.0	5 -145					
13C-PCB-70	75.8	5 -145					
13C-PCB-77	77.0	10 -145					
13C-PCB-80	74.5	10 -145					
13C-PCB-81	73.0	10 -145					
13C-PCB-95	73.5	10 -145					
13C-PCB-97	73.8	10 -145					
13C-PCB-101	80.5	10 -145					
13C-PCB-104	70.3	10 -145					
13C-PCB-105	73.8	10 -145					
13C-PCB-114	71.1	10 -145					
13C-PCB-118	83.5	10 -145					
13C-PCB-123	73.2	10 -145					
13C-PCB-126	70.6	10 -145					
13C-PCB-127	73.4	10 -145					
13C-PCB-138	82.3	10 -145					
13C-PCB-141	77.0	10 -145					
13C-PCB-153	83.7	10 -145					
13C-PCB-155	58.3	10 -145					
13C-PCB-156	79.0	10 -145					
13C-PCB-157	76.6	10 -145					
13C-PCB-159	75.9	10 -145					
13C-PCB-167	75.4	10 -145					
13C-PCB-169	74.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-09	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	31-Dec-14 06:47	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.245		PCB-44	38.3			
PCB-2	ND	0.244			PCB-45	9.71			
PCB-3	ND	0.237			PCB-46	0.587			
PCB-4/10	2.31				PCB-47	151			
PCB-5/8	9.28				PCB-48/75	42.2			
PCB-6	2.13				PCB-50	0.750			
PCB-7/9	ND	1.09			PCB-51	11.5			
PCB-11	1.03				PCB-52/69	405			
PCB-12/13	ND	0.999			PCB-53	20.8			
PCB-14	ND	0.891			PCB-54	0.892			
PCB-15	ND	0.908			PCB-55	5.82			
PCB-16/32	23.6				PCB-56/60	86.3			
PCB-17	17.1				PCB-57	1.74			
PCB-18	35.8				PCB-58	1.03			
PCB-19	3.08				PCB-61/70	125			
PCB-20/21/33	17.0				PCB-62	ND	0.195		
PCB-22	21.6				PCB-63	14.0			
PCB-23	ND	0.225			PCB-65	ND	0.189		
PCB-24/27	3.18				PCB-66/76	359			
PCB-25	3.56				PCB-67	2.11			
PCB-26	12.7				PCB-68	3.15			
PCB-28	103				PCB-73	0.347			J
PCB-29	0.185			J	PCB-74	146			
PCB-30	ND	0.102			PCB-77	2.00			
PCB-31	40.0				PCB-78	ND	0.499		
PCB-34	0.542				PCB-79	26.1			
PCB-35	ND	0.283			PCB-80	ND	0.423		
PCB-36	ND	0.283			PCB-81	0.884			
PCB-37	0.360			J	PCB-82	22.4			
PCB-38	7.47				PCB-83	0.708			
PCB-39	ND	0.275			PCB-84/92	281			
PCB-40	2.96				PCB-85/116	295			
PCB-41/64/71/72	191				PCB-86	1.41			
PCB-42/59	44.3				PCB-87/117/125	363			
PCB-43/49	319				PCB-88/91	155			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-09
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed :	31-Dec-14 06:47
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.30				PCB-136	49.2			
PCB-90/101	1640				PCB-137	61.9			
PCB-93	ND	0.377			PCB-138/163/164	1510			
PCB-94	2.02				PCB-139/149	855			
PCB-95/98/102	387				PCB-140	6.18			
PCB-96	2.14				PCB-141	190			
PCB-97	260				PCB-144	52.2			
PCB-99	914				PCB-145	ND	0.428		
PCB-100	13.7				PCB-146/165	267			
PCB-103	21.1				PCB-147	52.0			
PCB-104	0.558				PCB-148	4.11			
PCB-105	433				PCB-150	3.90			
PCB-106/118	1480				PCB-151	247			
PCB-107/109	132				PCB-152	ND		0.694	
PCB-108/112	8.40				PCB-153	1780			E
PCB-110	1110				PCB-154	49.8			
PCB-111/115	27.9				PCB-155	1.09			
PCB-113	ND	0.286			PCB-156	105			
PCB-114	14.0				PCB-157	26.5			
PCB-119	50.1				PCB-158/160	142			
PCB-120	6.77				PCB-159	ND	0.339		
PCB-121	ND	0.224			PCB-166	5.59			
PCB-122	0.916				PCB-167	48.3			
PCB-123	12.2				PCB-168	2.80			
PCB-124	11.9				PCB-169	ND	0.363		
PCB-126	4.14				PCB-170	209			
PCB-127	ND	0.518			PCB-171	64.4			
PCB-128/162	208				PCB-172	44.9			
PCB-129	22.6				PCB-173	2.54			
PCB-130	102				PCB-174	128			
PCB-131	ND	0.467			PCB-175	12.2			
PCB-132/161	124				PCB-176	18.3			
PCB-133/142	33.0				PCB-177	129			
PCB-134/143	18.8				PCB-178	77.3			
PCB-135	55.2				PCB-179	45.9			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-09	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	31-Dec-14 06:47	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	546				Total octaCB	436			B
PCB-181	1.31				Total nonaCB	70.8			
PCB-182/187	508				DecaCB	22.5			
PCB-183	182				Total PCB	18600			B
PCB-184	0.596								
PCB-185	18.6								
PCB-186	ND	0.129							
PCB-188	3.95								
PCB-189	7.02								
PCB-190	41.0								
PCB-191	8.58								
PCB-192	ND	0.143							
PCB-193	33.7								
PCB-194	75.4								
PCB-195	24.1			B					
PCB-196/203	125								
PCB-197	4.81								
PCB-198	4.73								
PCB-199	130								
PCB-200	8.63								
PCB-201	18.0								
PCB-202	41.1								
PCB-204	ND	0.368							
PCB-205	3.74								
PCB-206	44.7								
PCB-207	6.82								
PCB-208	19.3								
PCB-209	22.5								
Total monoCB	ND		0.245						
Total diCB	14.7								
Total triCB	289								
Total tetraCB	2010								
Total pentaCB	7650								
Total hexaCB	6020								
Total heptaCB	2080								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-09
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B4L0139
				Date Analyzed :	31-Dec-14 06:47
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	27.1	5 -145		13C-PCB-170	64.4	10 -145	
13C-PCB-3	44.1	5 -145		13C-PCB-180	62.9	10 -145	
13C-PCB-4	45.4	5 -145		13C-PCB-188	60.2	10 -145	
13C-PCB-11	57.2	5 -145		13C-PCB-189	64.4	10 -145	
13C-PCB-9	50.5	5 -145		13C-PCB-194	62.1	10 -145	
13C-PCB-19	46.8	5 -145		13C-PCB-202	52.1	10 -145	
13C-PCB-28	57.2	5 -145		13C-PCB-206	63.5	10 -145	
13C-PCB-32	49.7	5 -145		13C-PCB-208	58.8	10 -145	
13C-PCB-37	52.7	5 -145		13C-PCB-209	75.4	10 -145	
13C-PCB-47	61.2	5 -145		CRS 13C-PCB-79	70.3	10 -145	
13C-PCB-52	62.5	5 -145		13C-PCB-178	66.1	10 -145	
13C-PCB-54	60.6	5 -145					
13C-PCB-70	61.9	5 -145					
13C-PCB-77	64.3	10 -145					
13C-PCB-80	61.5	10 -145					
13C-PCB-81	63.4	10 -145					
13C-PCB-95	63.2	10 -145					
13C-PCB-97	62.7	10 -145					
13C-PCB-101	66.8	10 -145					
13C-PCB-104	63.5	10 -145					
13C-PCB-105	64.8	10 -145					
13C-PCB-114	62.8	10 -145					
13C-PCB-118	65.7	10 -145					
13C-PCB-123	63.2	10 -145					
13C-PCB-126	61.4	10 -145					
13C-PCB-127	66.4	10 -145					
13C-PCB-138	68.6	10 -145					
13C-PCB-141	67.2	10 -145					
13C-PCB-153	68.1	10 -145					
13C-PCB-155	53.4	10 -145					
13C-PCB-156	67.5	10 -145					
13C-PCB-157	67.0	10 -145					
13C-PCB-159	68.0	10 -145					
13C-PCB-167	65.9	10 -145					
13C-PCB-169	66.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-10	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.995	Date Analyzed :	31-Dec-14 07:52	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.93				PCB-44	1800			E
PCB-2	0.250			J	PCB-45	206			
PCB-3	0.170			J	PCB-46	61.8			
PCB-4/10	24.6				PCB-47	1330			
PCB-5/8	61.6				PCB-48/75	291			
PCB-6	23.0				PCB-50	9.14			
PCB-7/9	4.90				PCB-51	82.1			
PCB-11	4.01				PCB-52/69	3170			E
PCB-12/13	ND	0.889			PCB-53	168			
PCB-14	ND	0.793			PCB-54	10.5			
PCB-15	4.62				PCB-55	57.5			
PCB-16/32	332				PCB-56/60	936			
PCB-17	203				PCB-57	17.7			
PCB-18	470				PCB-58	12.6			
PCB-19	42.3				PCB-61/70	2300			
PCB-20/21/33	152				PCB-62	ND	0.719		
PCB-22	121				PCB-63	145			
PCB-23	0.412			J	PCB-65	0.974			
PCB-24/27	51.0				PCB-66/76	3380			E
PCB-25	57.1				PCB-67	55.7			
PCB-26	143				PCB-68	33.8			
PCB-28	1270				PCB-73	3.71			
PCB-29	1.28				PCB-74	1540			E
PCB-30	0.381			J	PCB-77	113			
PCB-31	385				PCB-78	ND	0.728		
PCB-34	6.63				PCB-79	152			
PCB-35	ND	0.831			PCB-80	ND	0.580		
PCB-36	ND	0.831			PCB-81	30.2			
PCB-37	13.1				PCB-82	720			
PCB-38	58.8				PCB-83	2.36			
PCB-39	0.537				PCB-84/92	2770			
PCB-40	275				PCB-85/116	1540			
PCB-41/64/71/72	1640				PCB-86	9.74			
PCB-42/59	720				PCB-87/117/125	2540			
PCB-43/49	2620				PCB-88/91	1320			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-10	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.995	Date Analyzed :	31-Dec-14 07:52	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	31.7				PCB-136	731			
PCB-90/101	10200			E	PCB-137	407			
PCB-93	ND	0.501			PCB-138/163/164	9350			E
PCB-94	23.9				PCB-139/149	6760			E
PCB-95/98/102	4630			E	PCB-140	53.4			
PCB-96	37.4				PCB-141	1240			
PCB-97	2660			E	PCB-144	366			
PCB-99	5370			E	PCB-145	1.66			
PCB-100	88.7				PCB-146/165	1520			
PCB-103	140				PCB-147	331			
PCB-104	2.91				PCB-148	21.0			
PCB-105	2700			E	PCB-150	40.6			
PCB-106/118	9010			E	PCB-151	1610			E
PCB-107/109	775				PCB-152	ND		5.71	
PCB-108/112	390				PCB-153	10300			E
PCB-110	7560			E	PCB-154	304			
PCB-111/115	142				PCB-155	6.56			
PCB-113	33.5				PCB-156	743			
PCB-114	151				PCB-157	174			
PCB-119	298				PCB-158/160	943			
PCB-120	35.8				PCB-159	ND	1.14		
PCB-121	ND	0.298			PCB-166	31.1			
PCB-122	26.0				PCB-167	358			
PCB-123	130				PCB-168	19.7			
PCB-124	256				PCB-169	ND	1.24		
PCB-126	34.5				PCB-170	1370			
PCB-127	ND	1.58			PCB-171	411			
PCB-128/162	1320				PCB-172	242			
PCB-129	272				PCB-173	21.9			
PCB-130	651				PCB-174	1130			
PCB-131	ND	0.440			PCB-175	70.3			
PCB-132/161	1600				PCB-176	168			
PCB-133/142	255				PCB-177	877			
PCB-134/143	352				PCB-178	457			
PCB-135	926				PCB-179	668			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-10	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.995	Date Analyzed :	31-Dec-14 07:52	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3290			E	Total octaCB	3240			B
PCB-181	7.62				Total nonaCB	466			
PCB-182/187	3210			E	DecaCB	92.2			
PCB-183	1120				Total PCB	136000			B
PCB-184	4.87								
PCB-185	121								
PCB-186	0.306			J					
PCB-188	25.6								
PCB-189	36.4								
PCB-190	263								
PCB-191	52.9								
PCB-192	ND	1.31							
PCB-193	182								
PCB-194	543								
PCB-195	192			B					
PCB-196/203	985								
PCB-197	35.9								
PCB-198	30.3								
PCB-199	953								
PCB-200	76.2								
PCB-201	126								
PCB-202	276								
PCB-204	1.36								
PCB-205	22.2								
PCB-206	306								
PCB-207	43.0								
PCB-208	118								
PCB-209	92.2								
Total monoCB	2.35								
Total diCB	123								
Total triCB	3310								
Total tetraCB	21200								
Total pentaCB	53600								
Total hexaCB	40700								
Total heptaCB	13700								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-10
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.995	QC Batch:	B4L0139
				Date Analyzed :	31-Dec-14 07:52
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	49.2	5 -145		13C-PCB-170	70.5	10 -145	
13C-PCB-3	56.7	5 -145		13C-PCB-180	75.4	10 -145	
13C-PCB-4	56.2	5 -145		13C-PCB-188	66.2	10 -145	
13C-PCB-11	67.2	5 -145		13C-PCB-189	68.5	10 -145	
13C-PCB-9	63.1	5 -145		13C-PCB-194	72.2	10 -145	
13C-PCB-19	55.7	5 -145		13C-PCB-202	62.7	10 -145	
13C-PCB-28	79.0	5 -145		13C-PCB-206	73.0	10 -145	
13C-PCB-32	59.4	5 -145		13C-PCB-208	67.8	10 -145	
13C-PCB-37	67.6	5 -145		13C-PCB-209	83.4	10 -145	
13C-PCB-47	71.1	5 -145		CRS 13C-PCB-79	72.7	10 -145	
13C-PCB-52	70.9	5 -145		13C-PCB-178	70.7	10 -145	
13C-PCB-54	72.0	5 -145					
13C-PCB-70	69.4	5 -145					
13C-PCB-77	68.0	10 -145					
13C-PCB-80	70.6	10 -145					
13C-PCB-81	71.3	10 -145					
13C-PCB-95	69.1	10 -145					
13C-PCB-97	70.6	10 -145					
13C-PCB-101	72.9	10 -145					
13C-PCB-104	67.6	10 -145					
13C-PCB-105	70.1	10 -145					
13C-PCB-114	66.3	10 -145					
13C-PCB-118	72.8	10 -145					
13C-PCB-123	67.6	10 -145					
13C-PCB-126	69.0	10 -145					
13C-PCB-127	68.9	10 -145					
13C-PCB-138	73.8	10 -145					
13C-PCB-141	70.6	10 -145					
13C-PCB-153	72.6	10 -145					
13C-PCB-155	61.3	10 -145					
13C-PCB-156	73.1	10 -145					
13C-PCB-157	70.6	10 -145					
13C-PCB-159	71.8	10 -145					
13C-PCB-167	71.3	10 -145					
13C-PCB-169	68.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-11
Project:		Sample Size:	10.1 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.746	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed :	31-Dec-14 08:57
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.67				PCB-44	731			
PCB-2	0.172			J	PCB-45	73.7			
PCB-3	0.173			J	PCB-46	24.9			
PCB-4/10	16.5				PCB-47	544			
PCB-5/8	48.5				PCB-48/75	148			
PCB-6	11.8				PCB-50	3.14			
PCB-7/9	3.38				PCB-51	39.3			
PCB-11	3.12				PCB-52/69	1150			
PCB-12/13	ND	0.369			PCB-53	70.2			
PCB-14	ND	0.330			PCB-54	4.30			
PCB-15	3.67				PCB-55	23.1			
PCB-16/32	161				PCB-56/60	425			
PCB-17	82.5				PCB-57	7.84			
PCB-18	168				PCB-58	5.89			
PCB-19	18.3				PCB-61/70	960			
PCB-20/21/33	75.0				PCB-62	ND	0.330		
PCB-22	64.5				PCB-63	56.9			
PCB-23	0.308			J	PCB-65	0.233			J
PCB-24/27	21.0				PCB-66/76	1340			
PCB-25	36.9				PCB-67	26.0			
PCB-26	72.8				PCB-68	17.1			
PCB-28	607				PCB-73	2.38			
PCB-29	0.902				PCB-74	637			
PCB-30	0.152			J	PCB-77	47.6			
PCB-31	202				PCB-78	ND	0.301		
PCB-34	4.48				PCB-79	66.0			
PCB-35	ND	0.736			PCB-80	ND	0.257		
PCB-36	ND	0.503			PCB-81	5.60			
PCB-37	9.94				PCB-82	276			
PCB-38	25.5				PCB-83	1.36			
PCB-39	0.230			J	PCB-84/92	997			
PCB-40	127				PCB-85/116	555			
PCB-41/64/71/72	734				PCB-86	5.43			
PCB-42/59	317				PCB-87/117/125	850			
PCB-43/49	1050				PCB-88/91	512			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-11	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.1 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.746	Date Analyzed :	31-Dec-14 08:57	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	15.5				PCB-136	290			
PCB-90/101	3510			E	PCB-137	137			
PCB-93	ND	0.334			PCB-138/163/164	3720			
PCB-94	9.53				PCB-139/149	2620			
PCB-95/98/102	1520				PCB-140	26.5			
PCB-96	16.0				PCB-141	413			
PCB-97	945				PCB-144	104			
PCB-99	2250			E	PCB-145	0.573			
PCB-100	35.6				PCB-146/165	635			
PCB-103	63.1				PCB-147	130			
PCB-104	1.18				PCB-148	9.30			
PCB-105	995				PCB-150	16.6			
PCB-106/118	3140			E	PCB-151	677			
PCB-107/109	310				PCB-152	ND		2.45	
PCB-108/112	144				PCB-153	4340			E
PCB-110	2500			E	PCB-154	136			
PCB-111/115	50.0				PCB-155	4.33			
PCB-113	8.13				PCB-156	274			
PCB-114	53.3				PCB-157	73.4			
PCB-119	125				PCB-158/160	320			
PCB-120	18.0				PCB-159	ND	0.883		
PCB-121	ND	0.198			PCB-166	13.9			
PCB-122	11.8				PCB-167	157			
PCB-123	56.0				PCB-168	6.04			
PCB-124	98.0				PCB-169	ND	0.930		
PCB-126	12.4				PCB-170	617			
PCB-127	ND	0.418			PCB-171	178			
PCB-128/162	502				PCB-172	114			
PCB-129	89.1				PCB-173	8.97			
PCB-130	249				PCB-174	476			
PCB-131	ND	0.235			PCB-175	29.9			
PCB-132/161	563				PCB-176	65.5			
PCB-133/142	94.7				PCB-177	441			
PCB-134/143	125				PCB-178	236			
PCB-135	393				PCB-179	320			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-11	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.746	Date Analyzed :	31-Dec-14 08:57	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1380				Total octaCB	1650			B
PCB-181	2.54				Total nonaCB	248			
PCB-182/187	1640				DecaCB	64.6			
PCB-183	469				Total PCB	53800			B
PCB-184	3.60								
PCB-185	53.2								
PCB-186	ND	0.840							
PCB-188	9.72								
PCB-189	18.1								
PCB-190	128								
PCB-191	24.8								
PCB-192	ND	0.872							
PCB-193	100								
PCB-194	292								
PCB-195	106			B					
PCB-196/203	468								
PCB-197	15.8								
PCB-198	14.6								
PCB-199	497								
PCB-200	35.9								
PCB-201	56.2								
PCB-202	146								
PCB-204	0.642								
PCB-205	14.0								
PCB-206	167								
PCB-207	20.3								
PCB-208	60.3								
PCB-209	64.6								
Total monoCB	2.02								
Total diCB	86.9								
Total triCB	1550								
Total tetraCB	8640								
Total pentaCB	19100								
Total hexaCB	16100								
Total heptaCB	6310								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-02-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-11
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.746	QC Batch:	B4L0139
				Date Analyzed :	31-Dec-14 08:57
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	67.7	5 -145		13C-PCB-170	81.9	10 -145	
13C-PCB-3	69.4	5 -145		13C-PCB-180	84.9	10 -145	
13C-PCB-4	70.7	5 -145		13C-PCB-188	76.1	10 -145	
13C-PCB-11	76.8	5 -145		13C-PCB-189	82.6	10 -145	
13C-PCB-9	74.7	5 -145		13C-PCB-194	80.7	10 -145	
13C-PCB-19	63.6	5 -145		13C-PCB-202	73.2	10 -145	
13C-PCB-28	75.2	5 -145		13C-PCB-206	82.0	10 -145	
13C-PCB-32	66.9	5 -145		13C-PCB-208	76.0	10 -145	
13C-PCB-37	85.2	5 -145		13C-PCB-209	88.6	10 -145	
13C-PCB-47	76.1	5 -145		CRS 13C-PCB-79	90.8	10 -145	
13C-PCB-52	78.6	5 -145		13C-PCB-178	85.7	10 -145	
13C-PCB-54	83.2	5 -145					
13C-PCB-70	84.6	5 -145					
13C-PCB-77	82.8	10 -145					
13C-PCB-80	81.8	10 -145					
13C-PCB-81	83.7	10 -145					
13C-PCB-95	76.1	10 -145					
13C-PCB-97	79.1	10 -145					
13C-PCB-101	78.3	10 -145					
13C-PCB-104	72.9	10 -145					
13C-PCB-105	81.7	10 -145					
13C-PCB-114	78.2	10 -145					
13C-PCB-118	82.0	10 -145					
13C-PCB-123	76.1	10 -145					
13C-PCB-126	83.0	10 -145					
13C-PCB-127	79.8	10 -145					
13C-PCB-138	83.4	10 -145					
13C-PCB-141	81.7	10 -145					
13C-PCB-153	84.1	10 -145					
13C-PCB-155	65.8	10 -145					
13C-PCB-156	84.8	10 -145					
13C-PCB-157	83.8	10 -145					
13C-PCB-159	83.5	10 -145					
13C-PCB-167	83.1	10 -145					
13C-PCB-169	82.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-12	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.1 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.44	Date Analyzed :	31-Dec-14 10:02	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.56				PCB-44	1760			E
PCB-2	0.242			J	PCB-45	162			
PCB-3	0.285			J	PCB-46	43.0			
PCB-4/10	26.3				PCB-47	1300			
PCB-5/8	52.2				PCB-48/75	213			
PCB-6	16.7				PCB-50	7.30			
PCB-7/9	4.43				PCB-51	61.7			
PCB-11	6.26				PCB-52/69	3200			E
PCB-12/13	ND	0.717			PCB-53	96.5			
PCB-14	ND	0.639			PCB-54	9.85			
PCB-15	9.54				PCB-55	59.3			
PCB-16/32	206				PCB-56/60	1090			
PCB-17	107				PCB-57	19.8			
PCB-18	268				PCB-58	13.4			
PCB-19	33.0				PCB-61/70	2570			
PCB-20/21/33	106				PCB-62	ND	0.612		
PCB-22	141				PCB-63	156			
PCB-23	ND	0.178			PCB-65	ND		0.242	
PCB-24/27	32.7				PCB-66/76	3430			E
PCB-25	59.7				PCB-67	65.6			
PCB-26	137				PCB-68	34.9			
PCB-28	1030			B	PCB-73	3.26			
PCB-29	0.825				PCB-74	1700			E
PCB-30	0.280			J	PCB-77	128			
PCB-31	447				PCB-78	ND	0.608		
PCB-34	5.06				PCB-79	171			
PCB-35	ND	0.176			PCB-80	ND	0.489		
PCB-36	0.259			J	PCB-81	25.4			
PCB-37	16.3				PCB-82	765			
PCB-38	48.8				PCB-83	ND	0.340		
PCB-39	0.706				PCB-84/92	3060			E
PCB-40	276				PCB-85/116	1450			
PCB-41/64/71/72	1550				PCB-86	ND	0.506		
PCB-42/59	735				PCB-87/117/125	2820			
PCB-43/49	2860				PCB-88/91	1480			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-12	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.1 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.44	Date Analyzed :	31-Dec-14 10:02	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	23.2				PCB-136	955			
PCB-90/101	11800			E	PCB-137	454			
PCB-93	ND	0.426			PCB-138/163/164	11800			E
PCB-94	15.8				PCB-139/149	8100			E
PCB-95/98/102	4670			E	PCB-140	65.8			
PCB-96	31.6				PCB-141	1620			E
PCB-97	2860			E	PCB-144	364			
PCB-99	6320			E	PCB-145	0.970			
PCB-100	108				PCB-146/165	1810			
PCB-103	171				PCB-147	379			
PCB-104	3.42				PCB-148	18.9			
PCB-105	3060			E	PCB-150	44.3			
PCB-106/118	10400			E	PCB-151	2230			E
PCB-107/109	848				PCB-152	5.72			
PCB-108/112	398				PCB-153	13200			E
PCB-110	8710			E	PCB-154	360			
PCB-111/115	153				PCB-155	11.0			
PCB-113	15.1				PCB-156	877			
PCB-114	172				PCB-157	214			
PCB-119	343				PCB-158/160	1140			
PCB-120	49.1				PCB-159	ND	1.65		
PCB-121	ND	0.253			PCB-166	39.2			
PCB-122	32.7				PCB-167	472			
PCB-123	148				PCB-168	17.7			
PCB-124	281				PCB-169	ND	1.77		
PCB-126	39.4				PCB-170	1900			E
PCB-127	ND	1.38			PCB-171	563			
PCB-128/162	1550				PCB-172	351			
PCB-129	313				PCB-173	25.4			
PCB-130	785				PCB-174	1550			E
PCB-131	ND	2.16			PCB-175	ND		92.1	
PCB-132/161	1790				PCB-176	221			
PCB-133/142	276				PCB-177	1250			
PCB-134/143	382				PCB-178	643			
PCB-135	1170				PCB-179	983			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-12	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.44	Date Analyzed :	31-Dec-14 10:02	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4710			E	Total octaCB	4620			
PCB-181	21.3				Total nonaCB	695			
PCB-182/187	4420			E	DecaCB	187			
PCB-183	1540			E	Total PCB	160000			B
PCB-184	11.2								
PCB-185	174								
PCB-186	0.208			J					
PCB-188	23.7								
PCB-189	45.6								
PCB-190	381								
PCB-191	77.7								
PCB-192	ND	0.701							
PCB-193	272								
PCB-194	799								
PCB-195	292								
PCB-196/203	1390								
PCB-197	48.0								
PCB-198	40.2								
PCB-199	1360								
PCB-200	106								
PCB-201	165								
PCB-202	385								
PCB-204	1.75								
PCB-205	31.6								
PCB-206	461								
PCB-207	60.3								
PCB-208	174								
PCB-209	187								
Total monoCB	3.08								
Total diCB	115								
Total triCB	2640			B					
Total tetraCB	21700								
Total pentaCB	60300								
Total hexaCB	50400								
Total heptaCB	19200		19300						

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-03-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-12
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.44	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 10:02
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	76.4	5 -145		13C-PCB-170	85.0	10 -145	
13C-PCB-3	77.1	5 -145		13C-PCB-180	88.8	10 -145	
13C-PCB-4	75.6	5 -145		13C-PCB-188	78.0	10 -145	
13C-PCB-11	82.0	5 -145		13C-PCB-189	84.6	10 -145	
13C-PCB-9	81.2	5 -145		13C-PCB-194	90.9	10 -145	
13C-PCB-19	71.7	5 -145		13C-PCB-202	74.6	10 -145	
13C-PCB-28	91.3	5 -145		13C-PCB-206	96.3	10 -145	
13C-PCB-32	73.1	5 -145		13C-PCB-208	87.1	10 -145	
13C-PCB-37	93.3	5 -145		13C-PCB-209	103	10 -145	
13C-PCB-47	84.1	5 -145		CRS 13C-PCB-79	93.9	10 -145	
13C-PCB-52	87.1	5 -145		13C-PCB-178	91.2	10 -145	
13C-PCB-54	83.7	5 -145					
13C-PCB-70	85.9	5 -145					
13C-PCB-77	86.6	10 -145					
13C-PCB-80	86.3	10 -145					
13C-PCB-81	86.4	10 -145					
13C-PCB-95	82.1	10 -145					
13C-PCB-97	82.4	10 -145					
13C-PCB-101	86.6	10 -145					
13C-PCB-104	81.2	10 -145					
13C-PCB-105	84.4	10 -145					
13C-PCB-114	82.1	10 -145					
13C-PCB-118	86.1	10 -145					
13C-PCB-123	81.8	10 -145					
13C-PCB-126	84.2	10 -145					
13C-PCB-127	85.5	10 -145					
13C-PCB-138	88.3	10 -145					
13C-PCB-141	85.0	10 -145					
13C-PCB-153	89.9	10 -145					
13C-PCB-155	71.8	10 -145					
13C-PCB-156	86.7	10 -145					
13C-PCB-157	85.7	10 -145					
13C-PCB-159	86.5	10 -145					
13C-PCB-167	85.4	10 -145					
13C-PCB-169	83.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-13	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.85	Date Analyzed :			

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.63				PCB-44	873			
PCB-2	0.470			J	PCB-45	107			
PCB-3	0.420			J	PCB-46	32.4			
PCB-4/10	43.4				PCB-47	830			
PCB-5/8	110				PCB-48/75	173			
PCB-6	22.8				PCB-50	5.66			
PCB-7/9	7.64				PCB-51	47.7			
PCB-11	12.2				PCB-52/69	1410			
PCB-12/13	ND	1.01			PCB-53	79.3			
PCB-14	ND	0.899			PCB-54	7.23			
PCB-15	9.79				PCB-55	30.7			
PCB-16/32	285				PCB-56/60	580			
PCB-17	127				PCB-57	11.0			
PCB-18	256				PCB-58	9.79			
PCB-19	36.7				PCB-61/70	1290			
PCB-20/21/33	121				PCB-62	ND	0.405		
PCB-22	105				PCB-63	79.0			
PCB-23	0.185			J	PCB-65	0.254			J
PCB-24/27	34.0				PCB-66/76	1910			
PCB-25	57.5				PCB-67	38.5			
PCB-26	81.2				PCB-68	27.2			
PCB-28	1020				PCB-68	27.2			
PCB-29	1.32				PCB-73	3.19			
PCB-30	0.291			J	PCB-74	828			
PCB-31	361				PCB-77	73.4			
PCB-34	7.75				PCB-78	ND	0.379		
PCB-35	ND		0.227		PCB-79	92.9			
PCB-36	0.381			J	PCB-80	ND	0.325		
PCB-37	17.6				PCB-81	5.76			
PCB-38	38.9				PCB-82	318			
PCB-39	0.595				PCB-83	0.393			J
PCB-40	173				PCB-84/92	1320			
PCB-41/64/71/72	873				PCB-85/116	680			
PCB-42/59	424				PCB-86	ND	0.360		
PCB-43/49	1670				PCB-87/117/125	1010			
					PCB-88/91	726			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-13	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.85	Date Analyzed:			

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.4				PCB-136	432			
PCB-90/101	4450			E	PCB-137	163			
PCB-93	ND	0.320			PCB-138/163/164	5820			E
PCB-94	11.5				PCB-139/149	3710			E
PCB-95/98/102	2090				PCB-140	41.6			
PCB-96	21.4				PCB-141	452			
PCB-97	1240				PCB-144	130			
PCB-99	3320			E	PCB-145	0.585			
PCB-100	47.2				PCB-146/165	997			
PCB-103	92.0				PCB-147	177			
PCB-104	1.34				PCB-148	15.4			
PCB-105	1280				PCB-150	22.1			
PCB-106/118	4440			E	PCB-151	970			
PCB-107/109	453				PCB-152	2.76			
PCB-108/112	186				PCB-153	6740			E
PCB-110	3100			E	PCB-154	197			
PCB-111/115	51.3				PCB-155	7.11			
PCB-113	13.9				PCB-156	374			
PCB-114	63.2				PCB-157	111			
PCB-119	186				PCB-158/160	409			
PCB-120	31.9				PCB-159	ND	1.21		
PCB-121	ND	0.190			PCB-166	14.8			
PCB-122	19.0				PCB-167	225			
PCB-123	86.3				PCB-168	8.67			
PCB-124	132				PCB-169	0.630			
PCB-126	18.0				PCB-170	905			
PCB-127	ND	0.484			PCB-171	253			
PCB-128/162	795				PCB-172	178			
PCB-129	103				PCB-173	10.5			
PCB-130	386				PCB-174	664			
PCB-131	ND	1.64			PCB-175	42.5			
PCB-132/161	746				PCB-176	87.5			
PCB-133/142	137				PCB-177	753			
PCB-134/143	169				PCB-178	378			
PCB-135	592				PCB-179	518			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-13
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.85	Date Analyzed :	
				Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1870			E	Total octaCB	2430			B
PCB-181	4.36				Total nonaCB	389			
PCB-182/187	2530				DecaCB	121			
PCB-183	669				Total PCB	76100			B
PCB-184	6.01								
PCB-185	76.5								
PCB-186	ND	0.665							
PCB-188	12.5								
PCB-189	29.2								
PCB-190	204								
PCB-191	34.2								
PCB-192	ND	0.692							
PCB-193	167								
PCB-194	411								
PCB-195	164			B					
PCB-196/203	678								
PCB-197	23.3								
PCB-198	23.2								
PCB-199	726								
PCB-200	52.6								
PCB-201	77.0								
PCB-202	255								
PCB-204	0.886								
PCB-205	21.3								
PCB-206	258								
PCB-207	28.6								
PCB-208	102								
PCB-209	121								
Total monoCB	6.52								
Total diCB	206								
Total triCB	2550								
Total tetraCB	11700								
Total pentaCB	25400								
Total hexaCB	23900								
Total heptaCB	9390								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-04-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-13
Project:		Sample Size:	10.0 g	QC Batch:	B4L0139
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.85	Date Analyzed:	
				Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	63.5	5 -145		13C-PCB-170	84.0	10 -145	
13C-PCB-3	68.2	5 -145		13C-PCB-180	86.4	10 -145	
13C-PCB-4	65.5	5 -145		13C-PCB-188	81.0	10 -145	
13C-PCB-11	79.1	5 -145		13C-PCB-189	84.1	10 -145	
13C-PCB-9	72.9	5 -145		13C-PCB-194	88.3	10 -145	
13C-PCB-19	64.7	5 -145		13C-PCB-202	78.6	10 -145	
13C-PCB-28	71.6	5 -145		13C-PCB-206	91.9	10 -145	
13C-PCB-32	72.0	5 -145		13C-PCB-208	83.3	10 -145	
13C-PCB-37	71.9	5 -145		13C-PCB-209	103	10 -145	
13C-PCB-47	79.8	5 -145		CRS 13C-PCB-79	91.0	10 -145	
13C-PCB-52	77.7	5 -145		13C-PCB-178	89.7	10 -145	
13C-PCB-54	77.8	5 -145					
13C-PCB-70	82.9	5 -145					
13C-PCB-77	85.4	10 -145					
13C-PCB-80	81.6	10 -145					
13C-PCB-81	86.3	10 -145					
13C-PCB-95	77.6	10 -145					
13C-PCB-97	83.0	10 -145					
13C-PCB-101	81.6	10 -145					
13C-PCB-104	76.6	10 -145					
13C-PCB-105	79.3	10 -145					
13C-PCB-114	73.8	10 -145					
13C-PCB-118	83.0	10 -145					
13C-PCB-123	82.9	10 -145					
13C-PCB-126	77.8	10 -145					
13C-PCB-127	79.8	10 -145					
13C-PCB-138	84.5	10 -145					
13C-PCB-141	81.6	10 -145					
13C-PCB-153	85.4	10 -145					
13C-PCB-155	71.4	10 -145					
13C-PCB-156	85.8	10 -145					
13C-PCB-157	84.7	10 -145					
13C-PCB-159	83.2	10 -145					
13C-PCB-167	84.8	10 -145					
13C-PCB-169	80.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-14	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.4 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.35	Date Analyzed :	31-Dec-14 15:38	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.18				PCB-44	3070			E
PCB-2	0.443			J	PCB-45	329			
PCB-3	0.389			J	PCB-46	100			
PCB-4/10	53.8				PCB-47	2380			E
PCB-5/8	134				PCB-48/75	477			
PCB-6	40.9				PCB-50	14.2			
PCB-7/9	9.55				PCB-51	135			
PCB-11	10.3				PCB-52/69	6080			E
PCB-12/13	ND	0.951			PCB-53	245			
PCB-14	ND	0.849			PCB-54	18.9			
PCB-15	13.7				PCB-55	94.4			
PCB-16/32	461				PCB-56/60	2030			
PCB-17	259				PCB-57	36.4			
PCB-18	594				PCB-58	28.7			
PCB-19	67.7				PCB-61/70	4700			E
PCB-20/21/33	315				PCB-62	ND	0.642		
PCB-22	312				PCB-63	274			
PCB-23	0.524				PCB-65	1.24			
PCB-24/27	77.6				PCB-66/76	6380			E
PCB-25	159				PCB-67	109			
PCB-26	349				PCB-68	67.1			
PCB-28	2440			B, E	PCB-73	8.77			
PCB-29	2.71				PCB-74	3070			E
PCB-30	0.589				PCB-77	226			
PCB-31	1020				PCB-78	ND	0.630		
PCB-34	15.7				PCB-79	269			
PCB-35	ND	0.516			PCB-80	ND	0.498		
PCB-36	0.438			J	PCB-81	29.7			
PCB-37	34.7				PCB-82	1350			
PCB-38	72.5				PCB-83	5.16			
PCB-39	1.00				PCB-84/92	5430			E
PCB-40	497				PCB-85/116	1880			
PCB-41/64/71/72	2710				PCB-86	26.9			
PCB-42/59	1170				PCB-87/117/125	4690			E
PCB-43/49	5020			E	PCB-88/91	2390			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-14	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.35	Date Analyzed :	31-Dec-14 15:38	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	47.0				PCB-136	1270			
PCB-90/101	19400			E	PCB-137	879			
PCB-93	ND	0.326			PCB-138/163/164	18400			E
PCB-94	41.4				PCB-139/149	11900			E
PCB-95/98/102	8620			E	PCB-140	99.0			
PCB-96	59.9				PCB-141	2440			E
PCB-97	4890			E	PCB-144	617			
PCB-99	10500			E	PCB-145	2.26			
PCB-100	164				PCB-146/165	2970			E
PCB-103	255				PCB-147	561			
PCB-104	5.15				PCB-148	39.8			
PCB-105	5100			E	PCB-150	65.6			
PCB-106/118	17400			E	PCB-151	2900			E
PCB-107/109	1510				PCB-152	11.1			
PCB-108/112	714				PCB-153	19800			E
PCB-110	13800			E	PCB-154	567			
PCB-111/115	265				PCB-155	16.7			
PCB-113	34.3				PCB-156	1530			E
PCB-114	283				PCB-157	355			
PCB-119	555				PCB-158/160	1870			
PCB-120	71.4				PCB-159	ND	1.13		
PCB-121	ND	0.194			PCB-166	71.0			
PCB-122	49.5				PCB-167	795			
PCB-123	284				PCB-168	26.7			
PCB-124	531				PCB-169	1.18			
PCB-126	68.2				PCB-170	2780			E
PCB-127	ND	1.79			PCB-171	866			
PCB-128/162	2610				PCB-172	537			
PCB-129	542				PCB-173	45.2			
PCB-130	1190				PCB-174	2320			E
PCB-131	ND	1.47			PCB-175	155			
PCB-132/161	3210			E	PCB-176	324			
PCB-133/142	478				PCB-177	1900			E
PCB-134/143	670				PCB-178	947			
PCB-135	1760			E	PCB-179	1360			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-14
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.35	QC Batch:	B4L0142
				Date Analyzed:	31-Dec-14 15:38
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	7100			E	Total octaCB	7210			
PCB-181	20.2				Total nonaCB	1200			
PCB-182/187	6610			E	DecaCB	279			
PCB-183	2300			E	Total PCB	262000			B
PCB-184	11.6								
PCB-185	246								
PCB-186	0.486								
PCB-188	51.9								
PCB-189	84.5								
PCB-190	538								
PCB-191	112								
PCB-192	ND	2.35							
PCB-193	389								
PCB-194	1270								
PCB-195	429								
PCB-196/203	2180								
PCB-197	73.6								
PCB-198	67.0								
PCB-199	2130			E					
PCB-200	160								
PCB-201	261								
PCB-202	591								
PCB-204	2.22								
PCB-205	53.7								
PCB-206	790								
PCB-207	110								
PCB-208	301								
PCB-209	279								
Total monoCB	5.01								
Total diCB	262								
Total triCB	6180			B					
Total tetraCB	39600								
Total pentaCB	100000								
Total hexaCB	77700								
Total heptaCB	28700								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-05-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-14
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.35	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 15:38
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	86.3	5 -145		13C-PCB-170	80.7	10 -145	
13C-PCB-3	82.6	5 -145		13C-PCB-180	80.6	10 -145	
13C-PCB-4	75.0	5 -145		13C-PCB-188	73.2	10 -145	
13C-PCB-11	78.2	5 -145		13C-PCB-189	77.4	10 -145	
13C-PCB-9	79.0	5 -145		13C-PCB-194	83.0	10 -145	
13C-PCB-19	81.6	5 -145		13C-PCB-202	67.2	10 -145	
13C-PCB-28	67.7	5 -145		13C-PCB-206	86.9	10 -145	
13C-PCB-32	84.4	5 -145		13C-PCB-208	75.7	10 -145	
13C-PCB-37	78.8	5 -145		13C-PCB-209	89.6	10 -145	
13C-PCB-47	77.2	5 -145		CRS 13C-PCB-79	87.8	10 -145	
13C-PCB-52	73.8	5 -145		13C-PCB-178	80.2	10 -145	
13C-PCB-54	67.2	5 -145					
13C-PCB-70	79.9	5 -145					
13C-PCB-77	79.7	10 -145					
13C-PCB-80	79.9	10 -145					
13C-PCB-81	81.4	10 -145					
13C-PCB-95	76.6	10 -145					
13C-PCB-97	83.0	10 -145					
13C-PCB-101	82.0	10 -145					
13C-PCB-104	76.7	10 -145					
13C-PCB-105	85.7	10 -145					
13C-PCB-114	80.5	10 -145					
13C-PCB-118	81.2	10 -145					
13C-PCB-123	78.2	10 -145					
13C-PCB-126	84.5	10 -145					
13C-PCB-127	83.3	10 -145					
13C-PCB-138	84.7	10 -145					
13C-PCB-141	81.6	10 -145					
13C-PCB-153	84.4	10 -145					
13C-PCB-155	73.3	10 -145					
13C-PCB-156	83.9	10 -145					
13C-PCB-157	80.0	10 -145					
13C-PCB-159	81.6	10 -145					
13C-PCB-167	82.1	10 -145					
13C-PCB-169	78.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-15	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.48	Date Analyzed :	31-Dec-14 16:43	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.91				PCB-44	1670			E
PCB-2	0.514				PCB-45	158			
PCB-3	0.550				PCB-46	55.1			
PCB-4/10	52.6				PCB-47	1790			E
PCB-5/8	133				PCB-48/75	281			
PCB-6	32.4				PCB-50	7.43			
PCB-7/9	9.11				PCB-51	72.6			
PCB-11	11.5				PCB-52/69	2880			
PCB-12/13	ND	0.710			PCB-53	159			
PCB-14	ND	0.633			PCB-54	7.72			
PCB-15	19.9				PCB-55	64.2			
PCB-16/32	304				PCB-56/60	1240			
PCB-17	159				PCB-57	21.9			
PCB-18	336				PCB-58	12.1			
PCB-19	42.7				PCB-61/70	2190			
PCB-20/21/33	168				PCB-62	ND	0.306		
PCB-22	147				PCB-63	256			
PCB-23	0.314			J	PCB-65	0.345			J
PCB-24/27	41.0				PCB-66/76	4550			E
PCB-25	70.3				PCB-67	63.4			
PCB-26	126				PCB-68	48.6			
PCB-28	1330			B	PCB-73	5.21			
PCB-29	1.68				PCB-74	2420			E
PCB-30	0.317			J	PCB-77	106			
PCB-31	458				PCB-78	ND	0.287		
PCB-34	7.30				PCB-79	256			
PCB-35	0.298			J	PCB-80	ND	0.243		
PCB-36	0.297			J	PCB-81	30.9			
PCB-37	27.1				PCB-82	854			
PCB-38	60.8				PCB-83	4.23			
PCB-39	0.853				PCB-84/92	3260			E
PCB-40	253				PCB-85/116	1600			
PCB-41/64/71/72	1720				PCB-86	7.31			
PCB-42/59	761				PCB-87/117/125	3090			
PCB-43/49	2980			E	PCB-88/91	1730			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-15	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.48	Date Analyzed:	31-Dec-14 16:43	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	17.6				PCB-136	999			
PCB-90/101	13300			E	PCB-137	649			
PCB-93	ND	0.479			PCB-138/163/164	18400			E
PCB-94	19.6				PCB-139/149	10100			E
PCB-95/98/102	4290				PCB-140	118			
PCB-96	30.2				PCB-141	1840			E
PCB-97	3220			E	PCB-144	432			
PCB-99	9990			E	PCB-145	0.791			
PCB-100	116				PCB-146/165	3390			E
PCB-103	190				PCB-147	495			
PCB-104	2.03				PCB-148	38.8			
PCB-105	4120			E	PCB-150	43.6			
PCB-106/118	14300			E	PCB-151	2960			E
PCB-107/109	1470				PCB-152	4.55			
PCB-108/112	461				PCB-153	22800			E
PCB-110	8300			E	PCB-154	529			
PCB-111/115	252				PCB-155	21.2			
PCB-113	48.0				PCB-156	1340			
PCB-114	242				PCB-157	376			
PCB-119	511				PCB-158/160	1500			
PCB-120	77.3				PCB-159	ND	0.564		
PCB-121	ND	0.285			PCB-166	61.4			
PCB-122	19.0				PCB-167	628			
PCB-123	175				PCB-168	24.0			
PCB-124	253				PCB-169	1.12			
PCB-126	43.0				PCB-170	3650			E
PCB-127	ND	1.73			PCB-171	964			
PCB-128/162	2310				PCB-172	673			
PCB-129	307				PCB-173	33.2			
PCB-130	1270				PCB-174	2240			E
PCB-131	ND	0.770			PCB-175	163			
PCB-132/161	2090				PCB-176	284			
PCB-133/142	441				PCB-177	2390			E
PCB-134/143	444				PCB-178	1290			
PCB-135	1580			E	PCB-179	1590			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-15	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.2 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.48	Date Analyzed :	31-Dec-14 16:43	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8620			E	Total octaCB	9830			
PCB-181	22.8				Total nonaCB	1340			
PCB-182/187	9120			E	DecaCB	335			
PCB-183	2700			E	Total PCB	222000			B
PCB-184	22.0								
PCB-185	262								
PCB-186	ND	0.424							
PCB-188	33.1								
PCB-189	51.7								
PCB-190	727								
PCB-191	137								
PCB-192	ND	0.432							
PCB-193	575								
PCB-194	1660			E					
PCB-195	662								
PCB-196/203	2970			E					
PCB-197	89.8								
PCB-198	80.5								
PCB-199	3070			E					
PCB-200	184								
PCB-201	302								
PCB-202	756								
PCB-204	3.59								
PCB-205	51.6								
PCB-206	921								
PCB-207	104								
PCB-208	312								
PCB-209	335								
Total monoCB	6.97								
Total diCB	259								
Total triCB	3280			B					
Total tetraCB	24100								
Total pentaCB	72000								
Total hexaCB	75300								
Total heptaCB	35500								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-06-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-15
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.48	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 16:43
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	76.8	5 -145		13C-PCB-170	86.3	10 -145	
13C-PCB-3	79.3	5 -145		13C-PCB-180	87.6	10 -145	
13C-PCB-4	76.6	5 -145		13C-PCB-188	78.5	10 -145	
13C-PCB-11	81.6	5 -145		13C-PCB-189	80.4	10 -145	
13C-PCB-9	79.7	5 -145		13C-PCB-194	110	10 -145	
13C-PCB-19	76.8	5 -145		13C-PCB-202	70.9	10 -145	
13C-PCB-28	81.9	5 -145		13C-PCB-206	128	10 -145	
13C-PCB-32	77.9	5 -145		13C-PCB-208	111	10 -145	
13C-PCB-37	86.1	5 -145		13C-PCB-209	144	10 -145	
13C-PCB-47	79.1	5 -145		CRS 13C-PCB-79	92.2	10 -145	
13C-PCB-52	80.6	5 -145		13C-PCB-178	84.9	10 -145	
13C-PCB-54	75.4	5 -145					
13C-PCB-70	80.6	5 -145					
13C-PCB-77	83.4	10 -145					
13C-PCB-80	81.3	10 -145					
13C-PCB-81	83.4	10 -145					
13C-PCB-95	78.2	10 -145					
13C-PCB-97	83.9	10 -145					
13C-PCB-101	84.6	10 -145					
13C-PCB-104	80.0	10 -145					
13C-PCB-105	87.4	10 -145					
13C-PCB-114	84.1	10 -145					
13C-PCB-118	85.9	10 -145					
13C-PCB-123	80.6	10 -145					
13C-PCB-126	84.5	10 -145					
13C-PCB-127	85.5	10 -145					
13C-PCB-138	90.6	10 -145					
13C-PCB-141	85.1	10 -145					
13C-PCB-153	88.7	10 -145					
13C-PCB-155	72.8	10 -145					
13C-PCB-156	88.0	10 -145					
13C-PCB-157	85.7	10 -145					
13C-PCB-159	86.6	10 -145					
13C-PCB-167	84.7	10 -145					
13C-PCB-169	85.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: FH-FF-WC-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-16	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.79	Date Analyzed :	31-Dec-14 17:48	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.91				PCB-44	3590			E
PCB-2	0.516				PCB-45	412			
PCB-3	0.413			J	PCB-46	111			
PCB-4/10	59.2				PCB-47	2970			E
PCB-5/8	143				PCB-48/75	491			
PCB-6	41.6				PCB-50	20.3			
PCB-7/9	10.9				PCB-51	151			
PCB-11	11.5				PCB-52/69	7040			E
PCB-12/13	ND	1.10			PCB-53	249			
PCB-14	ND	0.985			PCB-54	22.8			
PCB-15	13.4				PCB-55	121			
PCB-16/32	517				PCB-56/60	2260			
PCB-17	282				PCB-57	40.0			
PCB-18	646				PCB-58	30.0			
PCB-19	68.9				PCB-61/70	5610			E
PCB-20/21/33	315				PCB-62	ND	0.732		
PCB-22	341				PCB-63	332			
PCB-23	0.406			J	PCB-65	ND		0.773	
PCB-24/27	78.4				PCB-66/76	7200			E
PCB-25	139				PCB-67	137			
PCB-26	304				PCB-68	77.3			
PCB-28	2670			B, E	PCB-73	11.5			
PCB-29	2.65				PCB-74	3430			E
PCB-30	0.600				PCB-77	277			
PCB-31	1110				PCB-78	ND	0.703		
PCB-34	16.0				PCB-79	330			
PCB-35	0.495				PCB-80	ND	0.563		
PCB-36	0.512				PCB-81	39.1			
PCB-37	33.9				PCB-82	1680			E
PCB-38	110				PCB-83	5.97			
PCB-39	1.28				PCB-84/92	6720			E
PCB-40	629				PCB-85/116	2110			
PCB-41/64/71/72	3470				PCB-86	30.0			
PCB-42/59	1380				PCB-87/117/125	5800			E
PCB-43/49	6400			E	PCB-88/91	3000			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-16	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.79	Date Analyzed :	31-Dec-14 17:48	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	67.5				PCB-136	1660			E
PCB-90/101	23200			E	PCB-137	1010			
PCB-93	ND	0.525			PCB-138/163/164	20700			E
PCB-94	46.1				PCB-139/149	14400			E
PCB-95/98/102	9980			E	PCB-140	121			
PCB-96	84.8				PCB-141	2790			E
PCB-97	6030			E	PCB-144	751			
PCB-99	12900			E	PCB-145	3.23			
PCB-100	260				PCB-146/165	3430			E
PCB-103	371				PCB-147	698			
PCB-104	10.3				PCB-148	40.8			
PCB-105	5810			E	PCB-150	80.6			
PCB-106/118	19800			E	PCB-151	3660			E
PCB-107/109	1720				PCB-152	15.0			
PCB-108/112	878				PCB-153	22900			E
PCB-110	17300			E	PCB-154	766			
PCB-111/115	341				PCB-155	19.0			
PCB-113	102				PCB-156	1610			E
PCB-114	321				PCB-157	403			
PCB-119	702				PCB-158/160	2080			
PCB-120	83.4				PCB-159	ND	1.48		
PCB-121	ND	0.312			PCB-166	74.8			
PCB-122	53.4				PCB-167	863			
PCB-123	314				PCB-168	34.4			
PCB-124	619				PCB-169	1.26			
PCB-126	79.2				PCB-170	3300			E
PCB-127	ND	1.85			PCB-171	990			
PCB-128/162	2890				PCB-172	607			
PCB-129	619				PCB-173	50.8			
PCB-130	1350				PCB-174	2670			E
PCB-131	1.61				PCB-175	166			
PCB-132/161	3870			E	PCB-176	375			
PCB-133/142	543				PCB-177	2120			E
PCB-134/143	799				PCB-178	1050			
PCB-135	2060			E	PCB-179	1610			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-16	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.79	Date Analyzed :	31-Dec-14 17:48	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8200			E	Total octaCB	8460			
PCB-181	21.8				Total nonaCB	1220			
PCB-182/187	7610			E	DecaCB	238			
PCB-183	2560			E	Total PCB	307000			B
PCB-184	14.9								
PCB-185	288								
PCB-186	0.642								
PCB-188	56.0								
PCB-189	95.7								
PCB-190	643								
PCB-191	129								
PCB-192	ND	0.773							
PCB-193	471								
PCB-194	1490			E					
PCB-195	525								
PCB-196/203	2560								
PCB-197	82.6								
PCB-198	70.4								
PCB-199	2480			E					
PCB-200	189								
PCB-201	294								
PCB-202	706								
PCB-204	2.52								
PCB-205	59.2								
PCB-206	814								
PCB-207	108								
PCB-208	299								
PCB-209	238								
Total monoCB	5.84								
Total diCB	280								
Total triCB	6640			B					
Total tetraCB	46800								
Total pentaCB	120000								
Total hexaCB	90200								
Total heptaCB	33000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-16	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	3.79	Date Analyzed :	31-Dec-14 17:48	Column:	ZB-1	Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	78.3	5 -145		13C-PCB-170	81.9	10 -145	
13C-PCB-3	74.0	5 -145		13C-PCB-180	82.3	10 -145	
13C-PCB-4	70.1	5 -145		13C-PCB-188	77.4	10 -145	
13C-PCB-11	78.4	5 -145		13C-PCB-189	79.6	10 -145	
13C-PCB-9	75.1	5 -145		13C-PCB-194	88.1	10 -145	
13C-PCB-19	75.6	5 -145		13C-PCB-202	68.8	10 -145	
13C-PCB-28	71.7	5 -145		13C-PCB-206	95.2	10 -145	
13C-PCB-32	85.0	5 -145		13C-PCB-208	83.3	10 -145	
13C-PCB-37	82.0	5 -145		13C-PCB-209	103	10 -145	
13C-PCB-47	78.4	5 -145		CRS 13C-PCB-79	86.6	10 -145	
13C-PCB-52	73.4	5 -145		13C-PCB-178	81.8	10 -145	
13C-PCB-54	61.8	5 -145					
13C-PCB-70	83.0	5 -145					
13C-PCB-77	83.4	10 -145					
13C-PCB-80	82.8	10 -145					
13C-PCB-81	83.0	10 -145					
13C-PCB-95	82.5	10 -145					
13C-PCB-97	85.5	10 -145					
13C-PCB-101	83.3	10 -145					
13C-PCB-104	78.5	10 -145					
13C-PCB-105	88.5	10 -145					
13C-PCB-114	84.2	10 -145					
13C-PCB-118	85.7	10 -145					
13C-PCB-123	84.5	10 -145					
13C-PCB-126	84.4	10 -145					
13C-PCB-127	84.7	10 -145					
13C-PCB-138	87.1	10 -145					
13C-PCB-141	83.3	10 -145					
13C-PCB-153	85.7	10 -145					
13C-PCB-155	75.8	10 -145					
13C-PCB-156	87.0	10 -145					
13C-PCB-157	84.0	10 -145					
13C-PCB-159	85.5	10 -145					
13C-PCB-167	86.0	10 -145					
13C-PCB-169	82.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-17
Project:		Sample Size:	7.80 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.54	QC Batch:	B4L0142
				Date Analyzed:	31-Dec-14 18:53
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.59				PCB-44	1180			
PCB-2	0.416			J	PCB-45	138			
PCB-3	0.436			J	PCB-46	53.5			
PCB-4/10	40.8				PCB-47	826			
PCB-5/8	124				PCB-48/75	204			
PCB-6	28.4				PCB-50	5.38			
PCB-7/9	7.59				PCB-51	68.1			
PCB-11	9.98				PCB-52/69	1880			
PCB-12/13	ND	1.21			PCB-53	145			
PCB-14	ND	1.08			PCB-54	7.74			
PCB-15	14.8				PCB-55	37.3			
PCB-16/32	278				PCB-56/60	765			
PCB-17	143				PCB-57	12.1			
PCB-18	287				PCB-58	9.10			
PCB-19	37.5				PCB-61/70	1650			
PCB-20/21/33	147				PCB-62	ND	0.375		
PCB-22	113				PCB-63	87.6			
PCB-23	0.171			J	PCB-65	ND	0.363		
PCB-24/27	37.3				PCB-66/76	2230			
PCB-25	53.0				PCB-67	49.8			
PCB-26	95.5				PCB-68	21.8			
PCB-28	939			B	PCB-73	4.81			
PCB-29	1.51				PCB-74	953			
PCB-30	0.288			J	PCB-77	95.8			
PCB-31	317				PCB-78	ND	0.357		
PCB-34	7.78				PCB-79	97.1			
PCB-35	ND	0.481			PCB-80	ND	0.300		
PCB-36	0.245			J	PCB-81	8.73			
PCB-37	29.0				PCB-82	400			
PCB-38	28.9				PCB-83	1.52			
PCB-39	0.994				PCB-84/92	1640			
PCB-40	196				PCB-85/116	852			
PCB-41/64/71/72	1050				PCB-86	6.34			
PCB-42/59	485				PCB-87/117/125	1340			
PCB-43/49	1610				PCB-88/91	766			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-17	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	7.80 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.54	Date Analyzed :	31-Dec-14 18:53	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	19.9				PCB-136	441			
PCB-90/101	5560			E	PCB-137	191			
PCB-93	ND	0.520			PCB-138/163/164	5690			
PCB-94	17.4				PCB-139/149	3780			
PCB-95/98/102	2700				PCB-140	30.8			
PCB-96	26.3				PCB-141	622			
PCB-97	1440				PCB-144	160			
PCB-99	3420			E	PCB-145	0.929			
PCB-100	47.9				PCB-146/165	960			
PCB-103	82.5				PCB-147	184			
PCB-104	1.79				PCB-148	13.7			
PCB-105	1570				PCB-150	21.1			
PCB-106/118	5310			E	PCB-151	982			
PCB-107/109	450				PCB-152	3.73			
PCB-108/112	222				PCB-153	6700			E
PCB-110	3830			E	PCB-154	166			
PCB-111/115	73.6				PCB-155	4.97			
PCB-113	6.88				PCB-156	404			
PCB-114	81.2				PCB-157	111			
PCB-119	173				PCB-158/160	493			
PCB-120	25.9				PCB-159	ND	0.360		
PCB-121	ND	0.309			PCB-166	16.7			
PCB-122	24.7				PCB-167	229			
PCB-123	72.2				PCB-168	8.28			
PCB-124	138				PCB-169	0.429			J
PCB-126	20.9				PCB-170	847			
PCB-127	ND	0.689			PCB-171	237			
PCB-128/162	747				PCB-172	172			
PCB-129	137				PCB-173	13.0			
PCB-130	382				PCB-174	685			
PCB-131	ND	0.489			PCB-175	44.2			
PCB-132/161	829				PCB-176	88.6			
PCB-133/142	144				PCB-177	630			
PCB-134/143	207				PCB-178	326			
PCB-135	613				PCB-179	427			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-17	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	7.80 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.54	Date Analyzed :	31-Dec-14 18:53	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1950			E	Total octaCB	2130			
PCB-181	5.74				Total nonaCB	345			
PCB-182/187	2170				DecaCB	102			
PCB-183	626				Total PCB	82500			B
PCB-184	4.99								
PCB-185	84.3								
PCB-186	ND	0.124							
PCB-188	11.8								
PCB-189	25.8								
PCB-190	182								
PCB-191	34.6								
PCB-192	ND	0.142							
PCB-193	146								
PCB-194	378								
PCB-195	149								
PCB-196/203	613								
PCB-197	18.8								
PCB-198	17.3								
PCB-199	631								
PCB-200	43.7								
PCB-201	67.3								
PCB-202	197								
PCB-204	0.772								
PCB-205	14.7								
PCB-206	232								
PCB-207	27.0								
PCB-208	86.4								
PCB-209	102								
Total monoCB	5.44								
Total diCB	226								
Total triCB	2520			B					
Total tetraCB	13900								
Total pentaCB	30300								
Total hexaCB	24300								
Total heptaCB	8710								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-08-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-17
Project:		Sample Size:	7.80 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.54	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 18:53
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	75.6	5 -145		13C-PCB-170	78.0	10 -145	
13C-PCB-3	77.7	5 -145		13C-PCB-180	77.7	10 -145	
13C-PCB-4	72.3	5 -145		13C-PCB-188	75.3	10 -145	
13C-PCB-11	77.8	5 -145		13C-PCB-189	82.3	10 -145	
13C-PCB-9	76.1	5 -145		13C-PCB-194	101	10 -145	
13C-PCB-19	70.0	5 -145		13C-PCB-202	71.1	10 -145	
13C-PCB-28	83.9	5 -145		13C-PCB-206	112	10 -145	
13C-PCB-32	72.2	5 -145		13C-PCB-208	98.9	10 -145	
13C-PCB-37	81.3	5 -145		13C-PCB-209	113	10 -145	
13C-PCB-47	79.3	5 -145		CRS 13C-PCB-79	91.4	10 -145	
13C-PCB-52	82.5	5 -145		13C-PCB-178	85.0	10 -145	
13C-PCB-54	83.2	5 -145					
13C-PCB-70	81.0	5 -145					
13C-PCB-77	80.7	10 -145					
13C-PCB-80	80.3	10 -145					
13C-PCB-81	83.6	10 -145					
13C-PCB-95	76.6	10 -145					
13C-PCB-97	79.2	10 -145					
13C-PCB-101	77.9	10 -145					
13C-PCB-104	74.7	10 -145					
13C-PCB-105	86.4	10 -145					
13C-PCB-114	84.9	10 -145					
13C-PCB-118	79.5	10 -145					
13C-PCB-123	76.8	10 -145					
13C-PCB-126	84.7	10 -145					
13C-PCB-127	85.4	10 -145					
13C-PCB-138	83.8	10 -145					
13C-PCB-141	82.8	10 -145					
13C-PCB-153	84.2	10 -145					
13C-PCB-155	68.5	10 -145					
13C-PCB-156	82.8	10 -145					
13C-PCB-157	82.8	10 -145					
13C-PCB-159	84.9	10 -145					
13C-PCB-167	83.7	10 -145					
13C-PCB-169	83.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-18	Date Received:	13-Nov-2014 12:34				
Project:		Sample Size:	7.61 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08				
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.42	Date Analyzed :	02-Jan-15 23:15	Column:	ZB-1	Analyst:	MAS		
				31-Dec-14 19:58				Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.16				PCB-44	1090			
PCB-2	0.722				PCB-45	123			
PCB-3	0.712				PCB-46	23.8			
PCB-4/10	31.9				PCB-47	1640			
PCB-5/8	85.7				PCB-48/75	210			
PCB-6	17.4				PCB-50	7.63			
PCB-7/9	6.71				PCB-51	32.5			
PCB-11	17.0				PCB-52/69	3000			
PCB-12/13	ND	0.821			PCB-53	57.3			
PCB-14	ND	0.733			PCB-54	6.42			
PCB-15	11.5				PCB-55	50.2			
PCB-16/32	193				PCB-56/60	1100			
PCB-17	91.2				PCB-57	21.5			
PCB-18	194				PCB-58	17.3			
PCB-19	24.8				PCB-61/70	2640			
PCB-20/21/33	105				PCB-62	ND	0.407		
PCB-22	163				PCB-63	184			
PCB-23	0.157			J	PCB-65	0.755			
PCB-24/27	24.5				PCB-66/76	3470			
PCB-25	69.1				PCB-67	70.3			
PCB-26	137				PCB-68	47.3			
PCB-28	1390			B	PCB-73	4.05			
PCB-29	1.11				PCB-74	1690			
PCB-30	ND		0.298		PCB-77	126			
PCB-31	540				PCB-78	ND	0.418		
PCB-34	7.05				PCB-79	203			
PCB-35	ND	0.452			PCB-80	ND	0.345		
PCB-36	0.466			J	PCB-81	11.6			
PCB-37	25.8				PCB-82	604			
PCB-38	60.1				PCB-83	1.82			
PCB-39	0.983				PCB-84/92	2450			
PCB-40	214				PCB-85/116	1330			
PCB-41/64/71/72	1270				PCB-86	4.29			
PCB-42/59	652				PCB-87/117/125	1980			
PCB-43/49	2600				PCB-88/91	1050			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-18 Date Received: 13-Nov-2014 12:34
Project:		Sample Size:	7.61 g	QC Batch:	B4L0142 Date Extracted: 26-Dec-2014 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.42	Date Analyzed :	02-Jan-15 23:15 Column: ZB-1 Analyst: MAS
					31-Dec-14 19:58 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.2				PCB-136	625			
PCB-90/101	9390			E	PCB-137	493			
PCB-93	ND	0.358			PCB-138/163/164	13600			E
PCB-94	10.3				PCB-139/149	8560			E
PCB-95/98/102	3200				PCB-140	80.5			
PCB-96	18.5				PCB-141	1380			
PCB-97	2580			E	PCB-144	283			
PCB-99	7450			E	PCB-145	0.637			J
PCB-100	89.6				PCB-146/165	2490			
PCB-103	162				PCB-147	381			
PCB-104	1.53				PCB-148	29.5			
PCB-105	2760			E	PCB-150	36.9			
PCB-106/118	10100			E	PCB-151	1780			
PCB-107/109	998				PCB-152	2.88			
PCB-108/112	378				PCB-153	16500			E
PCB-110	6180			E	PCB-154	423			
PCB-111/115	131				PCB-155	13.7			
PCB-113	34.8				PCB-156	999			
PCB-114	147				PCB-157	258			
PCB-119	415				PCB-158/160	1030			
PCB-120	63.1				PCB-159	ND	0.711		
PCB-121	ND	0.298			PCB-166	37.3			
PCB-122	30.0				PCB-167	592			
PCB-123	173				PCB-168	18.4			
PCB-124	312				PCB-169	1.80			
PCB-126	45.2				PCB-170	2760			E
PCB-127	ND	1.80			PCB-171	794			
PCB-128/162	1720				PCB-172	554			
PCB-129	251				PCB-173	31.8			
PCB-130	869				PCB-174	2000			E
PCB-131	ND	0.976			PCB-175	149			
PCB-132/161	1240				PCB-176	252			
PCB-133/142	320				PCB-177	1890			
PCB-134/143	345				PCB-178	962			
PCB-135	1290				PCB-179	1060			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-18	Date Received:	13-Nov-2014 12:34				
Project:		Sample Size:	7.61 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08				
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.42	Date Analyzed :	02-Jan-15 23:15	Column:	ZB-1	Analyst:	MAS		
				31-Dec-14 19:58				Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	6260			E	Total octaCB	6910			
PCB-181	18.5				Total nonaCB	1090			
PCB-182/187	6600			E	DecaCB	360			
PCB-183	2030			E	Total PCB	166000			B
PCB-184	15.8								
PCB-185	160								
PCB-186	ND	0.415							
PCB-188	28.1								
PCB-189	77.4								
PCB-190	548								
PCB-191	97.0								
PCB-192	ND	0.439							
PCB-193	379								
PCB-194	1180								
PCB-195	538								
PCB-196/203	1930								
PCB-197	72.4								
PCB-198	74.4								
PCB-199	2170			E					
PCB-200	150								
PCB-201	231								
PCB-202	525								
PCB-204	2.22								
PCB-205	36.7								
PCB-206	700			D					
PCB-207	82.1								
PCB-208	311								
PCB-209	360			D					
Total monoCB	6.60								
Total diCB	170								
Total triCB	3030			B					
Total tetraCB	20600								
Total pentaCB	52100								
Total hexaCB	55600								
Total heptaCB	26700								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-09-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-18
Project:		Sample Size:	7.61 g	Date Received:	13-Nov-2014 12:34
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.42	QC Batch:	B4L0142
				Date Analyzed:	02-Jan-15 23:15
				Column:	ZB-1
				Analyst:	MAS
					31-Dec-14 19:58
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.3	5 -145		13C-PCB-170	88.4	10 -145	
13C-PCB-3	73.3	5 -145		13C-PCB-180	87.5	10 -145	
13C-PCB-4	71.4	5 -145		13C-PCB-188	80.3	10 -145	
13C-PCB-11	84.3	5 -145		13C-PCB-189	85.4	10 -145	
13C-PCB-9	80.0	5 -145		13C-PCB-194	119	10 -145	
13C-PCB-19	73.2	5 -145		13C-PCB-202	75.7	10 -145	
13C-PCB-28	92.5	5 -145		13C-PCB-206	84.4	10 -145	D
13C-PCB-32	79.1	5 -145		13C-PCB-208	134	10 -145	
13C-PCB-37	88.7	5 -145		13C-PCB-209	77.7	10 -145	D
13C-PCB-47	82.3	5 -145		CRS 13C-PCB-79	94.5	10 -145	
13C-PCB-52	82.0	5 -145		13C-PCB-178	89.0	10 -145	
13C-PCB-54	79.2	5 -145					
13C-PCB-70	83.5	5 -145					
13C-PCB-77	83.6	10 -145					
13C-PCB-80	83.9	10 -145					
13C-PCB-81	80.2	10 -145					
13C-PCB-95	82.0	10 -145					
13C-PCB-97	85.0	10 -145					
13C-PCB-101	87.8	10 -145					
13C-PCB-104	78.6	10 -145					
13C-PCB-105	94.4	10 -145					
13C-PCB-114	89.9	10 -145					
13C-PCB-118	89.4	10 -145					
13C-PCB-123	83.1	10 -145					
13C-PCB-126	90.6	10 -145					
13C-PCB-127	92.9	10 -145					
13C-PCB-138	96.0	10 -145					
13C-PCB-141	89.7	10 -145					
13C-PCB-153	94.8	10 -145					
13C-PCB-155	77.1	10 -145					
13C-PCB-156	90.5	10 -145					
13C-PCB-157	89.3	10 -145					
13C-PCB-159	90.8	10 -145					
13C-PCB-167	88.8	10 -145					
13C-PCB-169	89.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-CH-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-19	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.146	Date Analyzed :	31-Dec-14 21:02	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.225			J	PCB-44	20.1			
PCB-2	ND	0.202			PCB-45	6.12			
PCB-3	ND	0.196			PCB-46	0.418			J
PCB-4/10	2.01				PCB-47	107			
PCB-5/8	10.6				PCB-48/75	25.5			
PCB-6	1.57				PCB-50	0.573			
PCB-7/9	0.690			J	PCB-51	9.59			
PCB-11	2.12				PCB-52/69	251			
PCB-12/13	ND	0.893			PCB-53	16.0			
PCB-14	ND	0.796			PCB-54	0.915			
PCB-15	ND	0.812			PCB-55	3.75			
PCB-16/32	18.2				PCB-56/60	60.2			
PCB-17	12.1				PCB-57	1.63			
PCB-18	27.7				PCB-58	0.556			
PCB-19	1.99				PCB-61/70	104			
PCB-20/21/33	13.0				PCB-62	ND	0.379		
PCB-22	15.5				PCB-63	10.6			
PCB-23	ND	0.205			PCB-65	ND	0.367		
PCB-24/27	2.21				PCB-66/76	241			
PCB-25	3.32				PCB-67	2.73			
PCB-26	9.22				PCB-68	2.31			
PCB-28	75.4			B	PCB-73	0.612			
PCB-29	0.183			J	PCB-74	93.9			
PCB-30	ND	0.0529			PCB-77	3.47			
PCB-31	32.1				PCB-78	ND	0.392		
PCB-34	0.478			J	PCB-79	19.4			
PCB-35	ND	0.220			PCB-80	ND	0.338		
PCB-36	ND	0.220			PCB-81	0.778			
PCB-37	0.314			J	PCB-82	10.4			
PCB-38	3.76				PCB-83	0.277			J
PCB-39	ND	0.213			PCB-84/92	195			
PCB-40	1.77				PCB-85/116	181			
PCB-41/64/71/72	114				PCB-86	0.720			
PCB-42/59	29.6				PCB-87/117/125	223			
PCB-43/49	220				PCB-88/91	98.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-19	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.146	Date Analyzed:	31-Dec-14 21:02	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.898				PCB-136	39.2			
PCB-90/101	1130				PCB-137	51.9			
PCB-93	ND	0.416			PCB-138/163/164	1260			
PCB-94	1.21				PCB-139/149	725			
PCB-95/98/102	292				PCB-140	4.29			
PCB-96	1.42				PCB-141	159			
PCB-97	163				PCB-144	49.3			
PCB-99	688				PCB-145	ND	0.270		
PCB-100	11.0				PCB-146/165	247			
PCB-103	17.8				PCB-147	39.5			
PCB-104	0.660				PCB-148	3.50			
PCB-105	297				PCB-150	3.38			
PCB-106/118	967				PCB-151	243			
PCB-107/109	103				PCB-152	0.650			
PCB-108/112	4.29				PCB-153	1620			E
PCB-110	608				PCB-154	45.6			
PCB-111/115	15.9				PCB-155	1.46			
PCB-113	0.876				PCB-156	78.8			
PCB-114	10.0				PCB-157	20.8			
PCB-119	36.1				PCB-158/160	109			
PCB-120	4.96				PCB-159	ND	0.246		
PCB-121	ND	0.247			PCB-166	4.35			
PCB-122	0.679				PCB-167	42.1			
PCB-123	7.53				PCB-168	2.32			
PCB-124	8.87				PCB-169	ND	0.268		
PCB-126	2.96				PCB-170	195			
PCB-127	ND	0.219			PCB-171	57.7			
PCB-128/162	161				PCB-172	46.7			
PCB-129	15.9				PCB-173	1.64			
PCB-130	79.2				PCB-174	109			
PCB-131	ND	0.136			PCB-175	11.0			
PCB-132/161	68.0				PCB-176	15.3			
PCB-133/142	28.3				PCB-177	130			
PCB-134/143	13.3				PCB-178	77.6			
PCB-135	47.0				PCB-179	35.6			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-19	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.146	Date Analyzed :	31-Dec-14 21:02	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	515				Total octaCB	448			
PCB-181	0.953				Total nonaCB	73.1			
PCB-182/187	497				DecaCB	26.6			
PCB-183	163				Total PCB	14400			B
PCB-184	0.828								
PCB-185	19.4								
PCB-186	ND	0.284							
PCB-188	2.51								
PCB-189	6.96								
PCB-190	40.8								
PCB-191	8.66								
PCB-192	ND	0.338							
PCB-193	34.7								
PCB-194	78.4								
PCB-195	27.0								
PCB-196/203	128								
PCB-197	4.24								
PCB-198	4.44								
PCB-199	137								
PCB-200	8.20								
PCB-201	17.1								
PCB-202	39.3								
PCB-204	0.193			J					
PCB-205	3.87								
PCB-206	46.7								
PCB-207	7.81								
PCB-208	18.5								
PCB-209	26.6								
Total monoCB	0.225								
Total diCB	17.0								
Total triCB	215			B					
Total tetraCB	1350								
Total pentaCB	5090								
Total hexaCB	5170								
Total heptaCB	1970								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-19
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:34
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.146	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 21:02
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	76.5	5 -145		13C-PCB-170	83.1	10 -145	
13C-PCB-3	80.1	5 -145		13C-PCB-180	83.2	10 -145	
13C-PCB-4	75.7	5 -145		13C-PCB-188	86.4	10 -145	
13C-PCB-11	82.1	5 -145		13C-PCB-189	82.8	10 -145	
13C-PCB-9	78.9	5 -145		13C-PCB-194	85.5	10 -145	
13C-PCB-19	75.6	5 -145		13C-PCB-202	74.0	10 -145	
13C-PCB-28	85.4	5 -145		13C-PCB-206	82.0	10 -145	
13C-PCB-32	76.4	5 -145		13C-PCB-208	71.7	10 -145	
13C-PCB-37	83.8	5 -145		13C-PCB-209	93.1	10 -145	
13C-PCB-47	87.9	5 -145		CRS 13C-PCB-79	95.2	10 -145	
13C-PCB-52	86.4	5 -145		13C-PCB-178	92.6	10 -145	
13C-PCB-54	86.6	5 -145					
13C-PCB-70	88.6	5 -145					
13C-PCB-77	89.0	10 -145					
13C-PCB-80	86.2	10 -145					
13C-PCB-81	86.6	10 -145					
13C-PCB-95	78.1	10 -145					
13C-PCB-97	86.9	10 -145					
13C-PCB-101	83.7	10 -145					
13C-PCB-104	79.9	10 -145					
13C-PCB-105	98.0	10 -145					
13C-PCB-114	95.1	10 -145					
13C-PCB-118	89.3	10 -145					
13C-PCB-123	85.5	10 -145					
13C-PCB-126	99.3	10 -145					
13C-PCB-127	99.2	10 -145					
13C-PCB-138	95.2	10 -145					
13C-PCB-141	90.7	10 -145					
13C-PCB-153	97.3	10 -145					
13C-PCB-155	66.8	10 -145					
13C-PCB-156	89.1	10 -145					
13C-PCB-157	91.5	10 -145					
13C-PCB-159	91.2	10 -145					
13C-PCB-167	91.8	10 -145					
13C-PCB-169	87.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-20
Project:		Sample Size:	10.5 g	QC Batch:	B4L0142
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.200	Date Received:	13-Nov-2014 12:34
				Date Extracted:	26-Dec-2014 11:08
				Date Analyzed:	31-Dec-14 22:07
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.164		PCB-44	23.3			
PCB-2	ND		0.0814		PCB-45	4.98			
PCB-3	ND	0.145			PCB-46	ND		0.300	
PCB-4/10	1.67			J	PCB-47	102			
PCB-5/8	9.22				PCB-48/75	25.5			
PCB-6	1.49				PCB-50	0.473			J
PCB-7/9	ND	0.775			PCB-51	7.41			
PCB-11	1.77				PCB-52/69	211			
PCB-12/13	ND	0.793			PCB-53	14.6			
PCB-14	ND	0.707			PCB-54	0.853			
PCB-15	ND	0.481			PCB-55	2.91			
PCB-16/32	17.1				PCB-56/60	48.0			
PCB-17	10.7				PCB-57	1.40			
PCB-18	25.4				PCB-58	0.683			
PCB-19	1.86				PCB-61/70	83.4			
PCB-20/21/33	14.3				PCB-62	ND	0.313		
PCB-22	14.8				PCB-63	11.7			
PCB-23	ND	0.176			PCB-65	ND	0.303		
PCB-24/27	2.27				PCB-66/76	258			
PCB-25	3.28				PCB-67	2.23			
PCB-26	8.55				PCB-68	3.28			
PCB-28	71.7			B	PCB-73	0.564			
PCB-29	0.226			J	PCB-74	95.1			
PCB-30	ND	0.0967			PCB-77	2.66			
PCB-31	25.4				PCB-78	ND	0.291		
PCB-34	0.667				PCB-79	17.9			
PCB-35	ND	0.177			PCB-80	ND	0.241		
PCB-36	ND	0.177			PCB-81	0.703			
PCB-37	0.327			J	PCB-82	11.0			
PCB-38	3.85				PCB-83	0.224			J
PCB-39	ND	0.172			PCB-84/92	166			
PCB-40	1.82				PCB-85/116	170			
PCB-41/64/71/72	106				PCB-86	0.567			
PCB-42/59	28.2				PCB-87/117/125	179			
PCB-43/49	187				PCB-88/91	76.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-20	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	10.5 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.200	Date Analyzed :	31-Dec-14 22:07	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.748				PCB-136	30.7			
PCB-90/101	941				PCB-137	39.3			
PCB-93	ND	0.344			PCB-138/163/164	1210			
PCB-94	1.18				PCB-139/149	525			
PCB-95/98/102	206				PCB-140	6.27			
PCB-96	1.35				PCB-141	117			
PCB-97	122				PCB-144	34.3			
PCB-99	639				PCB-145	0.236			J
PCB-100	9.27				PCB-146/165	235			
PCB-103	14.6				PCB-147	33.9			
PCB-104	0.362			J	PCB-148	3.29			
PCB-105	262				PCB-150	2.26			
PCB-106/118	880				PCB-151	192			
PCB-107/109	100				PCB-152	0.768			
PCB-108/112	5.16				PCB-153	1440			E
PCB-110	530				PCB-154	38.9			
PCB-111/115	11.7				PCB-155	1.16			
PCB-113	1.26				PCB-156	78.6			
PCB-114	9.64				PCB-157	20.9			
PCB-119	37.5				PCB-158/160	100			
PCB-120	7.52				PCB-159	ND	0.144		
PCB-121	ND	0.204			PCB-166	3.36			
PCB-122	0.755				PCB-167	35.5			
PCB-123	11.7				PCB-168	2.41			
PCB-124	8.06				PCB-169	0.178			J
PCB-126	3.30				PCB-170	172			
PCB-127	ND	0.295			PCB-171	55.9			
PCB-128/162	169				PCB-172	39.3			
PCB-129	10.7				PCB-173	1.22			
PCB-130	80.6				PCB-174	81.7			
PCB-131	ND	0.181			PCB-175	9.75			
PCB-132/161	67.3				PCB-176	10.9			
PCB-133/142	26.1				PCB-177	115			
PCB-134/143	11.9				PCB-178	69.9			
PCB-135	42.1				PCB-179	33.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-20
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:34
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.200	QC Batch:	B4L0142
				Date Analyzed:	31-Dec-14 22:07
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	422				Total octaCB	428			
PCB-181	0.942				Total nonaCB	60.5			
PCB-182/187	444				DecaCB	14.7			
PCB-183	137				Total PCB	12600			B
PCB-184	1.14								
PCB-185	15.9								
PCB-186	ND	0.239							
PCB-188	2.43								
PCB-189	6.27								
PCB-190	35.8								
PCB-191	6.61								
PCB-192	ND	0.319							
PCB-193	32.4								
PCB-194	77.5								
PCB-195	25.5								
PCB-196/203	126								
PCB-197	4.70								
PCB-198	4.43								
PCB-199	124								
PCB-200	6.33								
PCB-201	17.6								
PCB-202	38.8								
PCB-204	ND	0.171							
PCB-205	3.67								
PCB-206	38.8								
PCB-207	6.80								
PCB-208	14.9								
PCB-209	14.7								
Total monoCB	ND		0.245						
Total diCB	14.1								
Total triCB	200			B					
Total tetraCB	1240								
Total pentaCB	4410								
Total hexaCB	4560								
Total heptaCB	1690								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-20
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:34
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.200	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 22:07
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	71.5	5 -145		13C-PCB-170	82.3	10 -145	
13C-PCB-3	73.3	5 -145		13C-PCB-180	76.5	10 -145	
13C-PCB-4	69.0	5 -145		13C-PCB-188	85.0	10 -145	
13C-PCB-11	78.2	5 -145		13C-PCB-189	82.0	10 -145	
13C-PCB-9	73.9	5 -145		13C-PCB-194	85.2	10 -145	
13C-PCB-19	73.0	5 -145		13C-PCB-202	70.8	10 -145	
13C-PCB-28	75.6	5 -145		13C-PCB-206	80.8	10 -145	
13C-PCB-32	75.2	5 -145		13C-PCB-208	74.8	10 -145	
13C-PCB-37	82.3	5 -145		13C-PCB-209	82.8	10 -145	
13C-PCB-47	84.6	5 -145		CRS 13C-PCB-79	94.8	10 -145	
13C-PCB-52	86.7	5 -145		13C-PCB-178	87.2	10 -145	
13C-PCB-54	87.1	5 -145					
13C-PCB-70	86.9	5 -145					
13C-PCB-77	87.5	10 -145					
13C-PCB-80	86.5	10 -145					
13C-PCB-81	88.9	10 -145					
13C-PCB-95	77.1	10 -145					
13C-PCB-97	83.2	10 -145					
13C-PCB-101	84.9	10 -145					
13C-PCB-104	77.0	10 -145					
13C-PCB-105	88.2	10 -145					
13C-PCB-114	89.3	10 -145					
13C-PCB-118	82.3	10 -145					
13C-PCB-123	80.6	10 -145					
13C-PCB-126	90.2	10 -145					
13C-PCB-127	89.7	10 -145					
13C-PCB-138	88.4	10 -145					
13C-PCB-141	85.5	10 -145					
13C-PCB-153	89.2	10 -145					
13C-PCB-155	64.8	10 -145					
13C-PCB-156	81.4	10 -145					
13C-PCB-157	81.9	10 -145					
13C-PCB-159	85.6	10 -145					
13C-PCB-167	83.9	10 -145					
13C-PCB-169	82.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-21	Date Received:	13-Nov-2014 12:34		
Project:		Sample Size:	1.04 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08		
Date Collected:	10-Dec-2014 0:00	%Lipids:	9.62	Date Analyzed :	31-Dec-14 23:12	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	13.2		D	PCB-44	3360			D
PCB-2	ND	14.1		D	PCB-45	121			D
PCB-3	ND	13.7		D	PCB-46	ND		46.0	D
PCB-4/10	ND	82.8		D	PCB-47	2090			D
PCB-5/8	ND	63.6		D	PCB-48/75	329			D
PCB-6	ND	62.3		D	PCB-50	ND	11.0		D
PCB-7/9	ND	61.9		D	PCB-51	33.1			J, D
PCB-11	ND	58.2		D	PCB-52/69	5600			D
PCB-12/13	ND	61.3		D	PCB-53	194			D
PCB-14	ND	54.7		D	PCB-54	ND	8.85		D
PCB-15	ND	55.8		D	PCB-55	128			D
PCB-16/32	63.7			J, D	PCB-56/60	2350			D
PCB-17	109			D	PCB-57	76.7			D
PCB-18	411			D	PCB-58	48.8			D
PCB-19	18.7			J, D	PCB-61/70	10900			D
PCB-20/21/33	61.4			J, D	PCB-62	ND	16.7		D
PCB-22	237			D	PCB-63	571			D
PCB-23	ND	7.31		D	PCB-65	ND	16.2		D
PCB-24/27	23.0			J, D	PCB-66/76	7680			D
PCB-25	72.7			D	PCB-67	206			D
PCB-26	179			D	PCB-68	262			D
PCB-28	1690			B, D	PCB-73	14.2			J, D
PCB-29	ND	7.21		D	PCB-74	3990			D
PCB-30	ND	6.40		D	PCB-77	294			D
PCB-31	949			D	PCB-78	ND	15.8		D
PCB-34	ND	7.60		D	PCB-79	815			D
PCB-35	ND	8.43		D	PCB-80	ND	12.6		D
PCB-36	ND	8.43		D	PCB-81	23.6			J, D
PCB-37	14.1			J, D	PCB-82	161			D
PCB-38	82.1			D	PCB-83	18.6			J, D
PCB-39	ND	8.18		D	PCB-84/92	10100			D
PCB-40	180			D	PCB-85/116	14600			D
PCB-41/64/71/72	2970			D	PCB-86	28.9			J, D
PCB-42/59	578			D	PCB-87/117/125	9330			D
PCB-43/49	2950			D	PCB-88/91	2510			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-21	Date Received:	13-Nov-2014 12:34
Project:		Sample Size:	1.04 g	QC Batch:	B4L0142	Date Extracted:	26-Dec-2014 11:08
Date Collected:	10-Dec-2014 0:00	%Lipids:	9.62	Date Analyzed :	31-Dec-14 23:12	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	44.0			J, D	PCB-136	1840			D
PCB-90/101	39700			D	PCB-137	4340			D
PCB-93	ND	26.2		D	PCB-138/163/164	139000			D
PCB-94	87.7			D	PCB-139/149	30000			D
PCB-95/98/102	13200			D	PCB-140	754			D
PCB-96	16.8			J, D	PCB-141	11800			D
PCB-97	5360			D	PCB-144	1810			D
PCB-99	27200			D	PCB-145	ND	13.0		D
PCB-100	ND		134	D	PCB-146/165	25300			D
PCB-103	194			D	PCB-147	2040			D
PCB-104	ND	19.3		D	PCB-148	240			D
PCB-105	19500			D	PCB-150	56.5			D
PCB-106/118	56300			D	PCB-151	9140			D
PCB-107/109	7720			D	PCB-152	41.7			J, D
PCB-108/112	1310			D	PCB-153	172000			E, D
PCB-110	26600			D	PCB-154	1390			D
PCB-111/115	877			D	PCB-155	120			D
PCB-113	76.2			D	PCB-156	8380			D
PCB-114	1310			D	PCB-157	2370			D
PCB-119	1220			D	PCB-158/160	7170			D
PCB-120	657			D	PCB-159	ND	26.4		D
PCB-121	ND	15.5		D	PCB-166	550			D
PCB-122	80.8			D	PCB-167	5200			D
PCB-123	1150			D	PCB-168	233			D
PCB-124	2430			D	PCB-169	85.0			D
PCB-126	416			D	PCB-170	26300			D
PCB-127	38.3			J, D	PCB-171	6720			D
PCB-128/162	18500			D	PCB-172	7380			D
PCB-129	496			D	PCB-173	ND	11.5		D
PCB-130	7860			D	PCB-174	8670			D
PCB-131	22.9			J, D	PCB-175	1530			D
PCB-132/161	3890			D	PCB-176	577			D
PCB-133/142	3520			D	PCB-177	14200			D
PCB-134/143	1410			D	PCB-178	10300			D
PCB-135	8810			D	PCB-179	5090			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-21
Project:		Sample Size:	1.04 g	Date Received:	13-Nov-2014 12:34
Date Collected:	10-Dec-2014 0:00	%Lipids:	9.62	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 23:12
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	72700			D	Total octaCB	66800			
PCB-181	194			D	Total nonaCB	8350			
PCB-182/187	61600			D	DecaCB	1040			
PCB-183	20400			D	Total PCB	1090000			B
PCB-184	474			D					
PCB-185	1840			D					
PCB-186	ND	8.15		D					
PCB-188	362			D					
PCB-189	1490			D					
PCB-190	6670			D					
PCB-191	826			D					
PCB-192	29.9			J, D					
PCB-193	5060			D					
PCB-194	12900			D					
PCB-195	4170			D					
PCB-196/203	20800			D					
PCB-197	1350			D					
PCB-198	875			D					
PCB-199	17700			D					
PCB-200	212			D					
PCB-201	2790			D					
PCB-202	4910			D					
PCB-204	133			D					
PCB-205	882			D					
PCB-206	5290			D					
PCB-207	1350			D					
PCB-208	1700			D					
PCB-209	1040			D					
Total monoCB	ND	14.1							
Total diCB	ND	82.8							
Total triCB	3910			B					
Total tetraCB	45800								
Total pentaCB	242000								
Total hexaCB	468000								
Total heptaCB	252000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400900-21
Project:		Sample Size:	1.04 g	Date Received:	13-Nov-2014 12:34
Date Collected:	10-Dec-2014 0:00	%Lipids:	9.62	QC Batch:	B4L0142
				Date Analyzed :	31-Dec-14 23:12
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.6	5 -145	D	13C-PCB-170	76.0	10 -145	D
13C-PCB-3	65.9	5 -145	D	13C-PCB-180	84.2	10 -145	D
13C-PCB-4	65.2	5 -145	D	13C-PCB-188	83.1	10 -145	D
13C-PCB-11	76.9	5 -145	D	13C-PCB-189	72.7	10 -145	D
13C-PCB-9	71.6	5 -145	D	13C-PCB-194	87.0	10 -145	D
13C-PCB-19	72.9	5 -145	D	13C-PCB-202	74.3	10 -145	D
13C-PCB-28	80.3	5 -145	D	13C-PCB-206	80.0	10 -145	D
13C-PCB-32	71.1	5 -145	D	13C-PCB-208	76.4	10 -145	D
13C-PCB-37	79.3	5 -145	D	13C-PCB-209	92.0	10 -145	D
13C-PCB-47	77.3	5 -145	D	CRS 13C-PCB-79	88.8	10 -145	D
13C-PCB-52	82.6	5 -145	D	13C-PCB-178	91.1	10 -145	D
13C-PCB-54	79.6	5 -145	D				
13C-PCB-70	81.8	5 -145	D				
13C-PCB-77	87.5	10 -145	D				
13C-PCB-80	81.7	10 -145	D				
13C-PCB-81	78.6	10 -145	D				
13C-PCB-95	75.1	10 -145	D				
13C-PCB-97	82.0	10 -145	D				
13C-PCB-101	81.2	10 -145	D				
13C-PCB-104	74.3	10 -145	D				
13C-PCB-105	87.4	10 -145	D				
13C-PCB-114	86.9	10 -145	D				
13C-PCB-118	84.0	10 -145	D				
13C-PCB-123	80.3	10 -145	D				
13C-PCB-126	84.4	10 -145	D				
13C-PCB-127	86.4	10 -145	D				
13C-PCB-138	88.3	10 -145	D				
13C-PCB-141	87.6	10 -145	D				
13C-PCB-153	90.1	10 -145	D				
13C-PCB-155	68.5	10 -145	D				
13C-PCB-156	81.4	10 -145	D				
13C-PCB-157	82.3	10 -145	D				
13C-PCB-159	87.4	10 -145	D				
13C-PCB-167	84.6	10 -145	D				
13C-PCB-169	75.7	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400900-01	FH-FF-CH-01-08-20141013	23.2	28-Dec-2014	B4L0137
1400900-02	FH-FF-CH-02-08-20141013	22.7	28-Dec-2014	B4L0137
1400900-03	FH-FF-CH-03-08-20141013	22.5	28-Dec-2014	B4L0137
1400900-04	FH-FF-CH-04-08-20141013	22.7	28-Dec-2014	B4L0137
1400900-05	FH-FF-CH-05-08-20141013	22.7	28-Dec-2014	B4L0137
1400900-06	FH-FF-CH-06-08-20141013	22.3	28-Dec-2014	B4L0137
1400900-07	FH-FF-CH-08-08-20141013	21.8	28-Dec-2014	B4L0137
1400900-08	FH-FF-CH-09-08-20141013	21.9	28-Dec-2014	B4L0137
1400900-09	FH-FF-CH-10-08-20141013	22.6	28-Dec-2014	B4L0137
1400900-10	FH-FF-WC-01-08-20141013	22.1	28-Dec-2014	B4L0137
1400900-11	FH-FF-WC-02-08-20141013	21.4	28-Dec-2014	B4L0137
1400900-12	FH-FF-WC-03-08-20141013	22.7	28-Dec-2014	B4L0137
1400900-13	FH-FF-WC-04-08-20141013	23.1	28-Dec-2014	B4L0137
1400900-14	FH-FF-WC-05-08-20141013	23.4	28-Dec-2014	B4L0137
1400900-15	FH-FF-WC-06-08-20141013	23.0	28-Dec-2014	B4L0137
1400900-16	FH-FF-WC-07-08-20141013	24.0	28-Dec-2014	B4L0137
1400900-17	FH-FF-WC-08-08-20141013	24.6	28-Dec-2014	B4L0137
1400900-18	FH-FF-WC-09-08-20141013	23.1	28-Dec-2014	B4L0137
1400900-19	OA-FF-CH-01-06-20141011	23.3	28-Dec-2014	B4L0137
1400900-20	OA-FF-CH-02-06-20141011	22.0	28-Dec-2014	B4L0137

Fish Scale Measurements

Field Sample ID	Lab ID	No.	Measurements of Scaled Fish	
			Total Length (cm)	Standard Length (cm)
FH-FF-WC-01-08-20141013	1400900-10	2	20.1	88.8
FH-FF-WC-02-08-20141013	1400900-11	2	20.3	104.6

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) EPA 166C	PCBs (low-res) 870 Congeners - is conducted on sample ID "FF/OF" sample fish, but test fish file(s) (FF) ONLY (NOT Offal (OF)) - CALSCEINCE	DDTs (870 SIM DDX WDDMU) - CALSCEINCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Filet Prep (Maximize Issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label zebra bag and NEW ID tag with replica ID and fish Total Length (TL) size in cm. If multiple fish in replicate, observe fish measured to in comments or middle size fish.	Archive: No testing / keep frozen	See notes' sections at bottom. FF/OF samples are analyzed for all fish. Back view of fish, the entire fish will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x	x								Scales already collected. SKIN Off Fillets + Offal from this replicate.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5														Scales already collected.
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch.	1-2	x	x	x	x	x	x								Lab pic 027 - Contains 5 fish in 1 foil (A1-A5) Orig. Archive
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch.	2	x		x	x	x									Scales already collected. SKIN Off Fillets + Offal from this replicate. CONFIRMED: NEEDS TO HAVE Archive A-4 ADDED to replicate + scales taken
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.



1400900
-0.9°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off filet, OF = offal, WO = whole organism, CL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip, LB = Long Beach Inner Harbor, LA = Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Replacement page Rec'd 12/26/14 via email
Signature/Printed Name: _____ Date/Time: _____

Received By: Original rec'd 12/23/14. Ad Bonclit 12/26/14 1427
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

- * 1400892
- Ⓐ 1400900
- Ⓢ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (low-res) 8270 congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Fillets (FF ONLY) (NOT Otolith (OT)) - CALSCIENCE	DDTs (8270 SIM DOX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation	
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch.	7														ANCHOR OEA 1400900 -0.9°C, -1.7°C, 0.3°C
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x			x					x					
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					TAKE SCALES. Analyze this sample only for lipids and PCBs
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x					Scales already collected of both fish in replicate. Note size of fish the Otolith comes from
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x					Scales already collected.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x					Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4													x	4 plus possibly another 4 more archive fish
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x					Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email rpho Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Belle Bennett Vista Company: R/10/14/14
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

> 1400893
 Ⓐ 1400900
 ~ 1400901
 ⊕ 1400904
 ⊗ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400900 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 0917</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>A5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: <u>-0.9</u> (uncorrected)	Time: <u>0912</u>		Thermometer ID: IR-1
Temp °C: <u>-0.9</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>6 of 9</u> Trk # <u>7718 4040 2229</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		COC	Sample Container
			None
Shipping Container	Vista	Client	Retain
			Return
			Dispose

Comments:

Sample ID: OA-FF-CH-02-06-20141011

OA-FF-CH-01-06-20141011 *

* ID corrected per email original ID: OA-0F/FF-CH01-06-20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400900 TAT 28

Samples Arrival:	Date/Time: 11/13/14 0849	Initials: <u>YB/B</u>	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time: 12/10/14 0917	Initials: <u>YB/B</u>	Location: WF-2
			Shelf/Rack: A5
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: -1.7 (uncorrected)	Time: 0916		Thermometer ID: IR-1
Temp °C: -1.7 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>0499</u> Trk # <u>7718 4040 2137</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓	✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

Sample label ID:

FH-FF-CH-01-08-20141013
 ↓
 09-08
 08-08
 04-08
 06-08
 05-08
 ↓

FH-FF-CH-10-08-20141013
 ↓
 02-08
 03-08
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1 400900 TAT _____

Samples Arrival:	Date/Time 11/13/14 0849	Initials: BBB	Location: WF2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 0917	Initials: BBB	Location: WF-2
			Shelf/Rack: A6
Delivered By:	<u>(FedEx)</u> UPS On Trac DHL Hand Delivered Other		
Preservation:	<u>(Ice)</u> Blue Ice Dry Ice None		
Temp °C: 0.3 (uncorrected)	Time: 0909	Thermometer ID: IR-1	
Temp °C: 0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	✓		
Sample Container Intact?			✓
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>(Client)</u> Retain	<u>(Return)</u> Dispose

Comments:

Sample ID:
 FH-FF-WC-06-08-20141013
 -02-08-
 -01-08-
 -05-08-
 -08-08-
 -07-08-
 -03-08-
 -04-08-
 ↓ ↓
 FH-FF-WC-09-08-20141013

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400900
 Date Received: 13-Nov-14 12:34
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|--|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____ °C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>JMM 11/15/15</u>
Client Comments/Instructions <u>COC rec'd by email</u>	

March 17, 2015

Vista Project I.D.: 1400901

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400901

Case Narrative

Sample Condition on Receipt:

Twenty fish samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report was amended to include the detection limits for PCB-78 and PCB-80 in sample "OA-FF-CH-08-06-20141011", and PCB-65 in sample "OA-FF-WC-09-06-20141011", which were omitted from the original report:

As requested, scales were removed from samples "OA-FF-WC-06-06-20141011", "OA-FF-WC-07-06-20141011", "OA-FF-WC-10-06-20141011", "OA-FF-LF-01-06-20141011" and "OA-FF-LF-02-06-20141011". The physical measurements of each scaled fish are included in the report. Heads were removed from one fish in each sample, and were shipped to Southern California Marine Institute. For sample "IB-FF-CH-02-05-20141012", the head was collected from the fish with a Total Length of 30cm and a Standard Length of 25cm. For sample "IB-FF-WC-01-05-20141012", the head was collected from the fish with a Total Length of 20cm and a Standard Length of 18cm.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

The recoveries of all labeled standards in the QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "OA-FF-CH-04-06-20141011" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400901-01	OA-FF-CH-03-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-02	OA-FF-CH-04-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-03	OA-FF-CH-05-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-04	OA-FF-CH-07-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-05	OA-FF-CH-08-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-06	OA-FF-CH-09-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-07	OA-FF-CH-10-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-08	OA-FF-WC-01-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-09	OA-FF-WC-03-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-10	OA-FF-WC-04-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-11	OA-FF-WC-05-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-12	OA-FF-WC-06-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-13	OA-FF-WC-07-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-14	OA-FF-WC-08-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-15	OA-FF-WC-09-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-16	OA-FF-WC-10-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-17	OA-FF-LF-01-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-18	OA-FF-LF-02-06-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-19	IB-FF-CH-02-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400901-20	IB-FF-WC-01-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0155	Lab Sample: B4L0155-BLK1
Sample Size: 10.0 g	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 16:00 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.374			PCB-43/49	ND	0.167		
PCB-2	ND	0.416			PCB-44	ND	0.204		
PCB-3	ND	0.404			PCB-45	ND	0.193		
PCB-4/10	ND	1.17			PCB-46	ND	0.196		
PCB-5/8	ND	1.01			PCB-47	ND	0.169		
PCB-6	ND	0.986			PCB-48/75	ND	0.147		
PCB-7/9	ND	0.979			PCB-50	ND	0.163		
PCB-11	ND	1.02			PCB-51	ND	0.161		
PCB-12/13	ND	1.07			PCB-52/69	ND	0.146		
PCB-14	ND	0.956			PCB-53	ND	0.157		
PCB-15	ND	0.975			PCB-54	ND	0.131		
PCB-16/32	ND	0.164			PCB-55	ND	0.120		
PCB-17	ND	0.187			PCB-56/60	ND	0.123		
PCB-18	ND	0.196			PCB-57	ND	0.128		
PCB-19	ND	0.184			PCB-58	ND	0.129		
PCB-20/21/33	ND	0.128			PCB-61/70	ND	0.132		
PCB-22	ND	0.127			PCB-62	ND	0.148		
PCB-23	ND	0.128			PCB-63	ND	0.127		
PCB-24/27	ND	0.143			PCB-65	ND	0.144		
PCB-25	ND	0.125			PCB-66/76	ND	0.125		
PCB-26	ND	0.130			PCB-67	ND	0.132		
PCB-28	ND	0.121			PCB-68	ND	0.129		
PCB-29	ND	0.126			PCB-73	ND	0.136		
PCB-30	ND	0.130			PCB-74	ND	0.118		
PCB-31	ND	0.118			PCB-77	ND	0.138		
PCB-34	ND	0.133			PCB-78	ND	0.140		
PCB-35	ND	0.123			PCB-79	ND	0.119		
PCB-36	ND	0.123			PCB-80	ND	0.105		
PCB-37	ND	0.122			PCB-81	ND	0.126		
PCB-38	ND	0.125			PCB-82	ND	0.420		
PCB-39	ND	0.119			PCB-83	ND	0.274		
PCB-40	ND	0.234			PCB-84/92	ND	0.356		
PCB-41/64/71/72	ND	0.146			PCB-85/116	ND	0.320		
PCB-42/59	ND	0.158			PCB-86	ND	0.408		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B4L0155
Date Extracted: 30-Dec-2014 8:02Lab Sample: B4L0155-BLK1
Date Analyzed: 05-Jan-15 16:00 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.267			PCB-133/142	ND	0.301		
PCB-88/91	ND	0.403			PCB-134/143	ND	0.307		
PCB-89	ND	0.368			PCB-135	ND	0.355		
PCB-90/101	ND	0.314			PCB-136	ND	0.255		
PCB-93	ND	0.363			PCB-137	ND	0.273		
PCB-94	ND	0.371			PCB-138/163/164	ND	0.253		
PCB-95/98/102	ND	0.338			PCB-139/149	ND	0.327		
PCB-96	ND	0.265			PCB-140	ND	0.352		
PCB-97	ND	0.334			PCB-141	ND	0.300		
PCB-99	ND	0.290			PCB-144	ND	0.337		
PCB-100	ND	0.289			PCB-145	ND	0.253		
PCB-103	ND	0.310			PCB-146/165	ND	0.246		
PCB-104	ND	0.230			PCB-147	ND	0.333		
PCB-105	ND	0.253			PCB-148	ND	0.373		
PCB-106/118	ND	0.248			PCB-150	ND	0.260		
PCB-107/109	ND	0.254			PCB-151	ND	0.342		
PCB-108/112	ND	0.323			PCB-152	ND	0.251		
PCB-110	ND	0.248			PCB-153	ND	0.241		
PCB-111/115	ND	0.238			PCB-154	ND	0.313		
PCB-113	ND	0.277			PCB-155	ND	0.243		
PCB-114	ND	0.237			PCB-156	ND	0.229		
PCB-119	ND	0.242			PCB-157	ND	0.243		
PCB-120	ND	0.234			PCB-158/160	ND	0.240		
PCB-121	ND	0.216			PCB-159	ND	0.234		
PCB-122	ND	0.260			PCB-166	ND	0.244		
PCB-123	ND	0.254			PCB-167	ND	0.235		
PCB-124	ND	0.234			PCB-168	ND	0.208		
PCB-126	ND	0.274			PCB-169	ND	0.260		
PCB-127	ND	0.247			PCB-170	ND	0.259		
PCB-128/162	ND	0.267			PCB-171	ND	0.259		
PCB-129	ND	0.335			PCB-172	ND	0.279		
PCB-130	ND	0.345			PCB-173	ND	0.293		
PCB-131	ND	0.311			PCB-174	ND	0.254		
PCB-132/161	ND	0.256			PCB-175	ND	0.260		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0155	Lab Sample: B4L0155-BLK1
Sample Size: 10.0 g	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 16:00 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.185			Total triCB	ND	0.196		
PCB-177	ND	0.274			Total tetraCB	ND	0.234		
PCB-178	ND	0.268			Total pentaCB	ND	0.420		
PCB-179	ND	0.193			Total hexaCB	ND	0.373		
PCB-180	ND	0.238			Total heptaCB	ND	0.293		
PCB-181	ND	0.250			Total octaCB	ND	0.462		
PCB-182/187	ND	0.248			Total nonaCB	ND	0.264		
PCB-183	ND	0.232			DecaCB	ND	0.243		
PCB-184	ND	0.203			Total PCB	ND	1.17		
PCB-185	ND	0.254							
PCB-186	ND	0.197							
PCB-188	ND	0.179							
PCB-189	ND	0.198							
PCB-190	ND	0.193							
PCB-191	ND	0.204							
PCB-192	ND	0.223							
PCB-193	ND	0.206							
PCB-194	ND	0.177							
PCB-195	ND	0.184							
PCB-196/203	ND	0.436							
PCB-197	ND	0.314							
PCB-198	ND	0.453							
PCB-199	ND	0.462							
PCB-200	ND	0.331							
PCB-201	ND	0.305							
PCB-202	ND	0.324							
PCB-204	ND	0.339							
PCB-205	ND	0.156							
PCB-206	ND	0.264							
PCB-207	ND	0.159							
PCB-208	ND	0.151							
PCB-209	ND	0.243							
Total monoCB	ND	0.416							
Total diCB	ND	1.17							

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0155	Lab Sample: B4L0155-BLK1
Sample Size: 10.0 g	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 16:00 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	72.0	5 - 145		13C-PCB-157	97.7	10 - 145	
13C-PCB-3	72.6	5 - 145		13C-PCB-159	97.7	10 - 145	
13C-PCB-4	87.0	5 - 145		13C-PCB-167	99.0	10 - 145	
13C-PCB-11	83.4	5 - 145		13C-PCB-169	94.3	10 - 145	
13C-PCB-9	87.0	5 - 145		13C-PCB-170	96.7	10 - 145	
13C-PCB-19	63.2	5 - 145		13C-PCB-180	93.5	10 - 145	
13C-PCB-28	82.4	5 - 145		13C-PCB-188	94.8	10 - 145	
13C-PCB-32	61.7	5 - 145		13C-PCB-189	89.4	10 - 145	
13C-PCB-37	93.8	5 - 145		13C-PCB-194	96.6	10 - 145	
13C-PCB-47	88.0	5 - 145		13C-PCB-202	95.9	10 - 145	
13C-PCB-52	91.3	5 - 145		13C-PCB-206	94.5	10 - 145	
13C-PCB-54	89.0	5 - 145		13C-PCB-208	93.9	10 - 145	
13C-PCB-70	94.1	5 - 145		13C-PCB-209	106	10 - 145	
13C-PCB-77	90.5	10 - 145		CRS 13C-PCB-79	92.3	10 - 145	
13C-PCB-80	96.6	10 - 145		13C-PCB-178	96.0	10 - 145	
13C-PCB-81	89.3	10 - 145					
13C-PCB-95	90.9	10 - 145					
13C-PCB-97	94.9	10 - 145					
13C-PCB-101	91.7	10 - 145					
13C-PCB-104	90.3	10 - 145					
13C-PCB-105	99.7	10 - 145					
13C-PCB-114	101	10 - 145					
13C-PCB-118	94.7	10 - 145					
13C-PCB-123	93.8	10 - 145					
13C-PCB-126	99.0	10 - 145					
13C-PCB-127	102	10 - 145					
13C-PCB-138	99.7	10 - 145					
13C-PCB-141	101	10 - 145					
13C-PCB-153	101	10 - 145					
13C-PCB-155	92.2	10 - 145					
13C-PCB-156	97.3	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0155
Date Extracted: 30-Dec-2014 8:02

Lab Sample: B4L0155-BS1
Date Analyzed: 05-Jan-15 13:50 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	117	100	117	60 - 135	IS 13C-PCB-1	61.2	15 - 145
PCB-3	116	100	116	60 - 135	IS 13C-PCB-3	72.3	15 - 145
PCB-4/10	442	400	111	60 - 135	IS 13C-PCB-4	77.9	15 - 145
PCB-15	218	200	109	60 - 135	IS 13C-PCB-9	79.1	15 - 145
PCB-19	122	100	122	60 - 135	IS 13C-PCB-11	78.6	15 - 145
PCB-37	98.9	100	98.9	60 - 135	IS 13C-PCB-19	57.0	15 - 145
PCB-54	97.3	100	97.3	60 - 135	IS 13C-PCB-28	82.8	15 - 145
PCB-77	105	100	105	60 - 135	IS 13C-PCB-32	57.2	15 - 145
PCB-81	103	100	103	60 - 135	IS 13C-PCB-37	78.6	15 - 145
PCB-104	106	100	106	60 - 135	IS 13C-PCB-47	87.2	15 - 145
PCB-105	117	100	117	60 - 135	IS 13C-PCB-52	84.6	15 - 145
PCB-106/118	217	200	109	60 - 135	IS 13C-PCB-54	84.8	15 - 145
PCB-114	112	100	112	60 - 135	IS 13C-PCB-70	91.1	15 - 145
PCB-123	111	100	111	60 - 135	IS 13C-PCB-77	92.1	40 - 145
PCB-126	114	100	114	60 - 135	IS 13C-PCB-80	92.0	40 - 145
PCB-155	112	100	112	60 - 135	IS 13C-PCB-81	90.2	40 - 145
PCB-156	114	100	114	60 - 135	IS 13C-PCB-95	86.3	40 - 145
PCB-157	114	100	114	60 - 135	IS 13C-PCB-97	90.3	40 - 145
PCB-167	112	100	112	60 - 135	IS 13C-PCB-101	89.3	40 - 145
PCB-169	115	100	115	60 - 135	IS 13C-PCB-104	85.1	40 - 145
PCB-188	108	100	108	60 - 135	IS 13C-PCB-105	97.3	40 - 145
PCB-189	122	100	122	60 - 135	IS 13C-PCB-114	94.9	40 - 145
PCB-202	108	100	108	60 - 135	IS 13C-PCB-118	90.1	40 - 145
PCB-205	115	100	115	60 - 135	IS 13C-PCB-123	89.9	40 - 145
PCB-206	111	100	111	60 - 135	IS 13C-PCB-126	95.7	40 - 145
PCB-208	110	100	110	60 - 135	IS 13C-PCB-127	98.0	40 - 145
PCB-209	121	100	121	60 - 135	IS 13C-PCB-138	94.4	40 - 145
					IS 13C-PCB-141	96.1	40 - 145
					IS 13C-PCB-153	93.3	40 - 145
					IS 13C-PCB-155	87.1	40 - 145
					IS 13C-PCB-156	91.0	40 - 145
					IS 13C-PCB-157	92.2	40 - 145
					IS 13C-PCB-159	92.7	40 - 145
					IS 13C-PCB-167	96.0	40 - 145
					IS 13C-PCB-169	86.2	40 - 145
					IS 13C-PCB-170	88.1	40 - 145
					IS 13C-PCB-180	91.5	40 - 145
					IS 13C-PCB-188	91.6	40 - 145
					IS 13C-PCB-189	83.7	40 - 145
					IS 13C-PCB-194	93.8	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0155
Date Extracted: 30-Dec-2014 8:02

Lab Sample: B4L0155-BS1
Date Analyzed: 05-Jan-15 13:50 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	92.9	40 - 145
					IS 13C-PCB-206	92.3	40 - 145
					IS 13C-PCB-208	95.5	40 - 145
					IS 13C-PCB-209	108	40 - 145
					CRS 13C-PCB-79	88.7	40 - 145
					CRS 13C-PCB-178	90.9	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: OA-FF-CH-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-01	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.115	Date Analyzed :	05-Jan-15 18:09	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.535			PCB-44	8.39			
PCB-2	ND	0.417			PCB-45	3.42			
PCB-3	ND	0.405			PCB-46	ND	0.213		
PCB-4/10	ND	1.74			PCB-47	56.8			
PCB-5/8	7.75				PCB-48/75	16.8			
PCB-6	1.18				PCB-50	0.517			
PCB-7/9	ND	1.46			PCB-51	7.65			
PCB-11	2.50				PCB-52/69	163			
PCB-12/13	ND	1.57			PCB-53	10.0			
PCB-14	ND	1.40			PCB-54	0.664			
PCB-15	ND	1.43			PCB-55	2.35			
PCB-16/32	15.1				PCB-56/60	38.4			
PCB-17	10.6				PCB-57	0.911			
PCB-18	19.8				PCB-58	ND		0.330	
PCB-19	1.57				PCB-61/70	64.6			
PCB-20/21/33	8.63				PCB-62	ND	0.157		
PCB-22	14.4				PCB-63	5.07			
PCB-23	ND	0.360			PCB-65	ND	0.152		
PCB-24/27	1.63				PCB-66/76	134			
PCB-25	1.97				PCB-67	1.86			
PCB-26	5.44				PCB-68	1.18			
PCB-28	50.3				PCB-73	0.425			J
PCB-29	ND	0.355			PCB-74	49.4			
PCB-30	ND	0.212			PCB-77	1.85			
PCB-31	18.1				PCB-78	ND	0.158		
PCB-34	0.234			J	PCB-79	11.4			
PCB-35	ND	0.388			PCB-80	ND	0.121		
PCB-36	ND	0.388			PCB-81	ND		0.463	
PCB-37	1.42				PCB-82	6.14			
PCB-38	3.22				PCB-83	ND	0.343		
PCB-39	ND	0.376			PCB-84/92	102			
PCB-40	ND		0.451		PCB-85/116	85.1			
PCB-41/64/71/72	68.0				PCB-86	ND	0.511		
PCB-42/59	18.8				PCB-87/117/125	116			
PCB-43/49	126				PCB-88/91	53.8			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-01	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.115	Date Analyzed :	05-Jan-15 18:09	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.695				PCB-136	20.1			
PCB-90/101	598				PCB-137	23.9			
PCB-93	ND	0.434			PCB-138/163/164	652			
PCB-94	ND		0.630		PCB-139/149	357			
PCB-95/98/102	164				PCB-140	ND		1.80	
PCB-96	0.695				PCB-141	81.0			
PCB-97	99.3				PCB-144	21.2			
PCB-99	345				PCB-145	ND	0.424		
PCB-100	5.86				PCB-146/165	131			
PCB-103	9.60				PCB-147	21.9			
PCB-104	ND		0.518		PCB-148	1.56			
PCB-105	163				PCB-150	2.37			
PCB-106/118	515				PCB-151	115			
PCB-107/109	54.4				PCB-152	0.456			J
PCB-108/112	1.93				PCB-153	820			
PCB-110	358				PCB-154	23.3			
PCB-111/115	6.96				PCB-155	0.741			
PCB-113	ND	0.340			PCB-156	41.9			
PCB-114	4.74				PCB-157	11.5			
PCB-119	18.1				PCB-158/160	55.2			
PCB-120	3.16				PCB-159	ND	0.451		
PCB-121	ND	0.258			PCB-166	2.41			
PCB-122	ND	1.01			PCB-167	22.3			
PCB-123	5.01				PCB-168	1.68			
PCB-124	6.58				PCB-169	ND	0.534		
PCB-126	1.81				PCB-170	89.0			
PCB-127	ND	0.510			PCB-171	28.1			
PCB-128/162	82.5				PCB-172	21.6			
PCB-129	9.88				PCB-173	1.17			
PCB-130	41.9				PCB-174	62.7			
PCB-131	ND	0.595			PCB-175	5.65			
PCB-132/161	43.3				PCB-176	8.86			
PCB-133/142	14.2				PCB-177	66.4			
PCB-134/143	7.76				PCB-178	40.2			
PCB-135	21.9				PCB-179	20.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-01	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.115	Date Analyzed :	05-Jan-15 18:09	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	247				Total octaCB	187			
PCB-181	0.595				Total nonaCB	33.1			
PCB-182/187	261				DecaCB	14.3			
PCB-183	82.3				Total PCB	7530			
PCB-184	0.359			J					
PCB-185	9.87								
PCB-186	ND	0.275							
PCB-188	1.49								
PCB-189	3.53								
PCB-190	18.1								
PCB-191	4.21								
PCB-192	ND	0.318							
PCB-193	17.6								
PCB-194	35.1								
PCB-195	11.3								
PCB-196/203	51.2								
PCB-197	1.95								
PCB-198	2.08								
PCB-199	54.0								
PCB-200	3.81								
PCB-201	7.83								
PCB-202	17.9								
PCB-204	ND	0.660							
PCB-205	1.65								
PCB-206	21.2								
PCB-207	3.28								
PCB-208	8.62								
PCB-209	14.3								
Total monoCB	ND	0.535							
Total diCB	11.4								
Total triCB	152								
Total tetraCB	792		793						
Total pentaCB	2730								
Total hexaCB	2630								
Total heptaCB	990								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-01
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.115	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 18:09
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	38.1	5 -145		13C-PCB-170	61.6	10 -145	
13C-PCB-3	52.2	5 -145		13C-PCB-180	60.5	10 -145	
13C-PCB-4	59.7	5 -145		13C-PCB-188	62.0	10 -145	
13C-PCB-11	59.9	5 -145		13C-PCB-189	57.0	10 -145	
13C-PCB-9	61.3	5 -145		13C-PCB-194	64.9	10 -145	
13C-PCB-19	42.1	5 -145		13C-PCB-202	61.9	10 -145	
13C-PCB-28	63.1	5 -145		13C-PCB-206	65.2	10 -145	
13C-PCB-32	40.9	5 -145		13C-PCB-208	63.7	10 -145	
13C-PCB-37	58.3	5 -145		13C-PCB-209	71.5	10 -145	
13C-PCB-47	63.0	5 -145		CRS 13C-PCB-79	64.5	10 -145	
13C-PCB-52	64.4	5 -145		13C-PCB-178	64.2	10 -145	
13C-PCB-54	62.2	5 -145					
13C-PCB-70	64.8	5 -145					
13C-PCB-77	63.5	10 -145					
13C-PCB-80	63.5	10 -145					
13C-PCB-81	60.3	10 -145					
13C-PCB-95	62.1	10 -145					
13C-PCB-97	63.6	10 -145					
13C-PCB-101	65.3	10 -145					
13C-PCB-104	64.3	10 -145					
13C-PCB-105	68.4	10 -145					
13C-PCB-114	67.3	10 -145					
13C-PCB-118	62.4	10 -145					
13C-PCB-123	61.3	10 -145					
13C-PCB-126	68.0	10 -145					
13C-PCB-127	67.8	10 -145					
13C-PCB-138	66.7	10 -145					
13C-PCB-141	69.2	10 -145					
13C-PCB-153	68.7	10 -145					
13C-PCB-155	63.0	10 -145					
13C-PCB-156	64.5	10 -145					
13C-PCB-157	65.3	10 -145					
13C-PCB-159	66.4	10 -145					
13C-PCB-167	65.7	10 -145					
13C-PCB-169	60.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-02	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0695	Date Analyzed :	05-Jan-15 19:14	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.539			PCB-44	10.9			
PCB-2	ND	0.490			PCB-45	3.42			
PCB-3	ND	0.475			PCB-46	ND	0.281		
PCB-4/10	ND	2.18			PCB-47	54.8			
PCB-5/8	6.27				PCB-48/75	14.1			
PCB-6	ND	1.74			PCB-50	0.308			J
PCB-7/9	ND	1.73			PCB-51	6.34			
PCB-11	2.18				PCB-52/69	163			
PCB-12/13	ND	1.79			PCB-53	8.41			
PCB-14	ND	1.60			PCB-54	ND		0.517	
PCB-15	ND	1.63			PCB-55	2.29			
PCB-16/32	12.9				PCB-56/60	39.7			
PCB-17	8.88				PCB-57	1.24			
PCB-18	16.6				PCB-58	0.533			
PCB-19	1.45				PCB-61/70	97.7			
PCB-20/21/33	7.71				PCB-62	ND	0.478		
PCB-22	10.4				PCB-63	7.38			
PCB-23	ND	0.364			PCB-65	ND	0.463		
PCB-24/27	1.44				PCB-66/76	154			
PCB-25	2.45				PCB-67	2.36			
PCB-26	6.51				PCB-68	2.07			
PCB-28	61.8				PCB-73	ND		0.251	
PCB-29	ND	0.359			PCB-74	80.3			
PCB-30	ND	0.201			PCB-77	3.02			
PCB-31	22.6				PCB-78	ND	0.477		
PCB-34	0.448			J	PCB-79	12.4			
PCB-35	ND	0.381			PCB-80	ND	0.380		
PCB-36	ND	0.381			PCB-81	1.11			
PCB-37	0.232			J	PCB-82	6.39			
PCB-38	2.83				PCB-83	ND	0.308		
PCB-39	ND	0.369			PCB-84/92	94.2			
PCB-40	0.536				PCB-85/116	67.4			
PCB-41/64/71/72	68.0				PCB-86	ND	0.458		
PCB-42/59	16.8				PCB-87/117/125	117			
PCB-43/49	131				PCB-88/91	47.9			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-02	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0695	Date Analyzed:	05-Jan-15 19:14	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.420			PCB-136	21.1			
PCB-90/101	591				PCB-137	23.9			
PCB-93	ND	0.419			PCB-138/163/164	682			
PCB-94	0.462			J	PCB-139/149	295			
PCB-95/98/102	143				PCB-140	2.63			
PCB-96	0.724				PCB-141	74.1			
PCB-97	85.5				PCB-144	21.0			
PCB-99	366				PCB-145	ND	0.478		
PCB-100	6.72				PCB-146/165	134			
PCB-103	9.96				PCB-147	20.7			
PCB-104	ND		0.511		PCB-148	2.72			
PCB-105	179				PCB-150	1.92			
PCB-106/118	555				PCB-151	109			
PCB-107/109	56.0				PCB-152	ND	0.476		
PCB-108/112	2.09				PCB-153	896			
PCB-110	286				PCB-154	25.3			
PCB-111/115	9.20				PCB-155	0.939			
PCB-113	ND	0.316			PCB-156	49.1			
PCB-114	7.53				PCB-157	12.6			
PCB-119	18.3				PCB-158/160	59.5			
PCB-120	3.07				PCB-159	ND	0.321		
PCB-121	ND	0.249			PCB-166	2.09			
PCB-122	ND		0.704		PCB-167	25.4			
PCB-123	7.43				PCB-168	1.70			
PCB-124	8.65				PCB-169	ND	0.373		
PCB-126	2.15				PCB-170	101			
PCB-127	ND	0.268			PCB-171	30.6			
PCB-128/162	87.5				PCB-172	21.2			
PCB-129	7.49				PCB-173	ND		0.484	
PCB-130	44.2				PCB-174	50.7			
PCB-131	ND	0.418			PCB-175	5.05			
PCB-132/161	36.7				PCB-176	7.00			
PCB-133/142	15.7				PCB-177	61.8			
PCB-134/143	8.56				PCB-178	35.4			
PCB-135	20.8				PCB-179	21.8			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-02
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0695	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 19:14
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	256				Total octaCB	194			
PCB-181	ND	0.507			Total nonaCB	27.3			
PCB-182/187	237				DecaCB	10.2			
PCB-183	84.8				Total PCB	7600			
PCB-184	0.348			J					
PCB-185	8.59								
PCB-186	ND	0.338							
PCB-188	1.52								
PCB-189	3.67								
PCB-190	22.2								
PCB-191	4.12								
PCB-192	ND	0.453							
PCB-193	18.5								
PCB-194	38.4								
PCB-195	11.6								
PCB-196/203	54.0								
PCB-197	2.22								
PCB-198	1.46								
PCB-199	55.1								
PCB-200	3.16								
PCB-201	7.75								
PCB-202	18.5								
PCB-204	ND	0.617							
PCB-205	1.85								
PCB-206	17.9								
PCB-207	2.61								
PCB-208	6.73								
PCB-209	10.2								
Total monoCB	ND	0.539							
Total diCB	8.45								
Total triCB	156								
Total tetraCB	881		882						
Total pentaCB	2670								
Total hexaCB	2680								
Total heptaCB	972								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-02
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0695	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 19:14
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	37.0	5 -145		13C-PCB-170	59.1	10 -145	
13C-PCB-3	43.3	5 -145		13C-PCB-180	62.2	10 -145	
13C-PCB-4	50.6	5 -145		13C-PCB-188	68.0	10 -145	
13C-PCB-11	54.3	5 -145		13C-PCB-189	56.8	10 -145	
13C-PCB-9	53.5	5 -145		13C-PCB-194	63.8	10 -145	
13C-PCB-19	34.4	5 -145		13C-PCB-202	61.0	10 -145	
13C-PCB-28	45.0	5 -145		13C-PCB-206	63.1	10 -145	
13C-PCB-32	38.1	5 -145		13C-PCB-208	64.9	10 -145	
13C-PCB-37	52.8	5 -145		13C-PCB-209	72.2	10 -145	
13C-PCB-47	62.3	5 -145		CRS 13C-PCB-79	62.3	10 -145	
13C-PCB-52	59.8	5 -145		13C-PCB-178	63.2	10 -145	
13C-PCB-54	61.3	5 -145					
13C-PCB-70	65.3	5 -145					
13C-PCB-77	64.9	10 -145					
13C-PCB-80	64.7	10 -145					
13C-PCB-81	64.4	10 -145					
13C-PCB-95	60.9	10 -145					
13C-PCB-97	65.7	10 -145					
13C-PCB-101	65.5	10 -145					
13C-PCB-104	63.2	10 -145					
13C-PCB-105	73.2	10 -145					
13C-PCB-114	72.5	10 -145					
13C-PCB-118	64.6	10 -145					
13C-PCB-123	63.7	10 -145					
13C-PCB-126	70.9	10 -145					
13C-PCB-127	74.5	10 -145					
13C-PCB-138	71.8	10 -145					
13C-PCB-141	71.3	10 -145					
13C-PCB-153	71.1	10 -145					
13C-PCB-155	62.2	10 -145					
13C-PCB-156	66.4	10 -145					
13C-PCB-157	67.0	10 -145					
13C-PCB-159	68.3	10 -145					
13C-PCB-167	69.4	10 -145					
13C-PCB-169	62.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-FF-CH-04-06-20141011	QC Batch: B4L0155	Lab Sample: B4L0155-DUP1
Source LabNumber: 1400901-02	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 17:05 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.4 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.409			PCB-41/64/71/72	75.1			
PCB-2	ND	0.385			PCB-42/59	17.7			
PCB-3	ND	0.373			PCB-43/49	152			
PCB-4/10	ND	0.874			PCB-44	10.7			
PCB-5/8	6.56				PCB-45	3.50			
PCB-6	0.998				PCB-46	ND	0.360		
PCB-7/9	ND	0.675			PCB-47	63.8			
PCB-11	1.79				PCB-48/75	16.3			
PCB-12/13	ND	0.763			PCB-50	ND		0.303	
PCB-14	ND	0.681			PCB-51	6.88			
PCB-15	ND	0.694			PCB-52/69	180			
PCB-16/32	13.6				PCB-53	9.79			
PCB-17	9.52				PCB-54	0.681			
PCB-18	17.8				PCB-55	2.44			
PCB-19	1.49				PCB-56/60	44.3			
PCB-20/21/33	7.29				PCB-57	1.24			
PCB-22	10.1				PCB-58	0.451			J
PCB-23	ND	0.178			PCB-61/70	108			
PCB-24/27	1.47				PCB-62	ND	0.240		
PCB-25	2.38				PCB-63	8.13			
PCB-26	6.15				PCB-65	ND	0.233		
PCB-28	61.8				PCB-66/76	175			
PCB-29	ND	0.177			PCB-67	2.50			
PCB-30	ND	0.146			PCB-68	2.22			
PCB-31	19.6				PCB-73	0.473			J
PCB-34	0.333			J	PCB-74	82.2			
PCB-35	ND	0.218			PCB-77	3.22			
PCB-36	ND	0.218			PCB-78	ND	0.251		
PCB-37	1.60				PCB-79	13.0			
PCB-38	3.27				PCB-80	ND	0.197		
PCB-39	ND	0.212			PCB-81	0.972			
PCB-40	ND		0.534		PCB-82	6.74			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-FF-CH-04-06-20141011	QC Batch: B4L0155	Lab Sample: B4L0155-DUP1
Source LabNumber: 1400901-02	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 17:05 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.4 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	ND	0.286			PCB-127	ND	0.579		
PCB-84/92	97.8				PCB-128/162	95.7			
PCB-85/116	74.4				PCB-129	8.76			
PCB-86	ND	0.425			PCB-130	41.2			
PCB-87/117/125	127				PCB-131	ND	0.520		
PCB-88/91	51.3				PCB-132/161	38.9			
PCB-89	ND	0.365			PCB-133/142	15.7			
PCB-90/101	624				PCB-134/143	8.77			
PCB-93	ND	0.362			PCB-135	21.5			
PCB-94	0.726				PCB-136	22.5			
PCB-95/98/102	154				PCB-137	30.7			
PCB-96	0.798				PCB-138/163/164	766			
PCB-97	96.1				PCB-139/149	319			
PCB-99	388				PCB-140	3.03			
PCB-100	6.87				PCB-141	80.9			
PCB-103	10.8				PCB-144	21.3			
PCB-104	ND		0.405		PCB-145	ND	0.329		
PCB-105	198				PCB-146/165	144			
PCB-106/118	613				PCB-147	22.6			
PCB-107/109	63.3				PCB-148	2.59			
PCB-108/112	ND		2.12		PCB-150	2.01			
PCB-110	316				PCB-151	117			
PCB-111/115	10.2				PCB-152	0.453			J
PCB-113	ND	0.275			PCB-153	972			
PCB-114	8.06				PCB-154	27.7			
PCB-119	20.0				PCB-155	ND		0.801	
PCB-120	3.43				PCB-156	54.6			
PCB-121	ND	0.215			PCB-157	13.8			
PCB-122	ND		0.559		PCB-158/160	67.2			
PCB-123	7.95				PCB-159	ND	0.404		
PCB-124	10.1				PCB-166	2.55			
PCB-126	2.54				PCB-167	28.5			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-FF-CH-04-06-20141011	QC Batch: B4L0155	Lab Sample: B4L0155-DUP1
Source LabNumber: 1400901-02	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 17:05 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.4 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	1.52				PCB-201	8.10			
PCB-169	ND	0.464			PCB-202	20.4			
PCB-170	109				PCB-204	ND	0.391		
PCB-171	31.7				PCB-205	2.08			
PCB-172	22.9				PCB-206	20.0			
PCB-173	ND		0.935		PCB-207	3.10			
PCB-174	53.6				PCB-208	7.90			
PCB-175	6.21				PCB-209	11.6			
PCB-176	8.20				Total monoCB	ND	0.409		
PCB-177	65.0				Total diCB	9.35			
PCB-178	41.7				Total triCB	156			
PCB-179	25.2				Total tetraCB	980		981	
PCB-180	277				Total pentaCB	2890			
PCB-181	ND	0.342			Total hexaCB	2930			
PCB-182/187	274				Total heptaCB	1070		1080	
PCB-183	97.1				Total octaCB	210			
PCB-184	0.543				Total nonaCB	31.0			
PCB-185	9.79				DecaCB	11.6			
PCB-186	ND	0.256			Total PCB	8290			
PCB-188	1.60								
PCB-189	4.03								
PCB-190	22.7								
PCB-191	4.14								
PCB-192	ND	0.305							
PCB-193	20.2								
PCB-194	41.4								
PCB-195	14.4								
PCB-196/203	58.9								
PCB-197	2.08								
PCB-198	2.16								
PCB-199	56.8								
PCB-200	3.34								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-FF-CH-04-06-20141011	QC Batch: B4L0155	Lab Sample: B4L0155-DUP1
Source LabNumber: 1400901-02	Date Extracted: 30-Dec-2014 8:02	Date Analyzed: 05-Jan-15 17:05 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.4 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	61.0	5-145		13C-PCB-156	81.7	10-145	
13C-PCB-3	70.0	5-145		13C-PCB-157	82.1	10-145	
13C-PCB-4	78.1	5-145		13C-PCB-159	84.6	10-145	
13C-PCB-11	79.6	5-145		13C-PCB-167	86.7	10-145	
13C-PCB-9	82.8	5-145		13C-PCB-169	77.8	10-145	
13C-PCB-19	55.1	5-145		13C-PCB-170	77.3	10-145	
13C-PCB-28	87.6	5-145		13C-PCB-180	80.0	10-145	
13C-PCB-32	57.4	5-145		13C-PCB-188	81.1	10-145	
13C-PCB-37	72.6	5-145		13C-PCB-189	74.5	10-145	
13C-PCB-47	82.3	5-145		13C-PCB-194	85.7	10-145	
13C-PCB-52	79.1	5-145		13C-PCB-202	80.0	10-145	
13C-PCB-54	83.8	5-145		13C-PCB-206	85.0	10-145	
13C-PCB-70	84.9	5-145		13C-PCB-208	86.5	10-145	
13C-PCB-77	84.1	10-145		13C-PCB-209	97.1	10-145	
13C-PCB-80	83.6	10-145		CRS 13C-PCB-79	85.2	10-145	
13C-PCB-81	80.7	10-145		13C-PCB-178	80.8	10-145	
13C-PCB-95	81.3	10-145					
13C-PCB-97	85.5	10-145					
13C-PCB-101	89.1	10-145					
13C-PCB-104	84.2	10-145					
13C-PCB-105	89.2	10-145					
13C-PCB-114	88.2	10-145					
13C-PCB-118	83.9	10-145					
13C-PCB-123	80.6	10-145					
13C-PCB-126	87.8	10-145					
13C-PCB-127	90.1	10-145					
13C-PCB-138	87.7	10-145					
13C-PCB-141	88.6	10-145					
13C-PCB-153	88.5	10-145					
13C-PCB-155	83.4	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-CH-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-03
Project:		Sample Size:	10.0 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0399	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	05-Jan-15 20:19
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.595			PCB-44	55.0			
PCB-2	ND	0.356			PCB-45	8.23			
PCB-3	ND	0.345			PCB-46	0.637			
PCB-4/10	2.33				PCB-47	107			
PCB-5/8	10.2				PCB-48/75	33.0			
PCB-6	1.89				PCB-50	0.680			
PCB-7/9	ND	0.892			PCB-51	13.2			
PCB-11	3.03				PCB-52/69	314			
PCB-12/13	ND	0.930			PCB-53	22.4			
PCB-14	ND	0.829			PCB-54	1.47			
PCB-15	ND	0.846			PCB-55	5.74			
PCB-16/32	23.9				PCB-56/60	64.7			
PCB-17	16.1				PCB-57	2.44			
PCB-18	34.3				PCB-58	0.868			
PCB-19	2.93				PCB-61/70	146			
PCB-20/21/33	15.0				PCB-62	ND	0.439		
PCB-22	15.9				PCB-63	11.5			
PCB-23	ND	0.422			PCB-65	ND	0.426		
PCB-24/27	3.59				PCB-66/76	272			
PCB-25	3.50				PCB-67	3.94			
PCB-26	11.4				PCB-68	2.82			
PCB-28	88.6				PCB-73	0.944			
PCB-29	ND		0.203		PCB-74	108			
PCB-30	ND	0.228			PCB-77	3.98			
PCB-31	32.2				PCB-78	ND	0.405		
PCB-34	ND		0.493		PCB-79	23.0			
PCB-35	ND	0.437			PCB-80	ND	0.312		
PCB-36	ND	0.437			PCB-81	1.39			
PCB-37	0.313			J	PCB-82	30.1			
PCB-38	5.70				PCB-83	ND	0.423		
PCB-39	ND	0.424			PCB-84/92	246			
PCB-40	3.93				PCB-85/116	151			
PCB-41/64/71/72	137				PCB-86	ND	0.630		
PCB-42/59	51.7				PCB-87/117/125	245			
PCB-43/49	252				PCB-88/91	122			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-03
Project:		Sample Size:	10.0 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0399	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed :	05-Jan-15 20:19
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.52				PCB-136	67.8			
PCB-90/101	1260				PCB-137	51.2			
PCB-93	ND	0.570			PCB-138/163/164	1400			
PCB-94	3.04				PCB-139/149	853			
PCB-95/98/102	417				PCB-140	5.07			
PCB-96	2.83				PCB-141	177			
PCB-97	244				PCB-144	47.9			
PCB-99	712				PCB-145	ND	0.298		
PCB-100	11.8				PCB-146/165	279			
PCB-103	20.8				PCB-147	46.3			
PCB-104	1.12				PCB-148	4.72			
PCB-105	325				PCB-150	4.94			
PCB-106/118	1030				PCB-151	270			
PCB-107/109	110				PCB-152	1.15			
PCB-108/112	9.58				PCB-153	1790			E
PCB-110	705				PCB-154	52.6			
PCB-111/115	14.2				PCB-155	1.47			
PCB-113	ND	0.419			PCB-156	88.7			
PCB-114	11.8				PCB-157	25.3			
PCB-119	36.4				PCB-158/160	118			
PCB-120	3.87				PCB-159	ND	0.318		
PCB-121	ND	0.338			PCB-166	5.11			
PCB-122	1.32				PCB-167	47.9			
PCB-123	10.4				PCB-168	2.90			
PCB-124	15.7				PCB-169	ND	0.369		
PCB-126	4.48				PCB-170	207			
PCB-127	ND	0.597			PCB-171	61.9			
PCB-128/162	177				PCB-172	46.3			
PCB-129	26.7				PCB-173	2.67			
PCB-130	91.6				PCB-174	150			
PCB-131	ND	0.411			PCB-175	12.1			
PCB-132/161	124				PCB-176	21.8			
PCB-133/142	36.4				PCB-177	148			
PCB-134/143	31.7				PCB-178	87.7			
PCB-135	64.6				PCB-179	63.1			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-03
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0399	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 20:19
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	538				Total octaCB	444			
PCB-181	ND	0.512			Total nonaCB	68.8			
PCB-182/187	563				DecaCB	28.5			
PCB-183	182				Total PCB	16300			
PCB-184	1.04								
PCB-185	21.5								
PCB-186	ND	0.403							
PCB-188	2.91								
PCB-189	7.13								
PCB-190	43.0								
PCB-191	8.93								
PCB-192	ND	0.456							
PCB-193	38.3								
PCB-194	80.8								
PCB-195	27.8								
PCB-196/203	121								
PCB-197	5.07								
PCB-198	4.20								
PCB-199	129								
PCB-200	9.70								
PCB-201	18.4								
PCB-202	43.2								
PCB-204	ND	0.517							
PCB-205	3.82								
PCB-206	43.6								
PCB-207	6.92								
PCB-208	18.3								
PCB-209	28.5								
Total monoCB	ND	0.595							
Total diCB	17.4								
Total triCB	254								
Total tetraCB	1650								
Total pentaCB	5750								
Total hexaCB	5890								
Total heptaCB	2210								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-03
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0399	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 20:19
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	23.7	5 -145		13C-PCB-170	64.6	10 -145	
13C-PCB-3	47.4	5 -145		13C-PCB-180	67.0	10 -145	
13C-PCB-4	56.4	5 -145		13C-PCB-188	68.9	10 -145	
13C-PCB-11	64.7	5 -145		13C-PCB-189	60.5	10 -145	
13C-PCB-9	64.3	5 -145		13C-PCB-194	68.0	10 -145	
13C-PCB-19	43.1	5 -145		13C-PCB-202	63.2	10 -145	
13C-PCB-28	66.2	5 -145		13C-PCB-206	70.0	10 -145	
13C-PCB-32	44.6	5 -145		13C-PCB-208	69.9	10 -145	
13C-PCB-37	68.3	5 -145		13C-PCB-209	79.6	10 -145	
13C-PCB-47	64.9	5 -145		CRS 13C-PCB-79	77.0	10 -145	
13C-PCB-52	66.6	5 -145		13C-PCB-178	71.5	10 -145	
13C-PCB-54	67.9	5 -145					
13C-PCB-70	69.9	5 -145					
13C-PCB-77	69.4	10 -145					
13C-PCB-80	72.1	10 -145					
13C-PCB-81	67.9	10 -145					
13C-PCB-95	65.9	10 -145					
13C-PCB-97	69.9	10 -145					
13C-PCB-101	70.1	10 -145					
13C-PCB-104	66.6	10 -145					
13C-PCB-105	76.0	10 -145					
13C-PCB-114	75.4	10 -145					
13C-PCB-118	70.7	10 -145					
13C-PCB-123	68.5	10 -145					
13C-PCB-126	75.4	10 -145					
13C-PCB-127	76.5	10 -145					
13C-PCB-138	76.1	10 -145					
13C-PCB-141	75.9	10 -145					
13C-PCB-153	75.5	10 -145					
13C-PCB-155	64.2	10 -145					
13C-PCB-156	70.3	10 -145					
13C-PCB-157	70.0	10 -145					
13C-PCB-159	71.7	10 -145					
13C-PCB-167	72.4	10 -145					
13C-PCB-169	66.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-04
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.204	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed:	05-Jan-15 21:24
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.843			PCB-44	21.0			
PCB-2	ND	0.292			PCB-45	4.41			
PCB-3	ND	0.283			PCB-46	0.240			J
PCB-4/10	ND		1.98		PCB-47	94.9			
PCB-5/8	6.31				PCB-48/75	20.1			
PCB-6	ND		1.18		PCB-50	ND		0.333	
PCB-7/9	ND	1.21			PCB-51	7.41			
PCB-11	1.90				PCB-52/69	226			
PCB-12/13	ND	1.29			PCB-53	13.5			
PCB-14	ND	1.15			PCB-54	0.810			
PCB-15	ND	1.17			PCB-55	4.53			
PCB-16/32	15.0				PCB-56/60	45.0			
PCB-17	9.27				PCB-57	1.64			
PCB-18	21.7				PCB-58	ND		0.770	
PCB-19	1.99				PCB-61/70	72.1			
PCB-20/21/33	6.14				PCB-62	ND	0.456		
PCB-22	8.64				PCB-63	6.40			
PCB-23	ND	0.313			PCB-65	ND	0.441		
PCB-24/27	1.99				PCB-66/76	209			
PCB-25	1.83				PCB-67	1.74			
PCB-26	5.92				PCB-68	1.92			
PCB-28	57.4				PCB-73	0.694			
PCB-29	ND	0.309			PCB-74	65.9			
PCB-30	ND	0.231			PCB-77	ND		2.13	
PCB-31	16.0				PCB-78	ND	0.468		
PCB-34	0.330			J	PCB-79	22.8			
PCB-35	ND	0.386			PCB-80	ND	0.353		
PCB-36	ND	0.385			PCB-81	0.377			J
PCB-37	ND		0.274		PCB-82	17.1			
PCB-38	5.53				PCB-83	ND	0.258		
PCB-39	ND	0.374			PCB-84/92	202			
PCB-40	ND		1.21		PCB-85/116	164			
PCB-41/64/71/72	103				PCB-86	ND	0.384		
PCB-42/59	29.6				PCB-87/117/125	225			
PCB-43/49	214				PCB-88/91	104			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-CH-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-04	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.204	Date Analyzed:	05-Jan-15 21:24	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.677				PCB-136	46.9			
PCB-90/101	1160				PCB-137	55.7			
PCB-93	ND	0.334			PCB-138/163/164	1500			
PCB-94	1.50				PCB-139/149	802			
PCB-95/98/102	303				PCB-140	4.60			
PCB-96	1.53				PCB-141	191			
PCB-97	190				PCB-144	49.8			
PCB-99	694				PCB-145	ND	0.493		
PCB-100	11.0				PCB-146/165	293			
PCB-103	17.8				PCB-147	47.5			
PCB-104	0.621				PCB-148	3.95			
PCB-105	315				PCB-150	4.16			
PCB-106/118	962				PCB-151	261			
PCB-107/109	108				PCB-152	ND		0.768	
PCB-108/112	5.53				PCB-153	1920			E
PCB-110	664				PCB-154	51.7			
PCB-111/115	13.9				PCB-155	ND		1.42	
PCB-113	1.42				PCB-156	92.2			
PCB-114	7.11				PCB-157	23.2			
PCB-119	34.2				PCB-158/160	127			
PCB-120	5.16				PCB-159	ND	0.296		
PCB-121	ND	0.199			PCB-166	4.83			
PCB-122	ND	0.632			PCB-167	45.1			
PCB-123	7.88				PCB-168	3.26			
PCB-124	9.09				PCB-169	ND	0.348		
PCB-126	3.56				PCB-170	231			
PCB-127	ND	0.627			PCB-171	70.1			
PCB-128/162	202				PCB-172	50.4			
PCB-129	22.0				PCB-173	2.71			
PCB-130	99.6				PCB-174	148			
PCB-131	ND	0.366			PCB-175	13.6			
PCB-132/161	109				PCB-176	22.1			
PCB-133/142	33.1				PCB-177	161			
PCB-134/143	18.1				PCB-178	94.0			
PCB-135	52.7				PCB-179	51.3			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-04	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.204	Date Analyzed :	05-Jan-15 21:24	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	604				Total octaCB	483			
PCB-181	1.49				Total nonaCB	73.1			
PCB-182/187	634				DecaCB	27.4			
PCB-183	208				Total PCB	15600			
PCB-184	0.846								
PCB-185	23.0								
PCB-186	ND	0.179							
PCB-188	3.37								
PCB-189	7.48								
PCB-190	45.4								
PCB-191	8.93								
PCB-192	ND	0.213							
PCB-193	41.9								
PCB-194	89.1								
PCB-195	31.1								
PCB-196/203	130								
PCB-197	5.43								
PCB-198	4.02								
PCB-199	141								
PCB-200	9.69								
PCB-201	20.1								
PCB-202	47.4								
PCB-204	0.436			J					
PCB-205	3.80								
PCB-206	46.5								
PCB-207	7.14								
PCB-208	19.5								
PCB-209	27.4								
Total monoCB	ND	0.843							
Total diCB	8.21		11.4						
Total triCB	152								
Total tetraCB	1170								
Total pentaCB	5230								
Total hexaCB	6060								
Total heptaCB	2420								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-04
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.204	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 21:24
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	14.5	5 -145		13C-PCB-170	58.9	10 -145	
13C-PCB-3	44.4	5 -145		13C-PCB-180	60.7	10 -145	
13C-PCB-4	45.0	5 -145		13C-PCB-188	62.7	10 -145	
13C-PCB-11	57.5	5 -145		13C-PCB-189	53.4	10 -145	
13C-PCB-9	56.8	5 -145		13C-PCB-194	66.3	10 -145	
13C-PCB-19	37.2	5 -145		13C-PCB-202	58.4	10 -145	
13C-PCB-28	63.6	5 -145		13C-PCB-206	64.1	10 -145	
13C-PCB-32	39.9	5 -145		13C-PCB-208	65.1	10 -145	
13C-PCB-37	52.6	5 -145		13C-PCB-209	66.7	10 -145	
13C-PCB-47	61.5	5 -145		CRS 13C-PCB-79	62.4	10 -145	
13C-PCB-52	59.3	5 -145		13C-PCB-178	61.1	10 -145	
13C-PCB-54	60.8	5 -145					
13C-PCB-70	64.4	5 -145					
13C-PCB-77	63.9	10 -145					
13C-PCB-80	64.1	10 -145					
13C-PCB-81	61.0	10 -145					
13C-PCB-95	61.5	10 -145					
13C-PCB-97	65.0	10 -145					
13C-PCB-101	64.3	10 -145					
13C-PCB-104	63.4	10 -145					
13C-PCB-105	71.2	10 -145					
13C-PCB-114	69.6	10 -145					
13C-PCB-118	67.2	10 -145					
13C-PCB-123	62.1	10 -145					
13C-PCB-126	66.8	10 -145					
13C-PCB-127	70.3	10 -145					
13C-PCB-138	71.0	10 -145					
13C-PCB-141	69.1	10 -145					
13C-PCB-153	72.2	10 -145					
13C-PCB-155	61.2	10 -145					
13C-PCB-156	64.1	10 -145					
13C-PCB-157	65.2	10 -145					
13C-PCB-159	65.3	10 -145					
13C-PCB-167	66.7	10 -145					
13C-PCB-169	59.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-05
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	05-Jan-15 22:29
				Column:	ZB-1
				Analyst:	DMS
				Date Extracted:	30-Dec-2014 8:02

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.162		PCB-44	11.3			
PCB-2	ND	0.245			PCB-45	4.57			
PCB-3	ND	0.238			PCB-46	ND	0.434		
PCB-4/10	1.38			J	PCB-47	102			
PCB-5/8	10.2				PCB-48/75	28.4			
PCB-6	1.35				PCB-50	0.551			
PCB-7/9	ND	0.736			PCB-51	12.2			
PCB-11	1.76				PCB-52/69	273			
PCB-12/13	ND	0.800			PCB-53	14.1			
PCB-14	ND	0.714			PCB-54	0.844			
PCB-15	ND	0.728			PCB-55	3.53			
PCB-16/32	22.3				PCB-56/60	55.1			
PCB-17	13.3				PCB-57	1.87			
PCB-18	23.0				PCB-58	0.749			
PCB-19	1.40				PCB-61/70	123			
PCB-20/21/33	12.8				PCB-62	ND	0.619		
PCB-22	19.4				PCB-63	11.8			
PCB-23	ND	0.341			PCB-65	ND	0.600		
PCB-24/27	1.97				PCB-66/76	266			
PCB-25	2.96				PCB-67	2.77			
PCB-26	8.56				PCB-68	2.83			
PCB-28	76.8				PCB-73	0.719			
PCB-29	ND		0.196		PCB-74	106			
PCB-30	ND	0.114			PCB-77	1.13			
PCB-31	28.7				PCB-78	ND	0.619		
PCB-34	ND		0.576		PCB-79	21.3			
PCB-35	ND	0.361			PCB-80	ND	0.478		
PCB-36	ND	0.361			PCB-81	1.38			
PCB-37	ND		0.223		PCB-82	6.79			
PCB-38	5.47				PCB-83	0.375			J
PCB-39	ND	0.350			PCB-84/92	186			
PCB-40	ND		0.510		PCB-85/116	158			
PCB-41/64/71/72	120				PCB-86	ND	0.486		
PCB-42/59	27.6				PCB-87/117/125	213			
PCB-43/49	222				PCB-88/91	86.2			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-CH-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-05	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed :	05-Jan-15 22:29	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.919				PCB-136	31.4			
PCB-90/101	1110				PCB-137	44.8			
PCB-93	ND	0.407			PCB-138/163/164	1230			
PCB-94	0.849				PCB-139/149	628			
PCB-95/98/102	267				PCB-140	4.76			
PCB-96	1.09				PCB-141	159			
PCB-97	157				PCB-144	37.7			
PCB-99	639				PCB-145	ND	0.456		
PCB-100	10.5				PCB-146/165	274			
PCB-103	17.9				PCB-147	35.6			
PCB-104	0.863				PCB-148	3.20			
PCB-105	295				PCB-150	3.40			
PCB-106/118	988				PCB-151	211			
PCB-107/109	103				PCB-152	0.843			
PCB-108/112	3.37				PCB-153	1630			E
PCB-110	598				PCB-154	40.9			
PCB-111/115	13.6				PCB-155	1.43			
PCB-113	ND	0.322			PCB-156	80.5			
PCB-114	10.4				PCB-157	24.6			
PCB-119	35.1				PCB-158/160	104			
PCB-120	6.01				PCB-159	ND	0.272		
PCB-121	ND	0.242			PCB-166	4.18			
PCB-122	ND	0.815			PCB-167	46.4			
PCB-123	9.99				PCB-168	2.78			
PCB-124	11.6				PCB-169	ND	0.342		
PCB-126	3.40				PCB-170	179			
PCB-127	ND	0.767			PCB-171	54.6			
PCB-128/162	159				PCB-172	42.9			
PCB-129	15.1				PCB-173	1.77			
PCB-130	78.9				PCB-174	101			
PCB-131	ND	0.348			PCB-175	11.6			
PCB-132/161	68.5				PCB-176	14.1			
PCB-133/142	30.9				PCB-177	116			
PCB-134/143	11.1				PCB-178	78.7			
PCB-135	39.7				PCB-179	33.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-05	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed :	05-Jan-15 22:29	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	491				Total octaCB	372			
PCB-181	1.18				Total nonaCB	54.1			
PCB-182/187	518				DecaCB	20.3			
PCB-183	157				Total PCB	13900			
PCB-184	0.890								
PCB-185	17.4								
PCB-186	ND	0.304							
PCB-188	2.75								
PCB-189	6.97								
PCB-190	37.0								
PCB-191	7.40								
PCB-192	ND	0.367							
PCB-193	34.6								
PCB-194	73.4								
PCB-195	24.1								
PCB-196/203	97.5								
PCB-197	3.77								
PCB-198	3.18								
PCB-199	108								
PCB-200	6.44								
PCB-201	14.8								
PCB-202	37.7								
PCB-204	ND	0.440							
PCB-205	3.67								
PCB-206	35.7								
PCB-207	4.74								
PCB-208	13.7								
PCB-209	20.3								
Total monoCB	ND		0.162						
Total diCB	14.7								
Total triCB	217		218						
Total tetraCB	1420								
Total pentaCB	4930								
Total hexaCB	5010								
Total heptaCB	1910								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-05
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 22:29
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	49.7	5 -145		13C-PCB-170	68.9	10 -145	
13C-PCB-3	66.6	5 -145		13C-PCB-180	72.5	10 -145	
13C-PCB-4	73.7	5 -145		13C-PCB-188	75.5	10 -145	
13C-PCB-11	74.5	5 -145		13C-PCB-189	61.9	10 -145	
13C-PCB-9	75.8	5 -145		13C-PCB-194	74.4	10 -145	
13C-PCB-19	50.4	5 -145		13C-PCB-202	68.5	10 -145	
13C-PCB-28	69.3	5 -145		13C-PCB-206	69.7	10 -145	
13C-PCB-32	52.4	5 -145		13C-PCB-208	74.7	10 -145	
13C-PCB-37	68.0	5 -145		13C-PCB-209	70.6	10 -145	
13C-PCB-47	80.2	5 -145		CRS 13C-PCB-79	80.2	10 -145	
13C-PCB-52	80.8	5 -145		13C-PCB-178	75.5	10 -145	
13C-PCB-54	81.5	5 -145					
13C-PCB-70	79.6	5 -145					
13C-PCB-77	76.1	10 -145					
13C-PCB-80	82.3	10 -145					
13C-PCB-81	79.3	10 -145					
13C-PCB-95	76.1	10 -145					
13C-PCB-97	76.3	10 -145					
13C-PCB-101	78.6	10 -145					
13C-PCB-104	77.1	10 -145					
13C-PCB-105	87.2	10 -145					
13C-PCB-114	84.5	10 -145					
13C-PCB-118	75.6	10 -145					
13C-PCB-123	73.7	10 -145					
13C-PCB-126	85.7	10 -145					
13C-PCB-127	87.2	10 -145					
13C-PCB-138	85.2	10 -145					
13C-PCB-141	82.6	10 -145					
13C-PCB-153	85.8	10 -145					
13C-PCB-155	73.2	10 -145					
13C-PCB-156	77.9	10 -145					
13C-PCB-157	77.7	10 -145					
13C-PCB-159	79.6	10 -145					
13C-PCB-167	81.2	10 -145					
13C-PCB-169	70.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-06	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed:	05-Jan-15 23:33	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.475			PCB-44	8.54			
PCB-2	ND	0.356			PCB-45	2.83			
PCB-3	ND	0.345			PCB-46	ND	0.406		
PCB-4/10	1.09			J	PCB-47	43.4			
PCB-5/8	5.24				PCB-48/75	12.0			
PCB-6	ND	0.979			PCB-50	0.233			J
PCB-7/9	ND	0.969			PCB-51	4.89			
PCB-11	1.67				PCB-52/69	121			
PCB-12/13	ND	1.07			PCB-53	6.45			
PCB-14	ND	0.955			PCB-54	0.411			J
PCB-15	ND	0.973			PCB-55	1.78			
PCB-16/32	9.90				PCB-56/60	30.1			
PCB-17	6.47				PCB-57	0.868			
PCB-18	13.1				PCB-58	ND		0.339	
PCB-19	1.29				PCB-61/70	61.0			
PCB-20/21/33	5.76				PCB-62	ND	0.294		
PCB-22	9.58				PCB-63	5.71			
PCB-23	ND	0.205			PCB-65	ND	0.285		
PCB-24/27	ND		1.09		PCB-66/76	122			
PCB-25	1.43				PCB-67	1.14			
PCB-26	4.06				PCB-68	1.15			
PCB-28	41.4				PCB-73	0.287			J
PCB-29	0.0930			J	PCB-74	51.3			
PCB-30	ND	0.134			PCB-77	1.41			
PCB-31	14.7				PCB-78	ND	0.272		
PCB-34	ND		0.128		PCB-79	9.17			
PCB-35	ND	0.222			PCB-80	ND	0.218		
PCB-36	ND	0.222			PCB-81	0.416			J
PCB-37	0.220			J	PCB-82	5.11			
PCB-38	2.60				PCB-83	ND	0.442		
PCB-39	ND	0.215			PCB-84/92	72.5			
PCB-40	0.576				PCB-85/116	61.8			
PCB-41/64/71/72	55.7				PCB-86	ND	0.658		
PCB-42/59	14.5				PCB-87/117/125	90.8			
PCB-43/49	99.2				PCB-88/91	38.6			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-06	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed :	05-Jan-15 23:33	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.383			J	PCB-136	15.2			
PCB-90/101	437				PCB-137	19.3			
PCB-93	ND	0.582			PCB-138/163/164	506			
PCB-94	0.537				PCB-139/149	241			
PCB-95/98/102	119				PCB-140	2.06			
PCB-96	0.569				PCB-141	56.3			
PCB-97	70.5				PCB-144	16.4			
PCB-99	267				PCB-145	ND	0.421		
PCB-100	5.08				PCB-146/165	94.5			
PCB-103	7.18				PCB-147	15.7			
PCB-104	0.337			J	PCB-148	1.38			
PCB-105	137				PCB-150	ND		1.07	
PCB-106/118	412				PCB-151	90.9			
PCB-107/109	42.5				PCB-152	0.298			J
PCB-108/112	1.72				PCB-153	616			
PCB-110	246				PCB-154	17.0			
PCB-111/115	5.75				PCB-155	0.748			
PCB-113	ND	0.422			PCB-156	35.1			
PCB-114	4.54				PCB-157	8.87			
PCB-119	14.0				PCB-158/160	44.6			
PCB-120	2.80				PCB-159	ND	0.455		
PCB-121	ND	0.346			PCB-166	1.71			
PCB-122	ND	0.506			PCB-167	17.0			
PCB-123	5.14				PCB-168	1.04			
PCB-124	6.21				PCB-169	ND	0.544		
PCB-126	ND		1.32		PCB-170	71.6			
PCB-127	ND	0.499			PCB-171	21.3			
PCB-128/162	64.7				PCB-172	14.3			
PCB-129	6.47				PCB-173	0.797			
PCB-130	30.2				PCB-174	38.9			
PCB-131	ND	0.589			PCB-175	3.76			
PCB-132/161	33.3				PCB-176	5.37			
PCB-133/142	11.3				PCB-177	43.5			
PCB-134/143	5.73				PCB-178	27.9			
PCB-135	17.5				PCB-179	15.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-06
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 23:33
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	180				Total octaCB	135		136	
PCB-181	ND	0.475			Total nonaCB	22.3			
PCB-182/187	188				DecaCB	8.96			
PCB-183	60.0				Total PCB	5680			
PCB-184	0.338			J					
PCB-185	7.11								
PCB-186	ND	0.358							
PCB-188	0.931								
PCB-189	2.29								
PCB-190	16.1								
PCB-191	2.78								
PCB-192	ND	0.423							
PCB-193	12.6								
PCB-194	25.4								
PCB-195	9.29								
PCB-196/203	37.5								
PCB-197	1.72								
PCB-198	ND		0.927						
PCB-199	38.0								
PCB-200	2.53								
PCB-201	5.50								
PCB-202	13.4								
PCB-204	ND	0.562							
PCB-205	1.43								
PCB-206	14.0								
PCB-207	2.33								
PCB-208	5.97								
PCB-209	8.96								
Total monoCB	ND	0.475							
Total diCB	8.00								
Total triCB	111		112						
Total tetraCB	656		657						
Total pentaCB	2050								
Total hexaCB	1970								
Total heptaCB	713								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-06
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.127	QC Batch:	B4L0155
				Date Analyzed :	05-Jan-15 23:33
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	37.9	5 -145		13C-PCB-170	60.6	10 -145	
13C-PCB-3	55.1	5 -145		13C-PCB-180	65.8	10 -145	
13C-PCB-4	60.4	5 -145		13C-PCB-188	69.4	10 -145	
13C-PCB-11	60.6	5 -145		13C-PCB-189	57.4	10 -145	
13C-PCB-9	63.6	5 -145		13C-PCB-194	66.3	10 -145	
13C-PCB-19	43.9	5 -145		13C-PCB-202	62.7	10 -145	
13C-PCB-28	61.6	5 -145		13C-PCB-206	62.8	10 -145	
13C-PCB-32	43.0	5 -145		13C-PCB-208	65.1	10 -145	
13C-PCB-37	61.2	5 -145		13C-PCB-209	58.4	10 -145	
13C-PCB-47	62.5	5 -145		CRS 13C-PCB-79	70.7	10 -145	
13C-PCB-52	62.7	5 -145		13C-PCB-178	69.3	10 -145	
13C-PCB-54	63.9	5 -145					
13C-PCB-70	64.9	5 -145					
13C-PCB-77	69.1	10 -145					
13C-PCB-80	67.1	10 -145					
13C-PCB-81	65.0	10 -145					
13C-PCB-95	64.5	10 -145					
13C-PCB-97	67.4	10 -145					
13C-PCB-101	69.9	10 -145					
13C-PCB-104	64.8	10 -145					
13C-PCB-105	79.0	10 -145					
13C-PCB-114	78.2	10 -145					
13C-PCB-118	69.0	10 -145					
13C-PCB-123	66.9	10 -145					
13C-PCB-126	74.3	10 -145					
13C-PCB-127	78.2	10 -145					
13C-PCB-138	74.8	10 -145					
13C-PCB-141	74.6	10 -145					
13C-PCB-153	77.0	10 -145					
13C-PCB-155	63.6	10 -145					
13C-PCB-156	69.5	10 -145					
13C-PCB-157	71.0	10 -145					
13C-PCB-159	72.7	10 -145					
13C-PCB-167	72.4	10 -145					
13C-PCB-169	65.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-07
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.158	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 05:25
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.200			PCB-44	14.9			
PCB-2	ND	0.232			PCB-45	4.80			
PCB-3	ND	0.225			PCB-46	ND		0.0942	
PCB-4/10	1.36			J	PCB-47	115			
PCB-5/8	6.42				PCB-48/75	27.6			
PCB-6	ND		0.798		PCB-50	ND		0.412	
PCB-7/9	ND	0.763			PCB-51	9.80			
PCB-11	1.70				PCB-52/69	286			
PCB-12/13	ND	0.746			PCB-53	13.8			
PCB-14	ND	0.666			PCB-54	0.986			
PCB-15	ND	0.679			PCB-55	3.74			
PCB-16/32	15.8				PCB-56/60	52.3			
PCB-17	9.84				PCB-57	1.96			
PCB-18	21.4				PCB-58	0.757			
PCB-19	1.65				PCB-61/70	108			
PCB-20/21/33	10.2				PCB-62	ND	0.381		
PCB-22	10.9				PCB-63	9.62			
PCB-23	ND	0.0845			PCB-65	ND	0.369		
PCB-24/27	1.72				PCB-66/76	276			
PCB-25	2.39				PCB-67	2.28			
PCB-26	7.51				PCB-68	2.46			
PCB-28	73.2				PCB-73	0.725			
PCB-29	0.103			J	PCB-74	88.8			
PCB-30	ND	0.122			PCB-77	2.75			
PCB-31	26.8				PCB-78	ND	0.355		
PCB-34	0.446			J	PCB-79	18.7			
PCB-35	ND	0.0887			PCB-80	ND	0.281		
PCB-36	ND	0.0887			PCB-81	0.829			
PCB-37	0.159			J	PCB-82	9.27			
PCB-38	3.71				PCB-83	0.391			J
PCB-39	ND	0.0860			PCB-84/92	209			
PCB-40	0.795				PCB-85/116	165			
PCB-41/64/71/72	127				PCB-86	1.25			
PCB-42/59	32.8				PCB-87/117/125	251			
PCB-43/49	239				PCB-88/91	109			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-07	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.158	Date Analyzed :	07-Jan-15 05:25	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.551				PCB-136	40.5			
PCB-90/101	1210				PCB-137	56.4			
PCB-93	ND	0.532			PCB-138/163/164	1390			
PCB-94	1.01				PCB-139/149	691			
PCB-95/98/102	306				PCB-140	4.50			
PCB-96	ND		0.927		PCB-141	184			
PCB-97	187				PCB-144	50.0			
PCB-99	687				PCB-145	ND	0.236		
PCB-100	12.6				PCB-146/165	282			
PCB-103	20.2				PCB-147	38.8			
PCB-104	0.833				PCB-148	3.78			
PCB-105	328				PCB-150	3.81			
PCB-106/118	1040				PCB-151	231			
PCB-107/109	106				PCB-152	0.908			
PCB-108/112	4.03				PCB-153	1800			E
PCB-110	710				PCB-154	45.9			
PCB-111/115	15.0				PCB-155	1.44			
PCB-113	1.49				PCB-156	88.7			
PCB-114	8.36				PCB-157	23.2			
PCB-119	39.3				PCB-158/160	126			
PCB-120	4.67				PCB-159	ND	0.705		
PCB-121	ND	0.316			PCB-166	4.98			
PCB-122	0.540				PCB-167	45.4			
PCB-123	8.20				PCB-168	2.42			
PCB-124	10.2				PCB-169	ND	0.323		
PCB-126	3.46				PCB-170	217			
PCB-127	ND	0.298			PCB-171	63.9			
PCB-128/162	172				PCB-172	50.1			
PCB-129	21.0				PCB-173	2.33			
PCB-130	92.5				PCB-174	138			
PCB-131	ND	0.163			PCB-175	14.0			
PCB-132/161	97.5				PCB-176	19.9			
PCB-133/142	33.6				PCB-177	152			
PCB-134/143	16.4				PCB-178	82.8			
PCB-135	42.8				PCB-179	49.3			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-07	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.158	Date Analyzed :	07-Jan-15 05:25	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	574				Total octaCB	514			
PCB-181	2.31				Total nonaCB	80.4			
PCB-182/187	538				DecaCB	28.5			
PCB-183	185				Total PCB	15500			
PCB-184	0.967								
PCB-185	23.6								
PCB-186	ND	0.224							
PCB-188	3.19								
PCB-189	7.97								
PCB-190	46.1								
PCB-191	8.82								
PCB-192	ND	0.287							
PCB-193	38.4								
PCB-194	96.8								
PCB-195	32.8								
PCB-196/203	142								
PCB-197	6.09								
PCB-198	4.57								
PCB-199	150								
PCB-200	10.1								
PCB-201	20.3								
PCB-202	47.3								
PCB-204	ND	0.427							
PCB-205	4.35								
PCB-206	51.6								
PCB-207	8.24								
PCB-208	20.6								
PCB-209	28.5								
Total monoCB	ND	0.232							
Total diCB	9.48		10.3						
Total triCB	186								
Total tetraCB	1440								
Total pentaCB	5450								
Total hexaCB	5580								
Total heptaCB	2220								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-07
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.158	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 05:25
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	47.1	5 -145		13C-PCB-170	49.7	10 -145	
13C-PCB-3	49.7	5 -145		13C-PCB-180	50.3	10 -145	
13C-PCB-4	45.7	5 -145		13C-PCB-188	54.8	10 -145	
13C-PCB-11	51.5	5 -145		13C-PCB-189	49.1	10 -145	
13C-PCB-9	49.1	5 -145		13C-PCB-194	51.3	10 -145	
13C-PCB-19	42.0	5 -145		13C-PCB-202	47.2	10 -145	
13C-PCB-28	49.1	5 -145		13C-PCB-206	50.2	10 -145	
13C-PCB-32	44.9	5 -145		13C-PCB-208	49.5	10 -145	
13C-PCB-37	54.2	5 -145		13C-PCB-209	59.7	10 -145	
13C-PCB-47	50.9	5 -145		CRS 13C-PCB-79	56.1	10 -145	
13C-PCB-52	53.6	5 -145		13C-PCB-178	55.3	10 -145	
13C-PCB-54	51.9	5 -145					
13C-PCB-70	55.3	5 -145					
13C-PCB-77	50.1	10 -145					
13C-PCB-80	56.8	10 -145					
13C-PCB-81	54.6	10 -145					
13C-PCB-95	54.9	10 -145					
13C-PCB-97	54.1	10 -145					
13C-PCB-101	56.7	10 -145					
13C-PCB-104	58.7	10 -145					
13C-PCB-105	68.0	10 -145					
13C-PCB-114	69.4	10 -145					
13C-PCB-118	50.9	10 -145					
13C-PCB-123	51.6	10 -145					
13C-PCB-126	66.3	10 -145					
13C-PCB-127	68.3	10 -145					
13C-PCB-138	58.8	10 -145					
13C-PCB-141	58.8	10 -145					
13C-PCB-153	61.7	10 -145					
13C-PCB-155	51.4	10 -145					
13C-PCB-156	56.9	10 -145					
13C-PCB-157	55.5	10 -145					
13C-PCB-159	59.0	10 -145					
13C-PCB-167	57.7	10 -145					
13C-PCB-169	53.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-08	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.41	Date Analyzed :	07-Jan-15 06:30	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.43				PCB-44	718			
PCB-2	0.616				PCB-45	75.4			
PCB-3	0.217			J	PCB-46	13.9			
PCB-4/10	16.4				PCB-47	518			
PCB-5/8	32.6				PCB-48/75	89.5			
PCB-6	7.11				PCB-50	3.36			
PCB-7/9	2.63				PCB-51	27.8			
PCB-11	8.74				PCB-52/69	1340			
PCB-12/13	ND	0.752			PCB-53	37.8			
PCB-14	ND	0.671			PCB-54	7.01			
PCB-15	5.14				PCB-55	22.9			
PCB-16/32	105				PCB-56/60	406			
PCB-17	49.0				PCB-57	8.20			
PCB-18	142				PCB-58	5.46			
PCB-19	17.2				PCB-61/70	962			
PCB-20/21/33	42.8				PCB-62	ND	0.360		
PCB-22	73.8				PCB-63	60.0			
PCB-23	ND	0.0868			PCB-65	ND	0.349		
PCB-24/27	16.3				PCB-66/76	1290			
PCB-25	26.9				PCB-67	27.0			
PCB-26	61.1				PCB-68	11.4			
PCB-28	589				PCB-73	2.07			
PCB-29	0.558				PCB-74	631			
PCB-30	0.222			J	PCB-77	45.5			
PCB-31	226				PCB-78	ND	0.669		
PCB-34	2.25				PCB-79	61.7			
PCB-35	ND	0.105			PCB-80	ND	0.476		
PCB-36	0.207			J	PCB-81	4.42			
PCB-37	10.2				PCB-82	255			
PCB-38	19.8				PCB-83	1.00			
PCB-39	0.261			J	PCB-84/92	1070			
PCB-40	115				PCB-85/116	562			
PCB-41/64/71/72	605				PCB-86	3.04			
PCB-42/59	271				PCB-87/117/125	942			
PCB-43/49	1140				PCB-88/91	500			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-08	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.41	Date Analyzed :	07-Jan-15 06:30	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.67				PCB-136	318			
PCB-90/101	3910			E	PCB-137	184			
PCB-93	ND	0.535			PCB-138/163/164	4510			E
PCB-94	6.53				PCB-139/149	2580			
PCB-95/98/102	1750				PCB-140	19.3			
PCB-96	11.5				PCB-141	617			
PCB-97	955				PCB-144	153			
PCB-99	2120			E	PCB-145	0.342			J
PCB-100	44.4				PCB-146/165	807			
PCB-103	64.0				PCB-147	119			
PCB-104	ND		1.98		PCB-148	10.7			
PCB-105	1090				PCB-150	14.5			
PCB-106/118	3380			E	PCB-151	735			
PCB-107/109	322				PCB-152	1.80			
PCB-108/112	149				PCB-153	5600			E
PCB-110	2810			E	PCB-154	132			
PCB-111/115	54.9				PCB-155	3.74			
PCB-113	19.1				PCB-156	329			
PCB-114	57.7				PCB-157	83.7			
PCB-119	128				PCB-158/160	434			
PCB-120	16.5				PCB-159	ND	0.742		
PCB-121	ND	0.318			PCB-166	15.8			
PCB-122	10.3				PCB-167	ND	0.709		
PCB-123	50.0				PCB-168	8.19			
PCB-124	110				PCB-169	ND	0.532		
PCB-126	15.9				PCB-170	770			
PCB-127	ND	0.491			PCB-171	231			
PCB-128/162	550				PCB-172	156			
PCB-129	117				PCB-173	10.6			
PCB-130	304				PCB-174	655			
PCB-131	ND	0.252			PCB-175	42.5			
PCB-132/161	703				PCB-176	95.5			
PCB-133/142	123				PCB-177	532			
PCB-134/143	159				PCB-178	254			
PCB-135	376				PCB-179	365			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-08
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.41	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 06:30
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2040			E	Total octaCB	1990			
PCB-181	4.12				Total nonaCB	340			
PCB-182/187	1750				DecaCB	91.3			
PCB-183	630				Total PCB	59800			
PCB-184	3.48								
PCB-185	81.5								
PCB-186	ND	0.195							
PCB-188	8.22								
PCB-189	20.2								
PCB-190	163								
PCB-191	33.0								
PCB-192	ND	0.245							
PCB-193	119								
PCB-194	382								
PCB-195	129								
PCB-196/203	571								
PCB-197	22.1								
PCB-198	16.4								
PCB-199	550								
PCB-200	46.5								
PCB-201	78.1								
PCB-202	175								
PCB-204	0.836								
PCB-205	16.7								
PCB-206	224								
PCB-207	30.0								
PCB-208	85.6								
PCB-209	91.3								
Total monoCB	2.27								
Total diCB	72.6								
Total triCB	1380								
Total tetraCB	8510								
Total pentaCB	20400								
Total hexaCB	19000								
Total heptaCB	7970								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-08
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.41	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 06:30
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.3	5 -145		13C-PCB-170	50.9	10 -145	
13C-PCB-3	57.7	5 -145		13C-PCB-180	55.3	10 -145	
13C-PCB-4	53.4	5 -145		13C-PCB-188	56.1	10 -145	
13C-PCB-11	56.1	5 -145		13C-PCB-189	53.2	10 -145	
13C-PCB-9	56.8	5 -145		13C-PCB-194	54.4	10 -145	
13C-PCB-19	46.3	5 -145		13C-PCB-202	48.6	10 -145	
13C-PCB-28	52.3	5 -145		13C-PCB-206	51.9	10 -145	
13C-PCB-32	47.9	5 -145		13C-PCB-208	50.1	10 -145	
13C-PCB-37	51.8	5 -145		13C-PCB-209	56.3	10 -145	
13C-PCB-47	58.1	5 -145		CRS 13C-PCB-79	57.5	10 -145	
13C-PCB-52	59.0	5 -145		13C-PCB-178	54.4	10 -145	
13C-PCB-54	59.0	5 -145					
13C-PCB-70	58.2	5 -145					
13C-PCB-77	51.8	10 -145					
13C-PCB-80	58.1	10 -145					
13C-PCB-81	50.5	10 -145					
13C-PCB-95	57.7	10 -145					
13C-PCB-97	55.4	10 -145					
13C-PCB-101	59.2	10 -145					
13C-PCB-104	59.7	10 -145					
13C-PCB-105	67.4	10 -145					
13C-PCB-114	67.1	10 -145					
13C-PCB-118	54.8	10 -145					
13C-PCB-123	52.0	10 -145					
13C-PCB-126	66.0	10 -145					
13C-PCB-127	66.1	10 -145					
13C-PCB-138	62.3	10 -145					
13C-PCB-141	60.1	10 -145					
13C-PCB-153	62.0	10 -145					
13C-PCB-155	55.0	10 -145					
13C-PCB-156	60.8	10 -145					
13C-PCB-157	57.1	10 -145					
13C-PCB-159	61.2	10 -145					
13C-PCB-167	60.8	10 -145					
13C-PCB-169	56.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-09	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.13	Date Analyzed :	07-Jan-15 07:35	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.849				PCB-44	404			
PCB-2	0.617				PCB-45	41.0			
PCB-3	ND		0.196		PCB-46	9.29			
PCB-4/10	8.90				PCB-47	320			
PCB-5/8	20.7				PCB-48/75	54.8			
PCB-6	4.22				PCB-50	1.99			
PCB-7/9	1.73			J	PCB-51	17.2			
PCB-11	14.2				PCB-52/69	804			
PCB-12/13	ND	0.527			PCB-53	24.6			
PCB-14	ND	0.470			PCB-54	3.87			
PCB-15	6.05				PCB-55	17.7			
PCB-16/32	61.8				PCB-56/60	265			
PCB-17	29.7				PCB-57	5.28			
PCB-18	81.1				PCB-58	3.03			
PCB-19	10.1				PCB-61/70	737			
PCB-20/21/33	27.4				PCB-62	ND	0.257		
PCB-22	36.5				PCB-63	37.2			
PCB-23	0.0910			J	PCB-65	ND	0.249		
PCB-24/27	9.37				PCB-66/76	857			
PCB-25	14.5				PCB-67	15.4			
PCB-26	27.6				PCB-68	8.60			
PCB-28	283				PCB-73	1.26			
PCB-29	0.244			J	PCB-74	425			
PCB-30	ND		0.0824		PCB-77	30.9			
PCB-31	128				PCB-78	ND	0.242		
PCB-34	1.05				PCB-79	54.5			
PCB-35	ND	0.125			PCB-80	ND	0.207		
PCB-36	0.282			J	PCB-81	5.27			
PCB-37	11.7				PCB-82	187			
PCB-38	13.0				PCB-83	1.01			
PCB-39	0.314			J	PCB-84/92	856			
PCB-40	64.1				PCB-85/116	459			
PCB-41/64/71/72	353				PCB-86	2.22			
PCB-42/59	160				PCB-87/117/125	781			
PCB-43/49	641				PCB-88/91	376			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-09
Project:		Sample Size:	10.4 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.13	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed :	07-Jan-15 07:35
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	4.24				PCB-136	306			
PCB-90/101	3430			E	PCB-137	168			
PCB-93	ND	0.480			PCB-138/163/164	4180			
PCB-94	3.56				PCB-139/149	2470			
PCB-95/98/102	1290				PCB-140	19.9			
PCB-96	7.36				PCB-141	608			
PCB-97	692				PCB-144	156			
PCB-99	1800			E	PCB-145	ND	0.386		
PCB-100	33.5				PCB-146/165	728			
PCB-103	49.7				PCB-147	113			
PCB-104	ND		1.23		PCB-148	8.98			
PCB-105	818				PCB-150	12.5			
PCB-106/118	2910			E	PCB-151	778			
PCB-107/109	255				PCB-152	ND		1.17	
PCB-108/112	101				PCB-153	5280			E
PCB-110	2040			E	PCB-154	118			
PCB-111/115	42.8				PCB-155	3.25			
PCB-113	13.7				PCB-156	301			
PCB-114	52.6				PCB-157	71.1			
PCB-119	90.2				PCB-158/160	416			
PCB-120	13.8				PCB-159	ND	0.385		
PCB-121	ND	0.285			PCB-166	14.4			
PCB-122	5.13				PCB-167	157			
PCB-123	39.1				PCB-168	6.50			
PCB-124	95.6				PCB-169	ND	0.502		
PCB-126	11.1				PCB-170	667			
PCB-127	ND	0.466			PCB-171	216			
PCB-128/162	489				PCB-172	126			
PCB-129	98.7				PCB-173	7.76			
PCB-130	284				PCB-174	606			
PCB-131	ND	0.292			PCB-175	34.9			
PCB-132/161	648				PCB-176	85.4			
PCB-133/142	115				PCB-177	506			
PCB-134/143	147				PCB-178	223			
PCB-135	383				PCB-179	384			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-09
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.13	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 07:35
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1810			E	Total octaCB	1510			
PCB-181	4.86				Total nonaCB	220			
PCB-182/187	1510				DecaCB	51.8			
PCB-183	555				Total PCB	49600			
PCB-184	3.72								
PCB-185	76.3								
PCB-186	ND	0.135							
PCB-188	7.25								
PCB-189	13.0								
PCB-190	134								
PCB-191	28.5								
PCB-192	ND	0.401							
PCB-193	105								
PCB-194	275								
PCB-195	97.4								
PCB-196/203	437								
PCB-197	16.1								
PCB-198	11.2								
PCB-199	422								
PCB-200	35.9								
PCB-201	59.9								
PCB-202	148								
PCB-204	0.548								
PCB-205	12.4								
PCB-206	141								
PCB-207	19.6								
PCB-208	59.4								
PCB-209	51.8								
Total monoCB	1.47		1.66						
Total diCB	55.9								
Total triCB	736		737						
Total tetraCB	5360								
Total pentaCB	16500								
Total hexaCB	18100								
Total heptaCB	7100								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-03-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-09
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.13	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 07:35
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	41.9	5 -145		13C-PCB-170	46.9	10 -145	
13C-PCB-3	47.2	5 -145		13C-PCB-180	49.4	10 -145	
13C-PCB-4	44.8	5 -145		13C-PCB-188	53.6	10 -145	
13C-PCB-11	50.5	5 -145		13C-PCB-189	46.3	10 -145	
13C-PCB-9	50.1	5 -145		13C-PCB-194	50.7	10 -145	
13C-PCB-19	41.3	5 -145		13C-PCB-202	46.6	10 -145	
13C-PCB-28	48.9	5 -145		13C-PCB-206	49.5	10 -145	
13C-PCB-32	43.2	5 -145		13C-PCB-208	46.7	10 -145	
13C-PCB-37	48.9	5 -145		13C-PCB-209	54.6	10 -145	
13C-PCB-47	52.4	5 -145		CRS 13C-PCB-79	53.6	10 -145	
13C-PCB-52	51.4	5 -145		13C-PCB-178	52.6	10 -145	
13C-PCB-54	51.3	5 -145					
13C-PCB-70	54.5	5 -145					
13C-PCB-77	50.3	10 -145					
13C-PCB-80	52.7	10 -145					
13C-PCB-81	53.9	10 -145					
13C-PCB-95	50.1	10 -145					
13C-PCB-97	52.9	10 -145					
13C-PCB-101	51.6	10 -145					
13C-PCB-104	50.6	10 -145					
13C-PCB-105	66.1	10 -145					
13C-PCB-114	67.0	10 -145					
13C-PCB-118	49.6	10 -145					
13C-PCB-123	49.7	10 -145					
13C-PCB-126	62.6	10 -145					
13C-PCB-127	64.7	10 -145					
13C-PCB-138	56.6	10 -145					
13C-PCB-141	57.3	10 -145					
13C-PCB-153	59.4	10 -145					
13C-PCB-155	49.5	10 -145					
13C-PCB-156	53.5	10 -145					
13C-PCB-157	53.5	10 -145					
13C-PCB-159	56.1	10 -145					
13C-PCB-167	54.9	10 -145					
13C-PCB-169	50.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-10	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.08 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.81	Date Analyzed :	07-Jan-15 08:39	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.48				PCB-44	445			
PCB-2	0.797			J	PCB-45	51.0			
PCB-3	0.286			J	PCB-46	10.8			
PCB-4/10	13.0				PCB-47	333			
PCB-5/8	38.3				PCB-48/75	65.0			
PCB-6	7.11				PCB-50	1.99			
PCB-7/9	2.84			J	PCB-51	30.3			
PCB-11	21.9				PCB-52/69	858			
PCB-12/13	ND	1.17			PCB-53	37.1			
PCB-14	ND	1.05			PCB-54	6.15			
PCB-15	7.75				PCB-55	16.3			
PCB-16/32	91.2				PCB-56/60	335			
PCB-17	44.5				PCB-57	5.41			
PCB-18	111				PCB-58	3.83			
PCB-19	13.9				PCB-61/70	784			
PCB-20/21/33	42.0				PCB-62	ND	0.141		
PCB-22	56.9				PCB-63	37.7			
PCB-23	0.202			J	PCB-65	0.269			J
PCB-24/27	13.4				PCB-66/76	855			
PCB-25	26.7				PCB-67	22.3			
PCB-26	46.4				PCB-68	8.60			
PCB-28	399				PCB-73	2.04			
PCB-29	0.398			J	PCB-74	413			
PCB-30	ND	0.225			PCB-77	52.1			
PCB-31	183				PCB-78	ND	0.711		
PCB-34	1.91				PCB-79	38.0			
PCB-35	ND	0.212			PCB-80	ND	0.112		
PCB-36	0.697			J	PCB-81	2.39			
PCB-37	19.3				PCB-82	156			
PCB-38	13.5				PCB-83	0.702			J
PCB-39	0.557			J	PCB-84/92	646			
PCB-40	73.6				PCB-85/116	355			
PCB-41/64/71/72	402				PCB-86	1.71			
PCB-42/59	175				PCB-87/117/125	530			
PCB-43/49	717				PCB-88/91	274			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-10	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.08 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.81	Date Analyzed :	07-Jan-15 08:39	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.72				PCB-136	174			
PCB-90/101	2290				PCB-137	87.4			
PCB-93	ND	0.359			PCB-138/163/164	2500			
PCB-94	4.93				PCB-139/149	1300			
PCB-95/98/102	1050				PCB-140	11.1			
PCB-96	7.95				PCB-141	294			
PCB-97	523				PCB-144	75.5			
PCB-99	1240				PCB-145	ND	0.192		
PCB-100	24.2				PCB-146/165	431			
PCB-103	37.6				PCB-147	63.2			
PCB-104	1.85				PCB-148	5.63			
PCB-105	666				PCB-150	7.48			
PCB-106/118	2040				PCB-151	403			
PCB-107/109	189				PCB-152	1.41			
PCB-108/112	81.4				PCB-153	3030			E
PCB-110	1520				PCB-154	66.5			
PCB-111/115	27.8				PCB-155	ND		2.20	
PCB-113	10.1				PCB-156	189			
PCB-114	35.2				PCB-157	47.3			
PCB-119	68.2				PCB-158/160	227			
PCB-120	10.0				PCB-159	ND	0.499		
PCB-121	ND	0.213			PCB-166	7.40			
PCB-122	10.1				PCB-167	110			
PCB-123	34.0				PCB-168	3.16			
PCB-124	76.1				PCB-169	ND	0.620		
PCB-126	10.3				PCB-170	392			
PCB-127	ND	0.755			PCB-171	115			
PCB-128/162	297				PCB-172	76.3			
PCB-129	63.6				PCB-173	7.10			
PCB-130	174				PCB-174	320			
PCB-131	ND	0.234			PCB-175	20.3			
PCB-132/161	355				PCB-176	47.2			
PCB-133/142	64.3				PCB-177	286			
PCB-134/143	85.3				PCB-178	126			
PCB-135	209				PCB-179	203			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-10
Project:		Sample Size:	6.08 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.81	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 08:39
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	973				Total octaCB	906			
PCB-181	2.88				Total nonaCB	147			
PCB-182/187	904				DecaCB	39.3			
PCB-183	296				Total PCB	34200			
PCB-184	1.99								
PCB-185	42.0								
PCB-186	ND	0.197							
PCB-188	4.58								
PCB-189	13.2								
PCB-190	86.5								
PCB-191	16.4								
PCB-192	ND	0.263							
PCB-193	64.9								
PCB-194	176								
PCB-195	56.8								
PCB-196/203	265								
PCB-197	9.48								
PCB-198	5.83								
PCB-199	250								
PCB-200	20.3								
PCB-201	34.3								
PCB-202	80.0								
PCB-204	ND	0.492							
PCB-205	8.89								
PCB-206	97.4								
PCB-207	13.1								
PCB-208	36.7								
PCB-209	39.3								
Total monoCB	2.56								
Total diCB	90.8								
Total triCB	1060								
Total tetraCB	5780								
Total pentaCB	11900								
Total hexaCB	10300								
Total heptaCB	4000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-04-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-10
Project:		Sample Size:	6.08 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.81	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 08:39
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	48.2	5 -145		13C-PCB-170	51.1	10 -145	
13C-PCB-3	52.1	5 -145		13C-PCB-180	53.6	10 -145	
13C-PCB-4	51.2	5 -145		13C-PCB-188	57.4	10 -145	
13C-PCB-11	56.8	5 -145		13C-PCB-189	52.5	10 -145	
13C-PCB-9	55.5	5 -145		13C-PCB-194	54.8	10 -145	
13C-PCB-19	45.3	5 -145		13C-PCB-202	49.7	10 -145	
13C-PCB-28	54.8	5 -145		13C-PCB-206	49.6	10 -145	
13C-PCB-32	47.6	5 -145		13C-PCB-208	49.3	10 -145	
13C-PCB-37	53.1	5 -145		13C-PCB-209	50.6	10 -145	
13C-PCB-47	56.2	5 -145		CRS 13C-PCB-79	54.9	10 -145	
13C-PCB-52	56.8	5 -145		13C-PCB-178	55.8	10 -145	
13C-PCB-54	58.5	5 -145					
13C-PCB-70	56.5	5 -145					
13C-PCB-77	53.7	10 -145					
13C-PCB-80	56.5	10 -145					
13C-PCB-81	51.5	10 -145					
13C-PCB-95	60.4	10 -145					
13C-PCB-97	58.4	10 -145					
13C-PCB-101	59.0	10 -145					
13C-PCB-104	62.2	10 -145					
13C-PCB-105	71.0	10 -145					
13C-PCB-114	71.2	10 -145					
13C-PCB-118	53.5	10 -145					
13C-PCB-123	52.3	10 -145					
13C-PCB-126	66.5	10 -145					
13C-PCB-127	71.9	10 -145					
13C-PCB-138	62.4	10 -145					
13C-PCB-141	61.6	10 -145					
13C-PCB-153	63.6	10 -145					
13C-PCB-155	57.9	10 -145					
13C-PCB-156	60.4	10 -145					
13C-PCB-157	59.2	10 -145					
13C-PCB-159	64.3	10 -145					
13C-PCB-167	60.2	10 -145					
13C-PCB-169	55.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-11	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.23 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.97	Date Analyzed :	07-Jan-15 09:44	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.88				PCB-44	1060			
PCB-2	ND		0.519		PCB-45	104			
PCB-3	0.219			J	PCB-46	25.7			
PCB-4/10	23.9				PCB-47	647			
PCB-5/8	38.0				PCB-48/75	125			
PCB-6	10.0				PCB-50	4.02			
PCB-7/9	3.19			J	PCB-51	37.6			
PCB-11	9.48				PCB-52/69	1770			
PCB-12/13	ND	0.460			PCB-53	59.6			
PCB-14	ND	0.410			PCB-54	8.25			
PCB-15	4.45				PCB-55	26.5			
PCB-16/32	168				PCB-56/60	503			
PCB-17	77.7				PCB-57	9.50			
PCB-18	224				PCB-58	5.89			
PCB-19	27.2				PCB-61/70	1140			
PCB-20/21/33	56.3				PCB-62	ND	0.193		
PCB-22	72.3				PCB-63	75.2			
PCB-23	0.180			J	PCB-65	0.288			J
PCB-24/27	24.3				PCB-66/76	1630			
PCB-25	24.2				PCB-67	28.7			
PCB-26	56.7				PCB-68	13.5			
PCB-28	660				PCB-73	2.82			
PCB-29	0.584			J	PCB-74	832			
PCB-30	0.199			J	PCB-77	47.3			
PCB-31	232				PCB-78	ND	0.556		
PCB-34	2.59				PCB-79	75.4			
PCB-35	ND	0.470			PCB-80	ND	0.431		
PCB-36	0.153			J	PCB-81	6.94			
PCB-37	8.42				PCB-82	303			
PCB-38	26.6				PCB-83	1.08			
PCB-39	0.162			J	PCB-84/92	1250			
PCB-40	160				PCB-85/116	618			
PCB-41/64/71/72	829				PCB-86	4.75			
PCB-42/59	365				PCB-87/117/125	1140			
PCB-43/49	1320				PCB-88/91	590			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-11
Project:		Sample Size:	6.23 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.97	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed :	07-Jan-15 09:44
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	9.97				PCB-136	316			
PCB-90/101	4650				PCB-137	216			
PCB-93	ND	0.312			PCB-138/163/164	4870			
PCB-94	8.11				PCB-139/149	2590			
PCB-95/98/102	2150				PCB-140	19.4			
PCB-96	16.0				PCB-141	609			
PCB-97	1120				PCB-144	158			
PCB-99	2480			E	PCB-145	0.511			J
PCB-100	41.0				PCB-146/165	820			
PCB-103	68.7				PCB-147	123			
PCB-104	2.41				PCB-148	6.93			
PCB-105	1350				PCB-150	13.6			
PCB-106/118	4070				PCB-151	705			
PCB-107/109	369				PCB-152	2.48			
PCB-108/112	174				PCB-153	5670			E
PCB-110	3160			E	PCB-154	117			
PCB-111/115	63.0				PCB-155	3.28			
PCB-113	13.7				PCB-156	373			
PCB-114	73.9				PCB-157	92.7			
PCB-119	134				PCB-158/160	491			
PCB-120	18.8				PCB-159	ND	0.550		
PCB-121	ND	0.185			PCB-166	16.5			
PCB-122	12.1				PCB-167	189			
PCB-123	58.7				PCB-168	7.46			
PCB-124	122				PCB-169	ND	0.744		
PCB-126	17.8				PCB-170	677			
PCB-127	ND	0.866			PCB-171	204			
PCB-128/162	587				PCB-172	130			
PCB-129	137				PCB-173	10.3			
PCB-130	297				PCB-174	582			
PCB-131	ND	0.697			PCB-175	35.3			
PCB-132/161	700				PCB-176	82.7			
PCB-133/142	126				PCB-177	483			
PCB-134/143	170				PCB-178	217			
PCB-135	373				PCB-179	319			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-11
Project:		Sample Size:	6.23 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.97	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 09:44
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1670				Total octaCB	1330			
PCB-181	4.42				Total nonaCB	206			
PCB-182/187	1500				DecaCB	50.9			
PCB-183	540				Total PCB	65000			
PCB-184	3.16								
PCB-185	71.8								
PCB-186	ND	0.135							
PCB-188	7.00								
PCB-189	17.5								
PCB-190	140								
PCB-191	28.3								
PCB-192	ND	0.184							
PCB-193	102								
PCB-194	244								
PCB-195	90.3								
PCB-196/203	382								
PCB-197	15.0								
PCB-198	12.2								
PCB-199	367								
PCB-200	31.3								
PCB-201	54.6								
PCB-202	126								
PCB-204	0.414			J					
PCB-205	11.7								
PCB-206	134								
PCB-207	18.8								
PCB-208	53.1								
PCB-209	50.9								
Total monoCB	2.10		2.62						
Total diCB	89.1								
Total triCB	1660								
Total tetraCB	10900								
Total pentaCB	24100								
Total hexaCB	19800								
Total heptaCB	6830								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-05-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-11
Project:		Sample Size:	6.23 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.97	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 09:44
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	55.9	5 -145		13C-PCB-170	56.7	10 -145	
13C-PCB-3	64.3	5 -145		13C-PCB-180	61.0	10 -145	
13C-PCB-4	58.5	5 -145		13C-PCB-188	64.8	10 -145	
13C-PCB-11	62.8	5 -145		13C-PCB-189	56.6	10 -145	
13C-PCB-9	62.7	5 -145		13C-PCB-194	62.9	10 -145	
13C-PCB-19	50.0	5 -145		13C-PCB-202	57.0	10 -145	
13C-PCB-28	61.6	5 -145		13C-PCB-206	57.9	10 -145	
13C-PCB-32	54.2	5 -145		13C-PCB-208	58.9	10 -145	
13C-PCB-37	61.2	5 -145		13C-PCB-209	64.1	10 -145	
13C-PCB-47	62.1	5 -145		CRS 13C-PCB-79	66.0	10 -145	
13C-PCB-52	62.6	5 -145		13C-PCB-178	61.4	10 -145	
13C-PCB-54	63.9	5 -145					
13C-PCB-70	62.9	5 -145					
13C-PCB-77	58.3	10 -145					
13C-PCB-80	64.9	10 -145					
13C-PCB-81	62.9	10 -145					
13C-PCB-95	64.3	10 -145					
13C-PCB-97	64.1	10 -145					
13C-PCB-101	67.6	10 -145					
13C-PCB-104	65.5	10 -145					
13C-PCB-105	78.3	10 -145					
13C-PCB-114	81.1	10 -145					
13C-PCB-118	61.1	10 -145					
13C-PCB-123	60.1	10 -145					
13C-PCB-126	77.8	10 -145					
13C-PCB-127	81.3	10 -145					
13C-PCB-138	70.6	10 -145					
13C-PCB-141	70.1	10 -145					
13C-PCB-153	72.6	10 -145					
13C-PCB-155	63.4	10 -145					
13C-PCB-156	66.3	10 -145					
13C-PCB-157	64.9	10 -145					
13C-PCB-159	69.6	10 -145					
13C-PCB-167	66.8	10 -145					
13C-PCB-169	61.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-12	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	7.22 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.87	Date Analyzed :	07-Jan-15 10:49	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.99				PCB-44	925			
PCB-2	0.487			J	PCB-45	132			
PCB-3	0.219			J	PCB-46	37.3			
PCB-4/10	24.7				PCB-47	925			
PCB-5/8	120				PCB-48/75	182			
PCB-6	18.1				PCB-50	5.50			
PCB-7/9	6.67				PCB-51	55.7			
PCB-11	10.2				PCB-52/69	1370			
PCB-12/13	ND	1.67			PCB-53	74.7			
PCB-14	ND	1.49			PCB-54	4.76			
PCB-15	5.09				PCB-55	28.7			
PCB-16/32	286				PCB-56/60	654			
PCB-17	137				PCB-57	10.4			
PCB-18	251				PCB-58	7.78			
PCB-19	24.5				PCB-61/70	1370			
PCB-20/21/33	102				PCB-62	ND	0.556		
PCB-22	107				PCB-63	93.0			
PCB-23	0.247			J	PCB-65	0.216			J
PCB-24/27	28.3				PCB-66/76	2220			
PCB-25	39.5				PCB-67	38.8			
PCB-26	56.9				PCB-68	22.6			
PCB-28	907				PCB-73	3.98			
PCB-29	1.29				PCB-74	991			
PCB-30	ND	0.194			PCB-77	57.0			
PCB-31	303				PCB-78	ND	0.526		
PCB-34	6.55				PCB-79	93.0			
PCB-35	ND	0.646			PCB-80	ND	0.429		
PCB-36	ND	0.646			PCB-81	9.88			
PCB-37	13.2				PCB-82	285			
PCB-38	36.5				PCB-83	1.55			
PCB-39	0.491			J	PCB-84/92	1100			
PCB-40	165				PCB-85/116	709			
PCB-41/64/71/72	930				PCB-86	ND	0.949		
PCB-42/59	431				PCB-87/117/125	950			
PCB-43/49	1660				PCB-88/91	593			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-12	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	7.22 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.87	Date Analyzed :	07-Jan-15 10:49	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	14.7				PCB-136	302			
PCB-90/101	3910				PCB-137	174			
PCB-93	ND	0.765			PCB-138/163/164	5650			
PCB-94	9.98				PCB-139/149	2420			
PCB-95/98/102	1590				PCB-140	32.1			
PCB-96	19.6				PCB-141	469			
PCB-97	1070				PCB-144	96.9			
PCB-99	3140			E	PCB-145	ND		0.431	
PCB-100	37.0				PCB-146/165	1040			
PCB-103	66.0				PCB-147	126			
PCB-104	0.949				PCB-148	10.8			
PCB-105	1290				PCB-150	14.9			
PCB-106/118	4260			E	PCB-151	740			
PCB-107/109	429				PCB-152	2.15			
PCB-108/112	164				PCB-153	6860			E
PCB-110	2680			E	PCB-154	144			
PCB-111/115	55.2				PCB-155	7.75			
PCB-113	7.99				PCB-156	374			
PCB-114	71.1				PCB-157	109			
PCB-119	179				PCB-158/160	444			
PCB-120	27.0				PCB-159	ND	0.782		
PCB-121	ND	0.454			PCB-166	14.6			
PCB-122	14.1				PCB-167	203			
PCB-123	80.5				PCB-168	9.35			
PCB-124	110				PCB-169	ND	1.03		
PCB-126	16.1				PCB-170	921			
PCB-127	ND	0.871			PCB-171	268			
PCB-128/162	712				PCB-172	175			
PCB-129	96.9				PCB-173	10.2			
PCB-130	333				PCB-174	652			
PCB-131	ND	1.04			PCB-175	39.9			
PCB-132/161	704				PCB-176	74.7			
PCB-133/142	136				PCB-177	677			
PCB-134/143	148				PCB-178	341			
PCB-135	393				PCB-179	463			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-12
Project:		Sample Size:	7.22 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.87	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 10:49
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2030				Total octaCB	2510			
PCB-181	ND	0.490			Total nonaCB	389			
PCB-182/187	2360				DecaCB	127			
PCB-183	637				Total PCB	71900			
PCB-184	8.35								
PCB-185	74.5								
PCB-186	ND	0.320							
PCB-188	10.5								
PCB-189	21.0								
PCB-190	217								
PCB-191	36.0								
PCB-192	ND	0.437							
PCB-193	171								
PCB-194	474								
PCB-195	173								
PCB-196/203	696								
PCB-197	22.2								
PCB-198	18.5								
PCB-199	738								
PCB-200	50.1								
PCB-201	77.9								
PCB-202	238								
PCB-204	0.744								
PCB-205	24.8								
PCB-206	266								
PCB-207	30.7								
PCB-208	92.6								
PCB-209	127								
Total monoCB	4.70								
Total diCB	185								
Total triCB	2300								
Total tetraCB	12500								
Total pentaCB	22900								
Total hexaCB	21800								
Total heptaCB	9190								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-12
Project:		Sample Size:	7.22 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.87	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 10:49
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	45.6	5 -145		13C-PCB-170	43.4	10 -145	
13C-PCB-3	49.2	5 -145		13C-PCB-180	45.6	10 -145	
13C-PCB-4	46.3	5 -145		13C-PCB-188	50.1	10 -145	
13C-PCB-11	49.8	5 -145		13C-PCB-189	45.3	10 -145	
13C-PCB-9	49.6	5 -145		13C-PCB-194	48.3	10 -145	
13C-PCB-19	40.2	5 -145		13C-PCB-202	42.1	10 -145	
13C-PCB-28	48.3	5 -145		13C-PCB-206	47.3	10 -145	
13C-PCB-32	40.5	5 -145		13C-PCB-208	46.1	10 -145	
13C-PCB-37	45.5	5 -145		13C-PCB-209	50.8	10 -145	
13C-PCB-47	49.9	5 -145		CRS 13C-PCB-79	51.4	10 -145	
13C-PCB-52	48.7	5 -145		13C-PCB-178	46.5	10 -145	
13C-PCB-54	50.9	5 -145					
13C-PCB-70	51.5	5 -145					
13C-PCB-77	47.3	10 -145					
13C-PCB-80	50.9	10 -145					
13C-PCB-81	49.3	10 -145					
13C-PCB-95	49.7	10 -145					
13C-PCB-97	46.7	10 -145					
13C-PCB-101	50.2	10 -145					
13C-PCB-104	50.9	10 -145					
13C-PCB-105	63.0	10 -145					
13C-PCB-114	61.4	10 -145					
13C-PCB-118	45.4	10 -145					
13C-PCB-123	45.6	10 -145					
13C-PCB-126	58.6	10 -145					
13C-PCB-127	63.4	10 -145					
13C-PCB-138	52.9	10 -145					
13C-PCB-141	53.9	10 -145					
13C-PCB-153	55.9	10 -145					
13C-PCB-155	48.9	10 -145					
13C-PCB-156	51.3	10 -145					
13C-PCB-157	50.3	10 -145					
13C-PCB-159	53.6	10 -145					
13C-PCB-167	52.5	10 -145					
13C-PCB-169	48.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-13
Project:		Sample Size:	6.03 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.48	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 11:54
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	6.70				PCB-44	1180			
PCB-2	ND		0.510		PCB-45	143			
PCB-3	ND		0.233		PCB-46	38.4			
PCB-4/10	42.6				PCB-47	1340			
PCB-5/8	126				PCB-48/75	201			
PCB-6	25.8				PCB-50	7.19			
PCB-7/9	7.91				PCB-51	62.4			
PCB-11	9.22				PCB-52/69	1880			
PCB-12/13	ND	1.67			PCB-53	86.2			
PCB-14	ND	1.49			PCB-54	7.32			
PCB-15	2.79				PCB-55	45.9			
PCB-16/32	323				PCB-56/60	719			
PCB-17	139				PCB-57	15.7			
PCB-18	237				PCB-58	13.4			
PCB-19	32.8				PCB-61/70	1370			
PCB-20/21/33	85.7				PCB-62	ND	0.769		
PCB-22	99.0				PCB-63	152			
PCB-23	0.286			J	PCB-65	0.522			J
PCB-24/27	33.7				PCB-66/76	3280			
PCB-25	41.5				PCB-67	44.8			
PCB-26	71.5				PCB-68	37.0			
PCB-28	1020				PCB-73	5.20			
PCB-29	1.29				PCB-74	1480			
PCB-30	ND	0.200			PCB-77	65.2			
PCB-31	272				PCB-78	ND	0.761		
PCB-34	7.61				PCB-79	168			
PCB-35	ND	0.814			PCB-80	ND	0.592		
PCB-36	ND	0.814			PCB-81	9.37			
PCB-37	8.60				PCB-82	465			
PCB-38	54.6				PCB-83	1.99			
PCB-39	ND	0.789			PCB-84/92	2030			
PCB-40	208				PCB-85/116	957			
PCB-41/64/71/72	1200				PCB-86	ND	0.819		
PCB-42/59	557				PCB-87/117/125	1670			
PCB-43/49	2350				PCB-88/91	1070			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-13	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.03 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.48	Date Analyzed :	07-Jan-15 11:54	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.7				PCB-136	628			
PCB-90/101	7650			E	PCB-137	363			
PCB-93	ND	0.681			PCB-138/163/164	11200			E
PCB-94	14.5				PCB-139/149	5170			E
PCB-95/98/102	2810				PCB-140	56.2			
PCB-96	27.2				PCB-141	1010			
PCB-97	1830				PCB-144	204			
PCB-99	5820			E	PCB-145	ND	0.652		
PCB-100	73.8				PCB-146/165	1990			
PCB-103	128				PCB-147	262			
PCB-104	1.44				PCB-148	ND		14.7	
PCB-105	2360				PCB-150	28.7			
PCB-106/118	8090			E	PCB-151	1540			
PCB-107/109	796				PCB-152	ND		2.98	
PCB-108/112	283				PCB-153	13600			E
PCB-110	4870			E	PCB-154	299			
PCB-111/115	94.8				PCB-155	14.4			
PCB-113	16.3				PCB-156	746			
PCB-114	126				PCB-157	218			
PCB-119	308				PCB-158/160	876			
PCB-120	52.7				PCB-159	ND	1.55		
PCB-121	ND	0.404			PCB-166	33.1			
PCB-122	18.1				PCB-167	413			
PCB-123	123				PCB-168	16.1			
PCB-124	169				PCB-169	ND	2.24		
PCB-126	27.5				PCB-170	1840			
PCB-127	ND	1.13			PCB-171	529			
PCB-128/162	1360				PCB-172	351			
PCB-129	187				PCB-173	19.5			
PCB-130	660				PCB-174	1330			
PCB-131	ND	2.05			PCB-175	80.3			
PCB-132/161	1390				PCB-176	160			
PCB-133/142	256				PCB-177	1330			
PCB-134/143	277				PCB-178	667			
PCB-135	815				PCB-179	934			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-13	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.03 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.48	Date Analyzed :	07-Jan-15 11:54	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4200			E	Total octaCB	4950			
PCB-181	10.2				Total nonaCB	776			
PCB-182/187	4570				DecaCB	247			
PCB-183	1310				Total PCB	129000			
PCB-184	17.6								
PCB-185	150								
PCB-186	ND	0.640							
PCB-188	20.2								
PCB-189	40.9								
PCB-190	407								
PCB-191	69.8								
PCB-192	ND	0.810							
PCB-193	321								
PCB-194	964								
PCB-195	343								
PCB-196/203	1400								
PCB-197	50.5								
PCB-198	29.0								
PCB-199	1430								
PCB-200	93.8								
PCB-201	155								
PCB-202	440								
PCB-204	1.73								
PCB-205	48.5								
PCB-206	527								
PCB-207	63.2								
PCB-208	186								
PCB-209	247								
Total monoCB	6.70		7.45						
Total diCB	214								
Total triCB	2430								
Total tetraCB	16700								
Total pentaCB	41900								
Total hexaCB	43500								
Total heptaCB	18400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-07-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-13
Project:		Sample Size:	6.03 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.48	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 11:54
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	50.4	5 -145		13C-PCB-170	46.6	10 -145	
13C-PCB-3	51.2	5 -145		13C-PCB-180	49.6	10 -145	
13C-PCB-4	48.4	5 -145		13C-PCB-188	53.4	10 -145	
13C-PCB-11	52.0	5 -145		13C-PCB-189	45.4	10 -145	
13C-PCB-9	52.1	5 -145		13C-PCB-194	51.1	10 -145	
13C-PCB-19	42.7	5 -145		13C-PCB-202	44.6	10 -145	
13C-PCB-28	50.1	5 -145		13C-PCB-206	49.7	10 -145	
13C-PCB-32	45.4	5 -145		13C-PCB-208	47.5	10 -145	
13C-PCB-37	46.8	5 -145		13C-PCB-209	55.6	10 -145	
13C-PCB-47	50.7	5 -145		CRS 13C-PCB-79	55.2	10 -145	
13C-PCB-52	51.0	5 -145		13C-PCB-178	50.7	10 -145	
13C-PCB-54	52.3	5 -145					
13C-PCB-70	51.3	5 -145					
13C-PCB-77	52.1	10 -145					
13C-PCB-80	53.9	10 -145					
13C-PCB-81	51.2	10 -145					
13C-PCB-95	52.0	10 -145					
13C-PCB-97	51.2	10 -145					
13C-PCB-101	52.5	10 -145					
13C-PCB-104	51.1	10 -145					
13C-PCB-105	65.3	10 -145					
13C-PCB-114	66.5	10 -145					
13C-PCB-118	50.1	10 -145					
13C-PCB-123	48.9	10 -145					
13C-PCB-126	62.5	10 -145					
13C-PCB-127	65.0	10 -145					
13C-PCB-138	57.7	10 -145					
13C-PCB-141	58.0	10 -145					
13C-PCB-153	60.7	10 -145					
13C-PCB-155	51.4	10 -145					
13C-PCB-156	54.0	10 -145					
13C-PCB-157	52.6	10 -145					
13C-PCB-159	58.1	10 -145					
13C-PCB-167	54.8	10 -145					
13C-PCB-169	48.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-14	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.06 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.60	Date Analyzed :	07-Jan-15 12:59	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.93				PCB-44	548			
PCB-2	0.465			J	PCB-45	65.2			
PCB-3	0.213			J	PCB-46	17.1			
PCB-4/10	24.1				PCB-47	627			
PCB-5/8	91.7				PCB-48/75	116			
PCB-6	14.1				PCB-50	3.70			
PCB-7/9	5.43				PCB-51	30.4			
PCB-11	9.69				PCB-52/69	914			
PCB-12/13	ND	0.981			PCB-53	47.2			
PCB-14	ND	0.876			PCB-54	4.26			
PCB-15	3.62				PCB-55	20.8			
PCB-16/32	174				PCB-56/60	353			
PCB-17	76.4				PCB-57	8.34			
PCB-18	119				PCB-58	7.02			
PCB-19	17.0				PCB-61/70	850			
PCB-20/21/33	57.6				PCB-62	ND	0.722		
PCB-22	52.3				PCB-63	67.3			
PCB-23	ND	0.341			PCB-65	ND	0.699		
PCB-24/27	17.0				PCB-66/76	1480			
PCB-25	24.1				PCB-67	24.2			
PCB-26	33.4				PCB-68	20.5			
PCB-28	574				PCB-73	1.94			
PCB-29	0.721			J	PCB-74	615			
PCB-30	ND	0.142			PCB-77	43.0			
PCB-31	162				PCB-78	ND	0.761		
PCB-34	4.63				PCB-79	72.1			
PCB-35	ND	0.363			PCB-80	ND	0.565		
PCB-36	ND		0.274		PCB-81	2.13			
PCB-37	9.65				PCB-82	201			
PCB-38	24.9				PCB-83	0.813			J
PCB-39	0.399			J	PCB-84/92	858			
PCB-40	100				PCB-85/116	481			
PCB-41/64/71/72	569				PCB-86	ND	0.548		
PCB-42/59	286				PCB-87/117/125	667			
PCB-43/49	1150				PCB-88/91	472			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-14	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.06 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.60	Date Analyzed :	07-Jan-15 12:59	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	7.01				PCB-136	253			
PCB-90/101	3100				PCB-137	114			
PCB-93	ND	0.440			PCB-138/163/164	4520			
PCB-94	6.69				PCB-139/149	2180			
PCB-95/98/102	1270				PCB-140	25.4			
PCB-96	11.1				PCB-141	342			
PCB-97	839				PCB-144	80.9			
PCB-99	2450				PCB-145	0.287			J
PCB-100	30.1				PCB-146/165	838			
PCB-103	59.7				PCB-147	110			
PCB-104	ND		0.482		PCB-148	8.15			
PCB-105	944				PCB-150	13.0			
PCB-106/118	3320				PCB-151	601			
PCB-107/109	346				PCB-152	1.46			
PCB-108/112	133				PCB-153	5350			E
PCB-110	2100				PCB-154	125			
PCB-111/115	40.1				PCB-155	5.47			
PCB-113	9.27				PCB-156	282			
PCB-114	48.0				PCB-157	87.2			
PCB-119	141				PCB-158/160	320			
PCB-120	24.0				PCB-159	ND	0.490		
PCB-121	ND	0.261			PCB-166	10.8			
PCB-122	10.4				PCB-167	174			
PCB-123	61.2				PCB-168	5.85			
PCB-124	89.4				PCB-169	0.691			J
PCB-126	12.4				PCB-170	695			
PCB-127	ND	1.10			PCB-171	205			
PCB-128/162	566				PCB-172	143			
PCB-129	69.2				PCB-173	7.96			
PCB-130	295				PCB-174	510			
PCB-131	ND	0.629			PCB-175	34.3			
PCB-132/161	511				PCB-176	63.2			
PCB-133/142	107				PCB-177	593			
PCB-134/143	121				PCB-178	284			
PCB-135	382				PCB-179	347			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-14	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.06 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.60	Date Analyzed :	07-Jan-15 12:59	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1530				Total octaCB	1830			
PCB-181	ND	0.658			Total nonaCB	292			
PCB-182/187	1840				DecaCB	97.7			
PCB-183	483				Total PCB	54100			
PCB-184	5.35								
PCB-185	58.3								
PCB-186	ND	0.418							
PCB-188	8.28								
PCB-189	17.3								
PCB-190	156								
PCB-191	27.6								
PCB-192	ND	0.586							
PCB-193	131								
PCB-194	340								
PCB-195	120								
PCB-196/203	490								
PCB-197	17.8								
PCB-198	14.9								
PCB-199	558								
PCB-200	34.4								
PCB-201	61.2								
PCB-202	177								
PCB-204	ND	0.548							
PCB-205	17.4								
PCB-206	195								
PCB-207	24.4								
PCB-208	72.7								
PCB-209	97.7								
Total monoCB	5.61								
Total diCB	149								
Total triCB	1350								
Total tetraCB	8040								
Total pentaCB	17700								
Total hexaCB	17500								
Total heptaCB	7150								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-08-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-14
Project:		Sample Size:	6.06 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.60	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 12:59
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	65.4	5 -145		13C-PCB-170	62.6	10 -145	
13C-PCB-3	66.5	5 -145		13C-PCB-180	64.9	10 -145	
13C-PCB-4	64.7	5 -145		13C-PCB-188	71.7	10 -145	
13C-PCB-11	71.4	5 -145		13C-PCB-189	64.7	10 -145	
13C-PCB-9	70.0	5 -145		13C-PCB-194	67.1	10 -145	
13C-PCB-19	59.3	5 -145		13C-PCB-202	61.6	10 -145	
13C-PCB-28	68.2	5 -145		13C-PCB-206	62.1	10 -145	
13C-PCB-32	61.9	5 -145		13C-PCB-208	59.4	10 -145	
13C-PCB-37	73.7	5 -145		13C-PCB-209	67.6	10 -145	
13C-PCB-47	71.6	5 -145		CRS 13C-PCB-79	77.6	10 -145	
13C-PCB-52	69.9	5 -145		13C-PCB-178	72.8	10 -145	
13C-PCB-54	71.8	5 -145					
13C-PCB-70	71.6	5 -145					
13C-PCB-77	71.0	10 -145					
13C-PCB-80	74.6	10 -145					
13C-PCB-81	69.1	10 -145					
13C-PCB-95	70.0	10 -145					
13C-PCB-97	68.5	10 -145					
13C-PCB-101	72.4	10 -145					
13C-PCB-104	71.2	10 -145					
13C-PCB-105	84.9	10 -145					
13C-PCB-114	87.2	10 -145					
13C-PCB-118	68.0	10 -145					
13C-PCB-123	66.7	10 -145					
13C-PCB-126	87.1	10 -145					
13C-PCB-127	88.9	10 -145					
13C-PCB-138	78.0	10 -145					
13C-PCB-141	78.5	10 -145					
13C-PCB-153	81.1	10 -145					
13C-PCB-155	69.1	10 -145					
13C-PCB-156	73.3	10 -145					
13C-PCB-157	72.9	10 -145					
13C-PCB-159	77.9	10 -145					
13C-PCB-167	76.4	10 -145					
13C-PCB-169	68.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-15	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.57 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.22	Date Analyzed :	07-Jan-15 14:03	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.11				PCB-44	360			
PCB-2	0.321			J	PCB-45	37.0			
PCB-3	0.177			J	PCB-46	7.66			
PCB-4/10	6.24				PCB-47	333			
PCB-5/8	35.9				PCB-48/75	53.3			
PCB-6	5.73				PCB-50	1.88			
PCB-7/9	2.26			J	PCB-51	14.1			
PCB-11	6.62				PCB-52/69	589			
PCB-12/13	ND	0.871			PCB-53	19.5			
PCB-14	ND	0.779			PCB-54	1.93			
PCB-15	3.04				PCB-55	11.6			
PCB-16/32	84.5				PCB-56/60	247			
PCB-17	39.8				PCB-57	4.49			
PCB-18	82.0				PCB-58	2.65			
PCB-19	7.86				PCB-61/70	580			
PCB-20/21/33	33.2				PCB-62	ND	0.477		
PCB-22	42.5				PCB-63	40.1			
PCB-23	ND	0.274			PCB-65	ND	0.463		
PCB-24/27	9.52				PCB-66/76	820			
PCB-25	15.6				PCB-67	15.6			
PCB-26	28.9				PCB-68	8.23			
PCB-28	386				PCB-73	1.16			
PCB-29	0.398			J	PCB-74	403			
PCB-30	ND	0.125			PCB-77	24.0			
PCB-31	125				PCB-78	ND	0.444		
PCB-34	1.89				PCB-79	39.0			
PCB-35	ND	0.315			PCB-80	ND	0.361		
PCB-36	ND	0.315			PCB-81	4.01			
PCB-37	5.54				PCB-82	119			
PCB-38	13.6				PCB-83	ND	0.396		
PCB-39	ND	0.305			PCB-84/92	495			
PCB-40	58.7				PCB-85/116	318			
PCB-41/64/71/72	330				PCB-86	ND	0.589		
PCB-42/59	156				PCB-87/117/125	412			
PCB-43/49	541				PCB-88/91	264			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-15	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.57 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.22	Date Analyzed :	07-Jan-15 14:03	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	4.31				PCB-136	147			
PCB-90/101	1840				PCB-137	77.9			
PCB-93	ND	0.530			PCB-138/163/164	2400			
PCB-94	3.25				PCB-139/149	1190			
PCB-95/98/102	746				PCB-140	12.1			
PCB-96	5.57				PCB-141	236			
PCB-97	453				PCB-144	52.7			
PCB-99	1320				PCB-145	ND	0.411		
PCB-100	17.1				PCB-146/165	445			
PCB-103	29.6				PCB-147	59.7			
PCB-104	0.496			J	PCB-148	4.98			
PCB-105	557				PCB-150	6.63			
PCB-106/118	1850				PCB-151	350			
PCB-107/109	174				PCB-152	ND		0.571	
PCB-108/112	68.1				PCB-153	2910			E
PCB-110	1190				PCB-154	69.8			
PCB-111/115	23.4				PCB-155	2.65			
PCB-113	ND	0.392			PCB-156	164			
PCB-114	32.6				PCB-157	45.3			
PCB-119	70.9				PCB-158/160	196			
PCB-120	10.7				PCB-159	ND	1.06		
PCB-121	ND	0.315			PCB-166	7.22			
PCB-122	5.03				PCB-167	93.8			
PCB-123	29.7				PCB-168	3.54			
PCB-124	53.8				PCB-169	ND	1.36		
PCB-126	6.07				PCB-170	403			
PCB-127	ND	0.699			PCB-171	122			
PCB-128/162	299				PCB-172	82.4			
PCB-129	44.8				PCB-173	5.03			
PCB-130	146				PCB-174	326			
PCB-131	ND	1.34			PCB-175	18.8			
PCB-132/161	322				PCB-176	40.3			
PCB-133/142	60.7				PCB-177	319			
PCB-134/143	66.6				PCB-178	153			
PCB-135	207				PCB-179	207			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-15	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.57 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.22	Date Analyzed :	07-Jan-15 14:03	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	965				Total octaCB	1120			
PCB-181	2.46				Total nonaCB	213			
PCB-182/187	1030				DecaCB	60.6			
PCB-183	297				Total PCB	31000			
PCB-184	2.97								
PCB-185	37.4								
PCB-186	ND	0.270							
PCB-188	4.43								
PCB-189	9.24								
PCB-190	89.6								
PCB-191	17.0								
PCB-192	ND	0.379							
PCB-193	73.5								
PCB-194	209								
PCB-195	76.3								
PCB-196/203	305								
PCB-197	11.4								
PCB-198	8.18								
PCB-199	335								
PCB-200	24.9								
PCB-201	39.3								
PCB-202	99.5								
PCB-204	ND	0.418							
PCB-205	10.3								
PCB-206	144								
PCB-207	18.9								
PCB-208	50.6								
PCB-209	60.6								
Total monoCB	1.61								
Total diCB	59.8								
Total triCB	876								
Total tetraCB	4710								
Total pentaCB	10100								
Total hexaCB	9630								
Total heptaCB	4200								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-09-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-15
Project:		Sample Size:	5.57 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.22	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 14:03
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	79.2	5 -145		13C-PCB-170	71.4	10 -145	
13C-PCB-3	79.7	5 -145		13C-PCB-180	77.0	10 -145	
13C-PCB-4	77.0	5 -145		13C-PCB-188	84.2	10 -145	
13C-PCB-11	82.3	5 -145		13C-PCB-189	71.8	10 -145	
13C-PCB-9	80.9	5 -145		13C-PCB-194	82.7	10 -145	
13C-PCB-19	68.9	5 -145		13C-PCB-202	74.6	10 -145	
13C-PCB-28	84.9	5 -145		13C-PCB-206	80.6	10 -145	
13C-PCB-32	71.3	5 -145		13C-PCB-208	76.6	10 -145	
13C-PCB-37	81.5	5 -145		13C-PCB-209	91.3	10 -145	
13C-PCB-47	82.7	5 -145		CRS 13C-PCB-79	92.5	10 -145	
13C-PCB-52	87.5	5 -145		13C-PCB-178	83.9	10 -145	
13C-PCB-54	84.8	5 -145					
13C-PCB-70	82.5	5 -145					
13C-PCB-77	83.3	10 -145					
13C-PCB-80	88.9	10 -145					
13C-PCB-81	86.0	10 -145					
13C-PCB-95	83.0	10 -145					
13C-PCB-97	86.0	10 -145					
13C-PCB-101	87.1	10 -145					
13C-PCB-104	84.1	10 -145					
13C-PCB-105	98.5	10 -145					
13C-PCB-114	96.6	10 -145					
13C-PCB-118	82.5	10 -145					
13C-PCB-123	82.3	10 -145					
13C-PCB-126	99.2	10 -145					
13C-PCB-127	100	10 -145					
13C-PCB-138	91.7	10 -145					
13C-PCB-141	93.1	10 -145					
13C-PCB-153	94.3	10 -145					
13C-PCB-155	85.7	10 -145					
13C-PCB-156	88.2	10 -145					
13C-PCB-157	86.0	10 -145					
13C-PCB-159	90.1	10 -145					
13C-PCB-167	89.8	10 -145					
13C-PCB-169	80.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-16	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.52 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.25	Date Analyzed :	07-Jan-15 20:45	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.87				PCB-44	875			
PCB-2	0.526			J	PCB-45	82.8			
PCB-3	0.281			J	PCB-46	17.3			
PCB-4/10	16.4				PCB-47	1090			
PCB-5/8	71.7				PCB-48/75	155			
PCB-6	10.4				PCB-50	4.68			
PCB-7/9	3.98				PCB-51	34.0			
PCB-11	13.0				PCB-52/69	1490			
PCB-12/13	ND	0.812			PCB-53	45.4			
PCB-14	ND	0.725			PCB-54	4.30			
PCB-15	6.08				PCB-55	29.9			
PCB-16/32	161				PCB-56/60	667			
PCB-17	61.6				PCB-57	12.4			
PCB-18	106				PCB-58	9.31			
PCB-19	12.9				PCB-61/70	1550			
PCB-20/21/33	73.5				PCB-62	ND	0.721		
PCB-22	88.0				PCB-63	125			
PCB-23	ND	0.142			PCB-65	ND	0.699		
PCB-24/27	14.7				PCB-66/76	2790			
PCB-25	42.1				PCB-67	41.1			
PCB-26	57.7				PCB-68	38.2			
PCB-28	987				PCB-73	3.44			
PCB-29	0.999				PCB-74	1280			
PCB-30	ND	0.0972			PCB-77	68.4			
PCB-31	242				PCB-78	ND	2.42		
PCB-34	5.44				PCB-79	116			
PCB-35	ND	0.539			PCB-80	ND	1.94		
PCB-36	0.488			J	PCB-81	6.07			
PCB-37	17.1				PCB-82	368			
PCB-38	31.6				PCB-83	1.64			
PCB-39	0.528			J	PCB-84/92	1440			
PCB-40	147				PCB-85/116	828			
PCB-41/64/71/72	876				PCB-86	ND	1.22		
PCB-42/59	448				PCB-87/117/125	1260			
PCB-43/49	1800				PCB-88/91	800			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-16	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.52 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.25	Date Analyzed :	07-Jan-15 20:45	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	6.74				PCB-136	486			
PCB-90/101	5810			E	PCB-137	289			
PCB-93	ND	0.966			PCB-138/163/164	8680			E
PCB-94	7.45				PCB-139/149	4080			
PCB-95/98/102	2060				PCB-140	52.9			
PCB-96	15.1				PCB-141	726			
PCB-97	1440				PCB-144	163			
PCB-99	4660			E	PCB-145	ND	0.806		
PCB-100	57.9				PCB-146/165	1640			
PCB-103	99.1				PCB-147	225			
PCB-104	ND		0.788		PCB-148	16.9			
PCB-105	1800				PCB-150	24.1			
PCB-106/118	6500			E	PCB-151	1220			
PCB-107/109	671				PCB-152	1.91			
PCB-108/112	215				PCB-153	10900			E
PCB-110	3520			E	PCB-154	259			
PCB-111/115	69.2				PCB-155	14.2			
PCB-113	18.8				PCB-156	607			
PCB-114	102				PCB-157	178			
PCB-119	264				PCB-158/160	648			
PCB-120	45.0				PCB-159	ND	0.812		
PCB-121	ND	0.574			PCB-166	29.1			
PCB-122	13.7				PCB-167	359			
PCB-123	122				PCB-168	17.4			
PCB-124	161				PCB-169	ND	1.41		
PCB-126	20.6				PCB-170	1460			
PCB-127	ND	2.72			PCB-171	439			
PCB-128/162	1140				PCB-172	287			
PCB-129	145				PCB-173	16.2			
PCB-130	549				PCB-174	1090			
PCB-131	ND	0.977			PCB-175	56.7			
PCB-132/161	1030				PCB-176	124			
PCB-133/142	212				PCB-177	1180			
PCB-134/143	218				PCB-178	552			
PCB-135	635				PCB-179	734			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-16	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	5.52 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.25	Date Analyzed :	07-Jan-15 20:45	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3250			E	Total octaCB	3610			
PCB-181	10.4				Total nonaCB	578			
PCB-182/187	3790				DecaCB	182			
PCB-183	989				Total PCB	102000			
PCB-184	15.3								
PCB-185	122								
PCB-186	ND	1.09							
PCB-188	18.6								
PCB-189	32.1								
PCB-190	326								
PCB-191	53.6								
PCB-192	ND	1.67							
PCB-193	274								
PCB-194	736								
PCB-195	257								
PCB-196/203	961								
PCB-197	35.5								
PCB-198	23.0								
PCB-199	1020								
PCB-200	69.2								
PCB-201	120								
PCB-202	351								
PCB-204	1.18								
PCB-205	38.1								
PCB-206	395								
PCB-207	47.8								
PCB-208	135								
PCB-209	182								
Total monoCB	3.68								
Total diCB	122								
Total triCB	1900								
Total tetraCB	13800								
Total pentaCB	32400								
Total hexaCB	34600								
Total heptaCB	14800								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-10-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-16
Project:		Sample Size:	5.52 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.25	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 20:45
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	55.8	5 -145		13C-PCB-170	45.1	10 -145	
13C-PCB-3	56.8	5 -145		13C-PCB-180	48.7	10 -145	
13C-PCB-4	48.6	5 -145		13C-PCB-188	56.1	10 -145	
13C-PCB-11	55.1	5 -145		13C-PCB-189	45.7	10 -145	
13C-PCB-9	53.7	5 -145		13C-PCB-194	52.8	10 -145	
13C-PCB-19	54.2	5 -145		13C-PCB-202	47.6	10 -145	
13C-PCB-28	46.8	5 -145		13C-PCB-206	50.2	10 -145	
13C-PCB-32	56.8	5 -145		13C-PCB-208	47.4	10 -145	
13C-PCB-37	52.4	5 -145		13C-PCB-209	56.1	10 -145	
13C-PCB-47	54.7	5 -145		CRS 13C-PCB-79	57.2	10 -145	
13C-PCB-52	56.6	5 -145		13C-PCB-178	55.1	10 -145	
13C-PCB-54	55.3	5 -145					
13C-PCB-70	56.5	5 -145					
13C-PCB-77	55.3	10 -145					
13C-PCB-80	57.1	10 -145					
13C-PCB-81	55.0	10 -145					
13C-PCB-95	56.2	10 -145					
13C-PCB-97	56.3	10 -145					
13C-PCB-101	58.4	10 -145					
13C-PCB-104	57.5	10 -145					
13C-PCB-105	64.8	10 -145					
13C-PCB-114	62.0	10 -145					
13C-PCB-118	56.0	10 -145					
13C-PCB-123	52.8	10 -145					
13C-PCB-126	63.8	10 -145					
13C-PCB-127	65.6	10 -145					
13C-PCB-138	61.5	10 -145					
13C-PCB-141	59.7	10 -145					
13C-PCB-153	62.2	10 -145					
13C-PCB-155	53.7	10 -145					
13C-PCB-156	56.9	10 -145					
13C-PCB-157	54.8	10 -145					
13C-PCB-159	59.6	10 -145					
13C-PCB-167	58.3	10 -145					
13C-PCB-169	47.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-LF-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-17	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.291	Date Analyzed :	07-Jan-15 21:50	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.387			J	PCB-44	142			
PCB-2	0.127			J	PCB-45	11.8			
PCB-3	ND		0.0611		PCB-46	4.25			
PCB-4/10	2.53				PCB-47	128			
PCB-5/8	15.5				PCB-48/75	25.8			
PCB-6	1.95				PCB-50	0.697			
PCB-7/9	0.872			J	PCB-51	9.71			
PCB-11	1.84				PCB-52/69	244			
PCB-12/13	ND	0.582			PCB-53	20.0			
PCB-14	ND	0.519			PCB-54	0.798			
PCB-15	ND	0.529			PCB-55	4.18			
PCB-16/32	24.8				PCB-56/60	61.1			
PCB-17	11.7				PCB-57	1.96			
PCB-18	32.3				PCB-58	1.75			
PCB-19	4.35				PCB-61/70	106			
PCB-20/21/33	13.8				PCB-62	ND	0.0902		
PCB-22	14.8				PCB-63	10.5			
PCB-23	ND		0.0299		PCB-65	ND	0.0874		
PCB-24/27	2.52				PCB-66/76	281			
PCB-25	3.71				PCB-67	1.57			
PCB-26	8.62				PCB-68	3.05			
PCB-28	90.7				PCB-73	0.850			
PCB-29	0.252			J	PCB-74	89.4			
PCB-30	ND	0.0482			PCB-77	5.96			
PCB-31	24.5				PCB-78	ND	0.386		
PCB-34	0.810				PCB-79	15.1			
PCB-35	ND	0.0975			PCB-80	ND	0.317		
PCB-36	ND	0.0975			PCB-81	0.918			
PCB-37	0.689				PCB-82	57.8			
PCB-38	3.66				PCB-83	0.271			J
PCB-39	ND	0.0946			PCB-84/92	265			
PCB-40	22.0				PCB-85/116	148			
PCB-41/64/71/72	131				PCB-86	0.721			
PCB-42/59	61.5				PCB-87/117/125	214			
PCB-43/49	239				PCB-88/91	126			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-LF-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-17
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.291	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed :	07-Jan-15 21:50
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.84				PCB-136	69.4			
PCB-90/101	1050				PCB-137	51.2			
PCB-93	ND	0.224			PCB-138/163/164	1330			
PCB-94	4.27				PCB-139/149	745			
PCB-95/98/102	384				PCB-140	4.73			
PCB-96	3.59				PCB-141	158			
PCB-97	246				PCB-144	34.0			
PCB-99	627				PCB-145	0.177			J
PCB-100	9.61				PCB-146/165	273			
PCB-103	17.5				PCB-147	39.7			
PCB-104	0.486				PCB-148	2.83			
PCB-105	281				PCB-150	4.79			
PCB-106/118	909				PCB-151	214			
PCB-107/109	105				PCB-152	0.805			
PCB-108/112	42.1				PCB-153	1690			E
PCB-110	606				PCB-154	40.6			
PCB-111/115	12.2				PCB-155	1.51			
PCB-113	2.78				PCB-156	76.8			
PCB-114	6.49				PCB-157	23.0			
PCB-119	37.1				PCB-158/160	110			
PCB-120	6.14				PCB-159	ND	0.991		
PCB-121	ND	0.133			PCB-166	3.80			
PCB-122	0.660				PCB-167	45.5			
PCB-123	6.97				PCB-168	2.20			
PCB-124	11.3				PCB-169	0.146			J
PCB-126	3.46				PCB-170	207			
PCB-127	ND	0.330			PCB-171	59.8			
PCB-128/162	170				PCB-172	47.3			
PCB-129	28.9				PCB-173	2.90			
PCB-130	88.7				PCB-174	181			
PCB-131	ND	0.151			PCB-175	11.5			
PCB-132/161	175				PCB-176	23.3			
PCB-133/142	38.0				PCB-177	177			
PCB-134/143	48.9				PCB-178	86.9			
PCB-135	95.8				PCB-179	78.0			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-LF-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-17
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.291	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 21:50
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	504				Total octaCB	434			
PCB-181	0.905				Total nonaCB	74.9			
PCB-182/187	551				DecaCB	28.3			
PCB-183	161				Total PCB	15400			
PCB-184	1.06								
PCB-185	22.9								
PCB-186	0.0645			J					
PCB-188	2.98								
PCB-189	6.83								
PCB-190	42.5								
PCB-191	7.98								
PCB-192	ND	0.161							
PCB-193	37.6								
PCB-194	84.3								
PCB-195	32.5								
PCB-196/203	107								
PCB-197	4.45								
PCB-198	3.39								
PCB-199	124								
PCB-200	9.44								
PCB-201	17.6								
PCB-202	46.8								
PCB-204	0.173			J					
PCB-205	4.57								
PCB-206	46.9								
PCB-207	7.71								
PCB-208	20.3								
PCB-209	28.3								
Total monoCB	0.513		0.574						
Total diCB	22.7								
Total triCB	237								
Total tetraCB	1620								
Total pentaCB	5180								
Total hexaCB	5570								
Total heptaCB	2210								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-LF-01-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-17
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.291	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 21:50
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	89.5	5 -145		13C-PCB-170	72.5	10 -145	
13C-PCB-3	95.5	5 -145		13C-PCB-180	80.5	10 -145	
13C-PCB-4	79.5	5 -145		13C-PCB-188	90.1	10 -145	
13C-PCB-11	86.1	5 -145		13C-PCB-189	68.2	10 -145	
13C-PCB-9	83.9	5 -145		13C-PCB-194	86.7	10 -145	
13C-PCB-19	51.0	5 -145		13C-PCB-202	79.2	10 -145	
13C-PCB-28	88.3	5 -145		13C-PCB-206	83.5	10 -145	
13C-PCB-32	88.7	5 -145		13C-PCB-208	85.1	10 -145	
13C-PCB-37	91.2	5 -145		13C-PCB-209	104	10 -145	
13C-PCB-47	88.1	5 -145		CRS 13C-PCB-79	92.6	10 -145	
13C-PCB-52	85.5	5 -145		13C-PCB-178	90.1	10 -145	
13C-PCB-54	85.0	5 -145					
13C-PCB-70	89.9	5 -145					
13C-PCB-77	87.4	10 -145					
13C-PCB-80	87.9	10 -145					
13C-PCB-81	87.9	10 -145					
13C-PCB-95	84.5	10 -145					
13C-PCB-97	89.4	10 -145					
13C-PCB-101	91.0	10 -145					
13C-PCB-104	90.0	10 -145					
13C-PCB-105	99.4	10 -145					
13C-PCB-114	98.9	10 -145					
13C-PCB-118	86.8	10 -145					
13C-PCB-123	85.7	10 -145					
13C-PCB-126	103	10 -145					
13C-PCB-127	103	10 -145					
13C-PCB-138	95.5	10 -145					
13C-PCB-141	95.8	10 -145					
13C-PCB-153	98.4	10 -145					
13C-PCB-155	87.0	10 -145					
13C-PCB-156	90.3	10 -145					
13C-PCB-157	89.0	10 -145					
13C-PCB-159	95.9	10 -145					
13C-PCB-167	92.9	10 -145					
13C-PCB-169	78.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-LF-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-18	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.106	Date Analyzed :	07-Jan-15 22:55	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.553				PCB-44	166			
PCB-2	0.139			J	PCB-45	15.0			
PCB-3	ND	0.102			PCB-46	4.82			
PCB-4/10	3.29				PCB-47	173			
PCB-5/8	23.0				PCB-48/75	29.5			
PCB-6	2.67				PCB-50	0.827			
PCB-7/9	1.09			J	PCB-51	13.9			
PCB-11	2.69				PCB-52/69	327			
PCB-12/13	ND	0.405			PCB-53	23.6			
PCB-14	ND	0.362			PCB-54	1.09			
PCB-15	0.454			J	PCB-55	4.84			
PCB-16/32	34.5				PCB-56/60	89.0			
PCB-17	17.5				PCB-57	2.60			
PCB-18	32.8				PCB-58	2.23			
PCB-19	3.53				PCB-61/70	225			
PCB-20/21/33	22.7				PCB-62	ND	0.263		
PCB-22	21.4				PCB-63	20.1			
PCB-23	ND	0.251			PCB-65	ND	0.254		
PCB-24/27	2.87				PCB-66/76	417			
PCB-25	4.69				PCB-67	2.67			
PCB-26	10.9				PCB-68	4.66			
PCB-28	123				PCB-73	0.974			
PCB-29	0.294			J	PCB-74	163			
PCB-30	ND	0.0715			PCB-77	8.89			
PCB-31	37.6				PCB-78	ND	0.255		
PCB-34	1.06				PCB-79	19.3			
PCB-35	ND	0.173			PCB-80	ND	0.201		
PCB-36	ND	0.173			PCB-81	1.36			
PCB-37	1.10				PCB-82	64.5			
PCB-38	5.08				PCB-83	0.303			J
PCB-39	ND	0.167			PCB-84/92	320			
PCB-40	25.5				PCB-85/116	180			
PCB-41/64/71/72	174				PCB-86	0.966			
PCB-42/59	69.2				PCB-87/117/125	259			
PCB-43/49	289				PCB-88/91	141			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-LF-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-18	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.106	Date Analyzed :	07-Jan-15 22:55	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	3.24				PCB-136	93.3			
PCB-90/101	1240				PCB-137	59.2			
PCB-93	ND	0.362			PCB-138/163/164	1530			
PCB-94	5.11				PCB-139/149	920			
PCB-95/98/102	490				PCB-140	7.56			
PCB-96	4.44				PCB-141	175			
PCB-97	271				PCB-144	39.8			
PCB-99	754				PCB-145	0.375			J
PCB-100	12.9				PCB-146/165	302			
PCB-103	20.1				PCB-147	45.0			
PCB-104	0.492				PCB-148	4.70			
PCB-105	359				PCB-150	5.39			
PCB-106/118	1150				PCB-151	271			
PCB-107/109	124				PCB-152	1.19			
PCB-108/112	46.2				PCB-153	1870			E
PCB-110	784				PCB-154	49.4			
PCB-111/115	14.6				PCB-155	1.46			
PCB-113	2.10				PCB-156	99.9			
PCB-114	13.9				PCB-157	27.9			
PCB-119	44.3				PCB-158/160	123			
PCB-120	7.93				PCB-159	ND	0.103		
PCB-121	ND	0.215			PCB-166	4.61			
PCB-122	1.45				PCB-167	55.9			
PCB-123	14.6				PCB-168	3.13			
PCB-124	22.2				PCB-169	0.262			J
PCB-126	4.29				PCB-170	235			
PCB-127	ND	0.376			PCB-171	68.6			
PCB-128/162	199				PCB-172	50.9			
PCB-129	27.7				PCB-173	2.82			
PCB-130	99.7				PCB-174	204			
PCB-131	ND	0.135			PCB-175	13.5			
PCB-132/161	208				PCB-176	26.7			
PCB-133/142	39.7				PCB-177	193			
PCB-134/143	50.2				PCB-178	97.2			
PCB-135	134				PCB-179	113			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-LF-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-18
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.106	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 22:55
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	563				Total octaCB	467			
PCB-181	1.42				Total nonaCB	69.0			
PCB-182/187	618				DecaCB	24.6			
PCB-183	187				Total PCB	18500			
PCB-184	1.31								
PCB-185	24.8								
PCB-186	ND	0.237							
PCB-188	3.07								
PCB-189	7.60								
PCB-190	49.1								
PCB-191	9.10								
PCB-192	ND	0.321							
PCB-193	41.6								
PCB-194	81.9								
PCB-195	33.1								
PCB-196/203	124								
PCB-197	5.29								
PCB-198	4.68								
PCB-199	134								
PCB-200	11.2								
PCB-201	18.5								
PCB-202	48.5								
PCB-204	0.195			J					
PCB-205	4.79								
PCB-206	42.3								
PCB-207	6.86								
PCB-208	19.8								
PCB-209	24.6								
Total monoCB	0.692								
Total diCB	33.2								
Total triCB	319								
Total tetraCB	2270								
Total pentaCB	6350								
Total hexaCB	6450								
Total heptaCB	2510								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-LF-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-18
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.106	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 22:55
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	81.1	5 -145		13C-PCB-170	73.1	10 -145	
13C-PCB-3	88.3	5 -145		13C-PCB-180	77.4	10 -145	
13C-PCB-4	73.5	5 -145		13C-PCB-188	82.1	10 -145	
13C-PCB-11	79.8	5 -145		13C-PCB-189	71.3	10 -145	
13C-PCB-9	78.6	5 -145		13C-PCB-194	79.9	10 -145	
13C-PCB-19	79.4	5 -145		13C-PCB-202	76.6	10 -145	
13C-PCB-28	80.5	5 -145		13C-PCB-206	66.8	10 -145	
13C-PCB-32	84.4	5 -145		13C-PCB-208	74.1	10 -145	
13C-PCB-37	80.1	5 -145		13C-PCB-209	76.5	10 -145	
13C-PCB-47	82.4	5 -145		CRS 13C-PCB-79	84.5	10 -145	
13C-PCB-52	81.6	5 -145		13C-PCB-178	83.3	10 -145	
13C-PCB-54	79.2	5 -145					
13C-PCB-70	82.5	5 -145					
13C-PCB-77	82.9	10 -145					
13C-PCB-80	83.8	10 -145					
13C-PCB-81	83.2	10 -145					
13C-PCB-95	80.2	10 -145					
13C-PCB-97	82.8	10 -145					
13C-PCB-101	83.0	10 -145					
13C-PCB-104	79.9	10 -145					
13C-PCB-105	87.5	10 -145					
13C-PCB-114	85.4	10 -145					
13C-PCB-118	80.1	10 -145					
13C-PCB-123	78.7	10 -145					
13C-PCB-126	88.7	10 -145					
13C-PCB-127	88.9	10 -145					
13C-PCB-138	88.0	10 -145					
13C-PCB-141	87.2	10 -145					
13C-PCB-153	87.9	10 -145					
13C-PCB-155	78.6	10 -145					
13C-PCB-156	83.2	10 -145					
13C-PCB-157	81.9	10 -145					
13C-PCB-159	87.0	10 -145					
13C-PCB-167	84.0	10 -145					
13C-PCB-169	78.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-19
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00976	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 23:59
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.582				PCB-44	26.7			
PCB-2	ND	0.191			PCB-45	16.5			
PCB-3	ND	0.185			PCB-46	0.463			J
PCB-4/10	4.39				PCB-47	353			
PCB-5/8	26.8				PCB-48/75	111			
PCB-6	4.99				PCB-50	2.04			
PCB-7/9	1.41			J	PCB-51	33.0			
PCB-11	0.956			J	PCB-52/69	937			
PCB-12/13	ND	0.617			PCB-53	47.6			
PCB-14	ND	0.550			PCB-54	2.27			
PCB-15	0.460			J	PCB-55	7.61			
PCB-16/32	88.2				PCB-56/60	157			
PCB-17	57.9				PCB-57	3.43			
PCB-18	86.8				PCB-58	1.58			
PCB-19	5.39				PCB-61/70	273			
PCB-20/21/33	49.6				PCB-62	ND	0.310		
PCB-22	69.3				PCB-63	33.1			
PCB-23	0.146			J	PCB-65	0.188			J
PCB-24/27	6.61				PCB-66/76	783			
PCB-25	7.68				PCB-67	4.35			
PCB-26	38.0				PCB-68	7.23			
PCB-28	301				PCB-73	ND	0.303		
PCB-29	0.719				PCB-74	314			
PCB-30	0.104			J	PCB-77	3.29			
PCB-31	109				PCB-78	ND	0.302		
PCB-34	2.08				PCB-79	39.0			
PCB-35	ND	0.248			PCB-80	ND	0.236		
PCB-36	ND	0.248			PCB-81	2.11			
PCB-37	0.464			J	PCB-82	14.1			
PCB-38	10.4				PCB-83	0.893			
PCB-39	ND	0.240			PCB-84/92	437			
PCB-40	1.92				PCB-85/116	398			
PCB-41/64/71/72	476				PCB-86	2.62			
PCB-42/59	76.4				PCB-87/117/125	526			
PCB-43/49	762				PCB-88/91	237			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-19
Project:		Sample Size:	10.3 g	QC Batch:	B4L0155
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00976	Date Received:	13-Nov-2014 12:35
				Date Extracted:	30-Dec-2014 8:02
				Date Analyzed :	07-Jan-15 23:59
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	2.05				PCB-136	91.6			
PCB-90/101	2720				PCB-137	113			
PCB-93	ND	0.339			PCB-138/163/164	3150			
PCB-94	1.73				PCB-139/149	1710			
PCB-95/98/102	681				PCB-140	11.5			
PCB-96	2.59				PCB-141	398			
PCB-97	359				PCB-144	107			
PCB-99	1590			E	PCB-145	0.276			J
PCB-100	21.4				PCB-146/165	592			
PCB-103	42.5				PCB-147	79.9			
PCB-104	0.538				PCB-148	8.03			
PCB-105	725				PCB-150	6.83			
PCB-106/118	2320				PCB-151	605			
PCB-107/109	222				PCB-152	1.37			
PCB-108/112	6.47				PCB-153	4080			E
PCB-110	1710			E	PCB-154	96.1			
PCB-111/115	32.7				PCB-155	2.31			
PCB-113	6.55				PCB-156	206			
PCB-114	24.8				PCB-157	51.2			
PCB-119	86.9				PCB-158/160	269			
PCB-120	12.2				PCB-159	ND	0.604		
PCB-121	ND	0.201			PCB-166	9.14			
PCB-122	1.49				PCB-167	101			
PCB-123	23.8				PCB-168	4.92			
PCB-124	26.6				PCB-169	0.448			J
PCB-126	5.88				PCB-170	484			
PCB-127	ND	0.774			PCB-171	151			
PCB-128/162	370				PCB-172	105			
PCB-129	31.8				PCB-173	4.45			
PCB-130	167				PCB-174	307			
PCB-131	ND	0.107			PCB-175	27.2			
PCB-132/161	193				PCB-176	40.4			
PCB-133/142	60.2				PCB-177	337			
PCB-134/143	22.6				PCB-178	194			
PCB-135	111				PCB-179	111			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-19
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00976	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 23:59
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1290				Total octaCB	950			
PCB-181	ND	0.206			Total nonaCB	148			
PCB-182/187	1310				DecaCB	56.0			
PCB-183	443				Total PCB	36500			
PCB-184	1.62								
PCB-185	52.3								
PCB-186	ND	0.133							
PCB-188	5.31								
PCB-189	15.8								
PCB-190	103								
PCB-191	20.9								
PCB-192	ND	0.184							
PCB-193	81.4								
PCB-194	185								
PCB-195	77.4								
PCB-196/203	253								
PCB-197	10.5								
PCB-198	8.22								
PCB-199	263								
PCB-200	17.6								
PCB-201	39.9								
PCB-202	86.6								
PCB-204	ND	0.367							
PCB-205	9.01								
PCB-206	93.2								
PCB-207	13.9								
PCB-208	41.2								
PCB-209	56.0								
Total monoCB	0.582								
Total diCB	39.0								
Total triCB	832								
Total tetraCB	4470								
Total pentaCB	12200								
Total hexaCB	12700								
Total heptaCB	5080								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-19
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00976	QC Batch:	B4L0155
				Date Analyzed :	07-Jan-15 23:59
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.5	5 -145		13C-PCB-170	55.5	10 -145	
13C-PCB-3	60.9	5 -145		13C-PCB-180	62.3	10 -145	
13C-PCB-4	52.8	5 -145		13C-PCB-188	65.1	10 -145	
13C-PCB-11	60.2	5 -145		13C-PCB-189	51.3	10 -145	
13C-PCB-9	57.8	5 -145		13C-PCB-194	63.6	10 -145	
13C-PCB-19	60.3	5 -145		13C-PCB-202	59.7	10 -145	
13C-PCB-28	62.8	5 -145		13C-PCB-206	61.2	10 -145	
13C-PCB-32	65.7	5 -145		13C-PCB-208	63.9	10 -145	
13C-PCB-37	61.4	5 -145		13C-PCB-209	74.4	10 -145	
13C-PCB-47	62.0	5 -145		CRS 13C-PCB-79	67.9	10 -145	
13C-PCB-52	62.5	5 -145		13C-PCB-178	66.4	10 -145	
13C-PCB-54	61.1	5 -145					
13C-PCB-70	64.0	5 -145					
13C-PCB-77	64.7	10 -145					
13C-PCB-80	65.2	10 -145					
13C-PCB-81	63.8	10 -145					
13C-PCB-95	62.9	10 -145					
13C-PCB-97	64.6	10 -145					
13C-PCB-101	66.7	10 -145					
13C-PCB-104	63.5	10 -145					
13C-PCB-105	67.6	10 -145					
13C-PCB-114	65.3	10 -145					
13C-PCB-118	65.4	10 -145					
13C-PCB-123	62.4	10 -145					
13C-PCB-126	69.3	10 -145					
13C-PCB-127	68.3	10 -145					
13C-PCB-138	70.0	10 -145					
13C-PCB-141	68.1	10 -145					
13C-PCB-153	70.8	10 -145					
13C-PCB-155	61.8	10 -145					
13C-PCB-156	63.9	10 -145					
13C-PCB-157	63.8	10 -145					
13C-PCB-159	67.8	10 -145					
13C-PCB-167	66.4	10 -145					
13C-PCB-169	59.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-20
Project:		Sample Size:	6.97 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.09	QC Batch:	B4L0155
				Date Analyzed :	08-Jan-15 01:04
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.48				PCB-44	877			
PCB-2	0.212			J	PCB-45	101			
PCB-3	0.256			J	PCB-46	29.4			
PCB-4/10	23.3				PCB-47	862			
PCB-5/8	70.6				PCB-48/75	151			
PCB-6	20.9				PCB-50	5.12			
PCB-7/9	5.31				PCB-51	57.9			
PCB-11	3.86				PCB-52/69	1810			
PCB-12/13	ND	0.830			PCB-53	107			
PCB-14	ND	0.741			PCB-54	10.2			
PCB-15	3.24				PCB-55	28.8			
PCB-16/32	239				PCB-56/60	484			
PCB-17	115				PCB-57	10.5			
PCB-18	269				PCB-58	8.53			
PCB-19	34.0				PCB-61/70	1300			
PCB-20/21/33	120				PCB-62	ND	0.426		
PCB-22	110				PCB-63	85.7			
PCB-23	0.329			J	PCB-65	ND	0.413		
PCB-24/27	41.4				PCB-66/76	1990			
PCB-25	57.0				PCB-67	30.1			
PCB-26	138				PCB-68	23.9			
PCB-28	998				PCB-73	4.50			
PCB-29	1.24				PCB-74	870			
PCB-30	0.191			J	PCB-77	49.7			
PCB-31	313				PCB-78	ND	0.427		
PCB-34	5.91				PCB-79	94.9			
PCB-35	ND	0.371			PCB-80	ND	0.325		
PCB-36	ND	0.371			PCB-81	6.97			
PCB-37	11.1				PCB-82	327			
PCB-38	24.3				PCB-83	1.44			
PCB-39	0.254			J	PCB-84/92	1590			
PCB-40	143				PCB-85/116	969			
PCB-41/64/71/72	908				PCB-86	4.12			
PCB-42/59	371				PCB-87/117/125	1340			
PCB-43/49	1630				PCB-88/91	790			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-20	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.97 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.09	Date Analyzed :	08-Jan-15 01:04	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	10.0				PCB-136	607			
PCB-90/101	6410			E	PCB-137	335			
PCB-93	ND	0.398			PCB-138/163/164	9410			E
PCB-94	11.8				PCB-139/149	5850			E
PCB-95/98/102	2540				PCB-140	41.8			
PCB-96	18.0				PCB-141	1180			
PCB-97	1330				PCB-144	255			
PCB-99	4080			E	PCB-145	0.693			J
PCB-100	56.8				PCB-146/165	1560			
PCB-103	102				PCB-147	226			
PCB-104	1.26				PCB-148	17.8			
PCB-105	1810				PCB-150	24.6			
PCB-106/118	6480			E	PCB-151	1580			
PCB-107/109	538				PCB-152	3.16			
PCB-108/112	191				PCB-153	11900			E
PCB-110	4380			E	PCB-154	274			
PCB-111/115	82.3				PCB-155	6.83			
PCB-113	8.04				PCB-156	713			
PCB-114	108				PCB-157	156			
PCB-119	230				PCB-158/160	850			
PCB-120	32.3				PCB-159	ND	0.726		
PCB-121	ND	0.237			PCB-166	28.2			
PCB-122	14.2				PCB-167	361			
PCB-123	98.1				PCB-168	13.3			
PCB-124	186				PCB-169	ND	0.898		
PCB-126	20.7				PCB-170	2020			
PCB-127	ND	0.407			PCB-171	601			
PCB-128/162	1030				PCB-172	365			
PCB-129	165				PCB-173	23.2			
PCB-130	505				PCB-174	1650			
PCB-131	ND	0.353			PCB-175	104			
PCB-132/161	1160				PCB-176	219			
PCB-133/142	201				PCB-177	1400			
PCB-134/143	228				PCB-178	666			
PCB-135	792				PCB-179	996			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-20	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	6.97 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.09	Date Analyzed :	08-Jan-15 01:04	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	5110			E	Total octaCB	4940			
PCB-181	7.09				Total nonaCB	788			
PCB-182/187	4790			E	DecaCB	253			
PCB-183	1740				Total PCB	115000			
PCB-184	5.28								
PCB-185	194								
PCB-186	ND	0.212							
PCB-188	18.4								
PCB-189	52.1								
PCB-190	451								
PCB-191	83.3								
PCB-192	ND	0.263							
PCB-193	302								
PCB-194	879								
PCB-195	359								
PCB-196/203	1490								
PCB-197	55.8								
PCB-198	38.5								
PCB-199	1390								
PCB-200	113								
PCB-201	189								
PCB-202	380								
PCB-204	1.17								
PCB-205	45.0								
PCB-206	514								
PCB-207	72.0								
PCB-208	202								
PCB-209	253								
Total monoCB	2.95								
Total diCB	127								
Total triCB	2480								
Total tetraCB	12000								
Total pentaCB	33800								
Total hexaCB	39500								
Total heptaCB	20800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: IB-FF-WC-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-20
Project:		Sample Size:	6.97 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.09	QC Batch:	B4L0155
				Date Analyzed :	08-Jan-15 01:04
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	40.2	5 -145		13C-PCB-170	40.5	10 -145	
13C-PCB-3	42.7	5 -145		13C-PCB-180	43.2	10 -145	
13C-PCB-4	35.4	5 -145		13C-PCB-188	41.8	10 -145	
13C-PCB-11	40.5	5 -145		13C-PCB-189	40.9	10 -145	
13C-PCB-9	39.2	5 -145		13C-PCB-194	40.8	10 -145	
13C-PCB-19	40.9	5 -145		13C-PCB-202	40.4	10 -145	
13C-PCB-28	34.9	5 -145		13C-PCB-206	40.7	10 -145	
13C-PCB-32	44.0	5 -145		13C-PCB-208	38.5	10 -145	
13C-PCB-37	39.9	5 -145		13C-PCB-209	42.7	10 -145	
13C-PCB-47	40.7	5 -145		CRS 13C-PCB-79	44.1	10 -145	
13C-PCB-52	41.9	5 -145		13C-PCB-178	43.9	10 -145	
13C-PCB-54	40.3	5 -145					
13C-PCB-70	41.8	5 -145					
13C-PCB-77	40.9	10 -145					
13C-PCB-80	42.9	10 -145					
13C-PCB-81	41.3	10 -145					
13C-PCB-95	41.4	10 -145					
13C-PCB-97	41.4	10 -145					
13C-PCB-101	42.1	10 -145					
13C-PCB-104	41.7	10 -145					
13C-PCB-105	42.5	10 -145					
13C-PCB-114	40.6	10 -145					
13C-PCB-118	41.8	10 -145					
13C-PCB-123	39.7	10 -145					
13C-PCB-126	43.0	10 -145					
13C-PCB-127	43.1	10 -145					
13C-PCB-138	44.4	10 -145					
13C-PCB-141	42.9	10 -145					
13C-PCB-153	44.9	10 -145					
13C-PCB-155	40.5	10 -145					
13C-PCB-156	43.5	10 -145					
13C-PCB-157	42.3	10 -145					
13C-PCB-159	43.9	10 -145					
13C-PCB-167	43.8	10 -145					
13C-PCB-169	40.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-21
Project:		Sample Size:	1.11 g	Date Received:	13-Nov-2014 12:35
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.38	QC Batch:	B4L0155
				Date Analyzed :	08-Jan-15 02:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.50			J, D	PCB-44	3340			D
PCB-2	ND	1.35		D	PCB-45	129			D
PCB-3	ND	1.31		D	PCB-46	59.4			D
PCB-4/10	11.2			J, D	PCB-47	2130			D
PCB-5/8	12.2			J, D	PCB-48/75	322			D
PCB-6	ND	6.12		D	PCB-50	3.69			J, D
PCB-7/9	ND	6.08		D	PCB-51	29.8			J, D
PCB-11	22.6			J, D	PCB-52/69	5760			D
PCB-12/13	ND	3.96		D	PCB-53	203			D
PCB-14	ND	5.57		D	PCB-54	1.12			J, D
PCB-15	ND	5.68		D	PCB-55	103			D
PCB-16/32	54.6			J, D	PCB-56/60	2350			D
PCB-17	92.4			D	PCB-57	68.9			D
PCB-18	349			D	PCB-58	41.2			J, D
PCB-19	15.7			J, D	PCB-61/70	11400			D
PCB-20/21/33	58.3			J, D	PCB-62	ND	1.74		D
PCB-22	213			D	PCB-63	572			D
PCB-23	1.60			J, D	PCB-65	ND		3.41	D
PCB-24/27	19.9			J, D	PCB-66/76	8040			D
PCB-25	64.1			D	PCB-67	217			D
PCB-26	160			D	PCB-68	294			D
PCB-28	1350			D	PCB-73	12.7			J, D
PCB-29	1.09			J, D	PCB-74	4030			D
PCB-30	ND	0.687		D	PCB-77	266			D
PCB-31	1020			D	PCB-78	ND	2.03		D
PCB-34	3.76			J, D	PCB-79	602			D
PCB-35	ND	3.06		D	PCB-80	15.8			J, D
PCB-36	ND	3.06		D	PCB-81	39.0			J, D
PCB-37	10.2			J, D	PCB-82	169			D
PCB-38	63.3			D	PCB-83	16.6			J, D
PCB-39	11.3			J, D	PCB-84/92	9020			D
PCB-40	188			D	PCB-85/116	12000			D
PCB-41/64/71/72	3010			D	PCB-86	30.0			J, D
PCB-42/59	569			D	PCB-87/117/125	8330			D
PCB-43/49	3020			D	PCB-88/91	2170			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-21	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	1.11 g	QC Batch:	B4L0155	Date Extracted:	30-Dec-2014 8:02		
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.38	Date Analyzed :	08-Jan-15 02:09	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	41.4			J, D	PCB-136	1550			D
PCB-90/101	35000			D	PCB-137	4510			D
PCB-93	ND	3.72		D	PCB-138/163/164	130000			D
PCB-94	76.3			D	PCB-139/149	25100			D
PCB-95/98/102	12100			D	PCB-140	666			D
PCB-96	18.2			J, D	PCB-141	11300			D
PCB-97	4900			D	PCB-144	1610			D
PCB-99	24200			D	PCB-145	3.16			J, D
PCB-100	123			D	PCB-146/165	24000			D
PCB-103	168			D	PCB-147	1740			D
PCB-104	ND	2.14		D	PCB-148	200			D
PCB-105	18500			D	PCB-150	48.7			D
PCB-106/118	51800			D	PCB-151	7850			D
PCB-107/109	6990			D	PCB-152	28.6			J, D
PCB-108/112	1140			D	PCB-153	159000			E, D
PCB-110	24000			D	PCB-154	1220			D
PCB-111/115	701			D	PCB-155	109			D
PCB-113	113			D	PCB-156	7900			D
PCB-114	1220			D	PCB-157	2280			D
PCB-119	1120			D	PCB-158/160	6860			D
PCB-120	535			D	PCB-159	ND	25.0		D
PCB-121	77.1			D	PCB-166	519			D
PCB-122	103			D	PCB-167	5020			D
PCB-123	1090			D	PCB-168	186			D
PCB-124	2180			D	PCB-169	91.4			D
PCB-126	354			D	PCB-170	24400			D
PCB-127	38.1			J, D	PCB-171	6700			D
PCB-128/162	18000			D	PCB-172	7120			D
PCB-129	497			D	PCB-173	7.04			J, D
PCB-130	7070			D	PCB-174	8340			D
PCB-131	15.4			J, D	PCB-175	1520			D
PCB-132/161	3970			D	PCB-176	557			D
PCB-133/142	3430			D	PCB-177	13800			D
PCB-134/143	1320			D	PCB-178	10100			D
PCB-135	7400			D	PCB-179	4960			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-21
Project:		Sample Size:	1.11 g	Date Received:	13-Nov-2014 12:35
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.38	QC Batch:	B4L0155
				Date Analyzed :	08-Jan-15 02:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	70000			D	Total octaCB	64500			
PCB-181	272			D	Total nonaCB	8040			
PCB-182/187	58300			D	DecaCB	994			
PCB-183	19900			D	Total PCB	1020000			
PCB-184	416			D					
PCB-185	1740			D					
PCB-186	4.33			J, D					
PCB-188	339			D					
PCB-189	1370			D					
PCB-190	6420			D					
PCB-191	847			D					
PCB-192	22.9			J, D					
PCB-193	4940			D					
PCB-194	13300			D					
PCB-195	4420			D					
PCB-196/203	19800			D					
PCB-197	1210			D					
PCB-198	732			D					
PCB-199	16700			D					
PCB-200	206			D					
PCB-201	2560			D					
PCB-202	4520			D					
PCB-204	129			D					
PCB-205	916			D					
PCB-206	5040			D					
PCB-207	1330			D					
PCB-208	1680			D					
PCB-209	994			D					
Total monoCB	1.50								
Total diCB	46.1								
Total triCB	3490								
Total tetraCB	46800								
Total pentaCB	218000								
Total hexaCB	434000								
Total heptaCB	242000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400901-21
Project:		Sample Size:	1.11 g	Date Received:	13-Nov-2014 12:35
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.38	QC Batch:	B4L0155
				Date Analyzed :	08-Jan-15 02:09
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	42.7	5 -145	D	13C-PCB-170	39.4	10 -145	D
13C-PCB-3	43.1	5 -145	D	13C-PCB-180	42.4	10 -145	D
13C-PCB-4	36.9	5 -145	D	13C-PCB-188	42.1	10 -145	D
13C-PCB-11	40.1	5 -145	D	13C-PCB-189	38.1	10 -145	D
13C-PCB-9	38.8	5 -145	D	13C-PCB-194	40.2	10 -145	D
13C-PCB-19	41.5	5 -145	D	13C-PCB-202	40.3	10 -145	D
13C-PCB-28	42.4	5 -145	D	13C-PCB-206	40.4	10 -145	D
13C-PCB-32	43.3	5 -145	D	13C-PCB-208	37.6	10 -145	D
13C-PCB-37	40.2	5 -145	D	13C-PCB-209	41.2	10 -145	D
13C-PCB-47	39.4	5 -145	D	CRS 13C-PCB-79	42.7	10 -145	D
13C-PCB-52	41.1	5 -145	D	13C-PCB-178	43.9	10 -145	D
13C-PCB-54	38.3	5 -145	D				
13C-PCB-70	41.5	5 -145	D				
13C-PCB-77	42.7	10 -145	D				
13C-PCB-80	41.6	10 -145	D				
13C-PCB-81	40.5	10 -145	D				
13C-PCB-95	38.2	10 -145	D				
13C-PCB-97	40.1	10 -145	D				
13C-PCB-101	40.8	10 -145	D				
13C-PCB-104	38.9	10 -145	D				
13C-PCB-105	41.8	10 -145	D				
13C-PCB-114	40.9	10 -145	D				
13C-PCB-118	39.5	10 -145	D				
13C-PCB-123	38.7	10 -145	D				
13C-PCB-126	42.3	10 -145	D				
13C-PCB-127	42.5	10 -145	D				
13C-PCB-138	43.7	10 -145	D				
13C-PCB-141	42.5	10 -145	D				
13C-PCB-153	43.3	10 -145	D				
13C-PCB-155	40.7	10 -145	D				
13C-PCB-156	42.6	10 -145	D				
13C-PCB-157	41.6	10 -145	D				
13C-PCB-159	43.8	10 -145	D				
13C-PCB-167	42.6	10 -145	D				
13C-PCB-169	39.0	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400901-01	OA-FF-CH-03-06-20141011	24.8	31-Dec-2014	B4L0153
1400901-02	OA-FF-CH-04-06-20141011	23.5	31-Dec-2014	B4L0153
1400901-03	OA-FF-CH-05-06-20141011	22.9	31-Dec-2014	B4L0153
1400901-04	OA-FF-CH-07-06-20141011	23.5	31-Dec-2014	B4L0153
1400901-05	OA-FF-CH-08-06-20141011	23.9	31-Dec-2014	B4L0153
1400901-06	OA-FF-CH-09-06-20141011	21.7	31-Dec-2014	B4L0153
1400901-07	OA-FF-CH-10-06-20141011	23.5	31-Dec-2014	B4L0153
1400901-08	OA-FF-WC-01-06-20141011	22.2	31-Dec-2014	B4L0153
1400901-09	OA-FF-WC-03-06-20141011	21.7	31-Dec-2014	B4L0153
1400901-10	OA-FF-WC-04-06-20141011	24.1	31-Dec-2014	B4L0153
1400901-11	OA-FF-WC-05-06-20141011	23.9	31-Dec-2014	B4L0153
1400901-12	OA-FF-WC-06-06-20141011	22.8	31-Dec-2014	B4L0153
1400901-13	OA-FF-WC-07-06-20141011	23.0	31-Dec-2014	B4L0153
1400901-14	OA-FF-WC-08-06-20141011	23.1	31-Dec-2014	B4L0153
1400901-15	OA-FF-WC-09-06-20141011	21.2	31-Dec-2014	B4L0153
1400901-16	OA-FF-WC-10-06-20141011	22.5	31-Dec-2014	B4L0153
1400901-17	OA-FF-LF-01-06-20141011	22.1	31-Dec-2014	B4L0153
1400901-18	OA-FF-LF-02-06-20141011	22.7	31-Dec-2014	B4L0153
1400901-19	IB-FF-CH-02-05-20141012	23.7	31-Dec-2014	B4L0153
1400901-20	IB-FF-WC-01-05-20141012	22.6	31-Dec-2014	B4L0153

Sample ID	Lab ID	Total Length (cm)	Standard Length (cm)	Mass (g)
OA-FF-WC-06-06-20141011	1400901-12	19.0	15.2	75.99
OA-FF-WC-07-06-20141011	1400901-13	19.3	16.3	86.62
OA-FF-WC-10-06-20141011	1400901-16	20.0	15.2	78.71
OA-FF-LF-01-06-20141011	1400901-17	27.2	23.3	101.39
OA-FF-LF-02-06-20141011	1400901-18	27.5	23.8	135.38

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments			
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Consensus - Is composite fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CN Stable Isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7														ANCHOR QEA 1400901 0.2°C 0.3°C, -0.3°C 0.9°C, -2.1°C
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x													Lab pic 028. Contains A1-A7. Orig. archive.
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Analyze this sample only for lipids and PCBs
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak	2	x													Scales already collected. Note gen. weight of fish.
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak	2	x													Scales already collected. Note size of fish the Otolith comes from
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak	1	x													Scales already collected.
32	FH-FF-WC-10-08-20141013	10/13/14	White Croak	1	x													Scales already collected. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak	4														Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x													4 plus possibly another 4 more archive fish
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
39	OA-FF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Chris Stransky Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: 12/04/14


Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Christina Benedict Vista Company: 12/04/14 11:06
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments																		
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	 1400901														
Track #	Field Sample ID	Collection Date/Time	Type of Fish																PCBs	DDTs	% Solids	% Lipids	Fillet Prep	Offal Prep	Whole Body	Prep Sample	Tweezer	Save fish head	Archive	See 'notes'	Comments/Preservation	
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut																1	x												Scales already collected.
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut																1	x												Scales already collected.
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut																1	x												Scales already collected.
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5											x		Photo 29. Label says "OA-XX-CA-A-06-20141011"															
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x						x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.															
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x						x	x					Scales already collected.															
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x						x	x					Scales already collected.															
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x						x	x					Scales already collected.															
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x						x	x					Scales already collected.															
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x						x	x					Scales already collected.															
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x				x	x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.															
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4											x																	
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x						x	x					Scales already collected.															
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x						x	x					Scales already collected.															
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x						x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.															
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4											x		Unknown actual number b/c of on-boat mis-ID															
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x						x			x			Scales already collected.															
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x					x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.															
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x						x			x			Scales already collected.															
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x						x			x			Scales already collected.															

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____


Received By: Bohdan Bmedit Vista Company: 12/04/14 10:4
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista						Vista Test Parameters (Sub's noted in Bold)										Comments					
Date: <u>11/20/2014</u>						No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample alquot to ship to Physals (CAN Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.		1400901
Track #	Field Sample ID	Collection Date/Time	Type of Fish																		
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4														x			
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x				x	x	x	x			x			x		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21														x		# of Archive unknown b/c of final sorting	
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x		x		x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x				x	x	x	x						x		Scales already collected. TAKE FISH HEAD from TL=30cm, SL=25cm fish.	
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x				x	x	x			x	x					Scales already collected from one fish in this rep.	
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x				x	x	x			x	x					Scales already collected from one fish in this rep.	
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x				x	x	x			x	x					Scales already collected from one fish in this rep.	
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x				x	x	x			x	x					TAKE SCALES. Note which fish taken from (size). No otolith.	
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x				x	x	x			x	x					Scales already collected from both fish in this Rep #5.	
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x				x	x	x			x	x					Scales already collected from one fish in this rep.	
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1																	
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x				x	x	x			x	x			x		TAKE SCALES. Note which fish taken from (size). No otolith.	

VVVV ** 20202222


Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By:	Company: <u>Anchor QEA</u>
<i>Via Email 12/03/14</i>	
Signature/Printed Name	Date/Time

Received By:	Company: <u>12/04/14 1196</u>
<i>Bettie Benedict Vista</i>	
Signature/Printed Name	Date/Time

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 ⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 1400901		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label jacket bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x			x	x			x	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6														
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	6														
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Received By: Brita Benedict Vista Company: 12/04/14 1105
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ∅ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time: <u>11/13/14 0849</u>	Initials: <u>VBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time: <u>12/10/14 1446</u>	Initials: <u>VBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>CI</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

Sample label ID: IB-FF-CH-02-05-20141612

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: PBB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 1446	Initials: PBB	Location: WF-2
			Shelf/Rack: C1
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -0.3 (uncorrected)	Time: 0903		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

Sample ID: OA-FF-WC-03-06-20141611
 ↓ 01-06 ↓
 ↓ 04-06 ↓
 ↓ 05-06 ↓
OA-FF-WC 06-06 ↓
 ↓ 07-06 ↓
 08-06 ↓
 09-06 ↓
OAFF-WC-10-06 20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBB	Location: WF 2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 1446	Initials: UBB	Location: WF-2
			Shelf/Rack: C1
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -0.3 (uncorrected)	Time: 0921		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>50f9</u> Trk # <u>7718 4040 1851</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID: OA-FF-LF-01-06-20141011
 ↓ 02-06 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 1446	Initials: UBSB	Location: WF2
			Shelf/Rack: C1
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: -0.9 (uncorrected)	Time: 0912		Thermometer ID: IR-1
Temp °C: -0.9 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>6 of 9</u> Trk # <u>7718 4040 2229</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	<u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container
		<input type="checkbox"/> None	
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:
 Sample ID: OA-FF-CH-05-06-20141011
 -07-06-
 -09-06-
 -04-06-
 -08-06-
 -10-06-
 -03-06

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>CBJB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1446</u>	Initials: <u>CBJB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	<u>NA</u>	COC	Sample Container
Shipping Container	Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
			<input checked="" type="radio"/> Return
			<input type="radio"/> Dispose

Comments:

Sample label ID:

LB-FF-WC-01-05-20141012

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400901
 Date Received: 13-Nov-14 12:35
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>MM 1/26/15</u>
Client Comments/Instructions <u>COC rec'd by email</u>	

January 09, 2015

Vista Project I.D.: 1400902

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400902

Case Narrative

Sample Condition on Receipt:

Twenty fish samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

As requested, scales were removed from the following samples:

IB-FF-WC-04-05-20141012
IB-FF-WC-05-05-20141012
IB-FF-LF-01-05-20141012
IB-FF-LF-02-05-20141012
IB-FF-LF-03-05-20141012
IB-FF-LF-04-05-20141012
IB-FF-LF-05-05-20141012
IA-FF-WC-01-07-20141011
IA-FF-WC-03-07-20141011

The physical measurements of each scaled fish are included in the report. Heads were removed from all fish, to be shipped to Southern California Marine Institute.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "IB-FF-WC-02-05-20141012" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400902-01	IB-FF-WC-02-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-02	IB-FF-WC-03-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-03	IB-FF-WC-04-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-04	IB-FF-WC-05-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-05	IB-FF-WC-06-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-06	IB-FF-WC-07-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-07	IB-FF-WC-08-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-08	IB-FF-WC-09-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-09	IB-FF-LF-01-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-10	IB-FF-LF-02-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-11	IB-FF-LF-03-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-12	IB-FF-LF-04-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-13	IB-FF-LF-05-05-20141012	12-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-14	IA-FF-WC-01-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-15	IA-FF-WC-02-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-16	IA-FF-WC-03-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-17	IA-FF-WC-04-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-18	IA-FF-WC-05-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-19	IA-FF-WC-06-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil
1400902-20	IA-FF-WC-07-07-20141011	11-Oct-14 00:00	13-Nov-14 12:35	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0084	Lab Sample: B4L0084-BLK1
Sample Size: 10.0 g	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 16:15 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.364			PCB-43/49	ND	0.220		
PCB-2	ND	0.397			PCB-44	ND	0.238		
PCB-3	ND	0.385			PCB-45	ND	0.253		
PCB-4/10	ND	1.32			PCB-46	ND	0.257		
PCB-5/8	ND	1.11			PCB-47	ND	0.197		
PCB-6	ND	1.08			PCB-48/75	ND	0.171		
PCB-7/9	ND	1.08			PCB-50	ND	0.224		
PCB-11	ND	1.05			PCB-51	ND	0.212		
PCB-12/13	ND	1.11			PCB-52/69	ND	0.191		
PCB-14	ND	0.992			PCB-53	ND	0.206		
PCB-15	ND	1.01			PCB-54	ND	0.181		
PCB-16/32	ND	0.150			PCB-55	ND	0.154		
PCB-17	ND	0.171			PCB-56/60	ND	0.157		
PCB-18	ND	0.179			PCB-57	ND	0.155		
PCB-19	ND	0.179			PCB-58	ND	0.157		
PCB-20/21/33	ND	0.124			PCB-61/70	ND	0.160		
PCB-22	ND	0.123			PCB-62	ND	0.173		
PCB-23	ND	0.124			PCB-63	ND	0.154		
PCB-24/27	ND	0.131			PCB-65	ND	0.168		
PCB-25	ND	0.122			PCB-66/76	ND	0.152		
PCB-26	ND	0.126			PCB-67	ND	0.161		
PCB-28	ND	0.118			PCB-68	ND	0.151		
PCB-29	ND	0.123			PCB-73	ND	0.178		
PCB-30	ND	0.127			PCB-74	ND	0.143		
PCB-31	ND	0.115			PCB-77	ND	0.151		
PCB-34	ND	0.129			PCB-78	ND	0.155		
PCB-35	ND	0.125			PCB-79	ND	0.152		
PCB-36	ND	0.125			PCB-80	ND	0.133		
PCB-37	ND	0.124			PCB-81	ND	0.139		
PCB-38	ND	0.127			PCB-82	ND	0.617		
PCB-39	ND	0.121			PCB-83	ND	0.393		
PCB-40	ND	0.273			PCB-84/92	ND	0.352		
PCB-41/64/71/72	ND	0.170			PCB-85/116	ND	0.458		
PCB-42/59	ND	0.184			PCB-86	ND	0.584		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0084	Lab Sample: B4L0084-BLK1
Sample Size: 10.0 g	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 16:15 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.383			PCB-133/142	ND	0.331		
PCB-88/91	ND	0.403			PCB-134/143	ND	0.338		
PCB-89	ND	0.364			PCB-135	ND	0.376		
PCB-90/101	ND	0.436			PCB-136	ND	0.270		
PCB-93	ND	0.364			PCB-137	ND	0.282		
PCB-94	ND	0.371			PCB-138/163/164	ND	0.266		
PCB-95/98/102	ND	0.339			PCB-139/149	ND	0.347		
PCB-96	ND	0.288			PCB-140	ND	0.373		
PCB-97	ND	0.478			PCB-141	ND	0.310		
PCB-99	ND	0.402			PCB-144	ND	0.357		
PCB-100	ND	0.313			PCB-145	ND	0.268		
PCB-103	ND	0.337			PCB-146/165	ND	0.271		
PCB-104	ND	0.249			PCB-147	ND	0.353		
PCB-105	ND	0.243			PCB-148	ND	0.395		
PCB-106/118	ND	0.362			PCB-150	ND	0.275		
PCB-107/109	ND	0.373			PCB-151	ND	0.362		
PCB-108/112	ND	0.463			PCB-152	ND	0.267		
PCB-110	ND	0.355			PCB-153	ND	0.266		
PCB-111/115	ND	0.341			PCB-154	ND	0.331		
PCB-113	ND	0.384			PCB-155	ND	0.258		
PCB-114	ND	0.233			PCB-156	ND	0.249		
PCB-119	ND	0.347			PCB-157	ND	0.264		
PCB-120	ND	0.335			PCB-158/160	ND	0.253		
PCB-121	ND	0.216			PCB-159	ND	0.249		
PCB-122	ND	0.256			PCB-166	ND	0.260		
PCB-123	ND	0.374			PCB-167	ND	0.245		
PCB-124	ND	0.344			PCB-168	ND	0.229		
PCB-126	ND	0.254			PCB-169	ND	0.268		
PCB-127	ND	0.246			PCB-170	ND	0.218		
PCB-128/162	ND	0.285			PCB-171	ND	0.218		
PCB-129	ND	0.353			PCB-172	ND	0.234		
PCB-130	ND	0.357			PCB-173	ND	0.247		
PCB-131	ND	0.343			PCB-174	ND	0.214		
PCB-132/161	ND	0.281			PCB-175	ND	0.217		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank					EPA Method 1668C				
Matrix: Tissue		QC Batch: B4L0084			Lab Sample: B4L0084-BLK1				
Sample Size: 10.0 g		Date Extracted: 15-Dec-2014 13:53			Date Analyzed: 24-Dec-14 16:15 Column: ZB-1 Analyst: DMS				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.155			Total triCB	ND	0.179		
PCB-177	ND	0.231			Total tetraCB	ND	0.273		
PCB-178	ND	0.225			Total pentaCB	ND	0.617		
PCB-179	ND	0.161			Total hexaCB	ND	0.395		
PCB-180	ND	0.200			Total heptaCB	ND	0.247		
PCB-181	ND	0.210			Total octaCB	ND	0.399		
PCB-182/187	ND	0.208			Total nonaCB	ND	0.183		
PCB-183	ND	0.195			DecaCB	ND	0.180		
PCB-184	ND	0.170			Total PCB	ND	1.32		
PCB-185	ND	0.213							
PCB-186	ND	0.165							
PCB-188	ND	0.150							
PCB-189	ND	0.159							
PCB-190	ND	0.162							
PCB-191	ND	0.171							
PCB-192	ND	0.188							
PCB-193	ND	0.173							
PCB-194	ND	0.142							
PCB-195	ND	0.148							
PCB-196/203	ND	0.376							
PCB-197	ND	0.271							
PCB-198	ND	0.391							
PCB-199	ND	0.399							
PCB-200	ND	0.286							
PCB-201	ND	0.264							
PCB-202	ND	0.279							
PCB-204	ND	0.293							
PCB-205	ND	0.126							
PCB-206	ND	0.183							
PCB-207	ND	0.112							
PCB-208	ND	0.107							
PCB-209	ND	0.180							
Total monoCB	ND	0.397							
Total diCB	ND	1.32							

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B4L0084	Lab Sample: B4L0084-BLK1
Sample Size: 10.0 g	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 16:15 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	63.4	5 - 145		13C-PCB-157	78.3	10 - 145	
13C-PCB-3	64.0	5 - 145		13C-PCB-159	77.3	10 - 145	
13C-PCB-4	56.3	5 - 145		13C-PCB-167	79.0	10 - 145	
13C-PCB-11	60.1	5 - 145		13C-PCB-169	76.4	10 - 145	
13C-PCB-9	56.6	5 - 145		13C-PCB-170	75.5	10 - 145	
13C-PCB-19	61.0	5 - 145		13C-PCB-180	76.0	10 - 145	
13C-PCB-28	62.4	5 - 145		13C-PCB-188	74.1	10 - 145	
13C-PCB-32	63.5	5 - 145		13C-PCB-189	74.0	10 - 145	
13C-PCB-37	70.2	5 - 145		13C-PCB-194	75.9	10 - 145	
13C-PCB-47	69.9	5 - 145		13C-PCB-202	68.5	10 - 145	
13C-PCB-52	68.8	5 - 145		13C-PCB-206	80.0	10 - 145	
13C-PCB-54	62.2	5 - 145		13C-PCB-208	74.6	10 - 145	
13C-PCB-70	73.7	5 - 145		13C-PCB-209	93.6	10 - 145	
13C-PCB-77	76.1	10 - 145		CRS 13C-PCB-79	82.2	10 - 145	
13C-PCB-80	75.5	10 - 145		13C-PCB-178	81.7	10 - 145	
13C-PCB-81	76.0	10 - 145					
13C-PCB-95	73.8	10 - 145					
13C-PCB-97	78.2	10 - 145					
13C-PCB-101	75.5	10 - 145					
13C-PCB-104	71.1	10 - 145					
13C-PCB-105	77.3	10 - 145					
13C-PCB-114	75.4	10 - 145					
13C-PCB-118	75.8	10 - 145					
13C-PCB-123	74.2	10 - 145					
13C-PCB-126	79.5	10 - 145					
13C-PCB-127	77.7	10 - 145					
13C-PCB-138	79.6	10 - 145					
13C-PCB-141	81.3	10 - 145					
13C-PCB-153	78.6	10 - 145					
13C-PCB-155	62.8	10 - 145					
13C-PCB-156	78.0	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0084
Date Extracted: 15-Dec-2014 13:53

Lab Sample: B4L0084-BS1
Date Analyzed: 24-Dec-14 14:06 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	97.9	100	97.9	60 - 135	IS 13C-PCB-1	69.3	15 - 145
PCB-3	97.4	100	97.4	60 - 135	IS 13C-PCB-3	74.3	15 - 145
PCB-4/10	443	400	111	60 - 135	IS 13C-PCB-4	65.3	15 - 145
PCB-15	222	200	111	60 - 135	IS 13C-PCB-9	68.4	15 - 145
PCB-19	112	100	112	60 - 135	IS 13C-PCB-11	73.3	15 - 145
PCB-37	103	100	103	60 - 135	IS 13C-PCB-19	70.6	15 - 145
PCB-54	106	100	106	60 - 135	IS 13C-PCB-28	73.6	15 - 145
PCB-77	109	100	109	60 - 135	IS 13C-PCB-32	76.7	15 - 145
PCB-81	108	100	108	60 - 135	IS 13C-PCB-37	84.0	15 - 145
PCB-104	117	100	117	60 - 135	IS 13C-PCB-47	79.0	15 - 145
PCB-105	118	100	118	60 - 135	IS 13C-PCB-52	76.4	15 - 145
PCB-106/118	238	200	119	60 - 135	IS 13C-PCB-54	73.3	15 - 145
PCB-114	110	100	110	60 - 135	IS 13C-PCB-70	86.2	15 - 145
PCB-123	122	100	122	60 - 135	IS 13C-PCB-77	90.4	40 - 145
PCB-126	120	100	120	60 - 135	IS 13C-PCB-80	86.1	40 - 145
PCB-155	121	100	121	60 - 135	IS 13C-PCB-81	88.0	40 - 145
PCB-156	113	100	113	60 - 135	IS 13C-PCB-95	83.0	40 - 145
PCB-157	118	100	118	60 - 135	IS 13C-PCB-97	89.2	40 - 145
PCB-167	116	100	116	60 - 135	IS 13C-PCB-101	87.3	40 - 145
PCB-169	118	100	118	60 - 135	IS 13C-PCB-104	78.2	40 - 145
PCB-188	115	100	115	60 - 135	IS 13C-PCB-105	86.7	40 - 145
PCB-189	123	100	123	60 - 135	IS 13C-PCB-114	84.6	40 - 145
PCB-202	115	100	115	60 - 135	IS 13C-PCB-118	89.5	40 - 145
PCB-205	118	100	118	60 - 135	IS 13C-PCB-123	87.4	40 - 145
PCB-206	117	100	117	60 - 135	IS 13C-PCB-126	88.8	40 - 145
PCB-208	118	100	118	60 - 135	IS 13C-PCB-127	86.6	40 - 145
PCB-209	120	100	120	60 - 135	IS 13C-PCB-138	89.7	40 - 145
					IS 13C-PCB-141	91.4	40 - 145
					IS 13C-PCB-153	88.4	40 - 145
					IS 13C-PCB-155	72.3	40 - 145
					IS 13C-PCB-156	89.8	40 - 145
					IS 13C-PCB-157	87.4	40 - 145
					IS 13C-PCB-159	88.5	40 - 145
					IS 13C-PCB-167	88.6	40 - 145
					IS 13C-PCB-169	86.7	40 - 145
					IS 13C-PCB-170	84.4	40 - 145
					IS 13C-PCB-180	85.4	40 - 145
					IS 13C-PCB-188	83.2	40 - 145
					IS 13C-PCB-189	82.6	40 - 145
					IS 13C-PCB-194	87.9	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B4L0084
Date Extracted: 15-Dec-2014 13:53

Lab Sample: B4L0084-BS1
Date Analyzed: 24-Dec-14 14:06 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	76.5	40 - 145
					IS 13C-PCB-206	93.1	40 - 145
					IS 13C-PCB-208	84.5	40 - 145
					IS 13C-PCB-209	107	40 - 145
					CRS 13C-PCB-79	92.8	40 - 145
					CRS 13C-PCB-178	88.7	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: IB-FF-WC-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-01	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.15	Date Analyzed:	24-Dec-14 17:19	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.70				PCB-44	1030			
PCB-2	ND	0.251			PCB-45	118			
PCB-3	0.169			J	PCB-46	36.3			
PCB-4/10	25.6				PCB-47	875			
PCB-5/8	63.7				PCB-48/75	199			
PCB-6	20.9				PCB-50	5.80			
PCB-7/9	5.01				PCB-51	64.3			
PCB-11	3.56				PCB-52/69	2020			
PCB-12/13	ND	1.25			PCB-53	112			
PCB-14	ND	1.12			PCB-54	10.4			
PCB-15	3.24				PCB-55	30.8			
PCB-16/32	278				PCB-56/60	524			
PCB-17	143				PCB-57	11.2			
PCB-18	324				PCB-58	8.17			
PCB-19	37.8				PCB-61/70	1250			
PCB-20/21/33	105				PCB-62	ND	0.664		
PCB-22	108				PCB-63	80.7			
PCB-23	0.231			J	PCB-65	ND	0.643		
PCB-24/27	48.1				PCB-66/76	2070			
PCB-25	47.1				PCB-67	31.1			
PCB-26	118				PCB-68	23.6			
PCB-28	959				PCB-73	4.25			
PCB-29	1.05				PCB-74	882			
PCB-30	0.223			J	PCB-77	49.6			
PCB-31	250				PCB-78	ND	0.610		
PCB-34	5.03				PCB-79	100			
PCB-35	ND	0.197			PCB-80	ND	0.499		
PCB-36	0.154			J	PCB-81	7.02			
PCB-37	5.95				PCB-82	405			
PCB-38	23.6				PCB-83	ND	0.208		
PCB-39	0.245			J	PCB-84/92	1770			
PCB-40	172				PCB-85/116	1020			
PCB-41/64/71/72	1030				PCB-86	ND	0.310		
PCB-42/59	432				PCB-87/117/125	1490			
PCB-43/49	1700				PCB-88/91	868			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-01
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.15	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed:	24-Dec-14 17:19
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.7				PCB-136	716			
PCB-90/101	6800			E	PCB-137	287			
PCB-93	ND	0.266			PCB-138/163/164	9020			E
PCB-94	15.3				PCB-139/149	6580			E
PCB-95/98/102	3010				PCB-140	47.7			
PCB-96	24.6				PCB-141	1160			
PCB-97	1560			E	PCB-144	349			
PCB-99	4070			E	PCB-145	1.20			
PCB-100	63.7				PCB-146/165	1420			
PCB-103	114				PCB-147	233			
PCB-104	ND		1.46		PCB-148	ND	0.402		
PCB-105	1830			E	PCB-150	27.2			
PCB-106/118	6410			E	PCB-151	1800			E
PCB-107/109	550				PCB-152	3.91			
PCB-108/112	224				PCB-153	11100			E
PCB-110	4940			E	PCB-154	285			
PCB-111/115	87.8				PCB-155	6.05			
PCB-113	11.9				PCB-156	685			
PCB-114	96.2				PCB-157	151			
PCB-119	229				PCB-158/160	772			
PCB-120	30.2				PCB-159	ND	1.82		
PCB-121	ND	0.158			PCB-166	26.4			
PCB-122	13.2				PCB-167	356			
PCB-123	108				PCB-168	14.5			
PCB-124	193				PCB-169	0.581			
PCB-126	21.9				PCB-170	1990			E
PCB-127	ND	1.91			PCB-171	573			
PCB-128/162	1050				PCB-172	343			
PCB-129	178				PCB-173	24.7			
PCB-130	515				PCB-174	1620			E
PCB-131	ND	2.31			PCB-175	102			
PCB-132/161	1240				PCB-176	231			
PCB-133/142	192				PCB-177	1360			
PCB-134/143	248				PCB-178	656			
PCB-135	899				PCB-179	1010			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-01	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.15	Date Analyzed :	24-Dec-14 17:19	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	5070			E	Total octaCB	5060			
PCB-181	ND	0.329			Total nonaCB	802			
PCB-182/187	4670			E	DecaCB	253			
PCB-183	1700			E	Total PCB	117000			
PCB-184	4.96								
PCB-185	184								
PCB-186	ND	0.292							
PCB-188	18.0								
PCB-189	55.0								
PCB-190	418								
PCB-191	77.6								
PCB-192	ND	0.293							
PCB-193	285								
PCB-194	821								
PCB-195	309								
PCB-196/203	1610								
PCB-197	58.2								
PCB-198	50.0								
PCB-199	1480			E					
PCB-200	120								
PCB-201	189								
PCB-202	383								
PCB-204	1.05								
PCB-205	38.8								
PCB-206	524								
PCB-207	72.8								
PCB-208	205								
PCB-209	253								
Total monoCB	2.87								
Total diCB	122								
Total triCB	2460								
Total tetraCB	12900								
Total pentaCB	36000								
Total hexaCB	39400								
Total heptaCB	20400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-01
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.15	QC Batch:	B4L0084
				Date Analyzed :	24-Dec-14 17:19
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	84.5	5 -145		13C-PCB-170	81.6	10 -145	
13C-PCB-3	84.1	5 -145		13C-PCB-180	83.8	10 -145	
13C-PCB-4	69.9	5 -145		13C-PCB-188	74.2	10 -145	
13C-PCB-11	75.7	5 -145		13C-PCB-189	75.6	10 -145	
13C-PCB-9	74.8	5 -145		13C-PCB-194	83.8	10 -145	
13C-PCB-19	76.5	5 -145		13C-PCB-202	67.8	10 -145	
13C-PCB-28	81.9	5 -145		13C-PCB-206	82.5	10 -145	
13C-PCB-32	78.8	5 -145		13C-PCB-208	75.5	10 -145	
13C-PCB-37	81.4	5 -145		13C-PCB-209	92.0	10 -145	
13C-PCB-47	74.7	5 -145		CRS 13C-PCB-79	86.0	10 -145	
13C-PCB-52	77.3	5 -145		13C-PCB-178	81.1	10 -145	
13C-PCB-54	72.6	5 -145					
13C-PCB-70	79.1	5 -145					
13C-PCB-77	80.4	10 -145					
13C-PCB-80	78.7	10 -145					
13C-PCB-81	78.9	10 -145					
13C-PCB-95	77.0	10 -145					
13C-PCB-97	79.9	10 -145					
13C-PCB-101	82.6	10 -145					
13C-PCB-104	73.8	10 -145					
13C-PCB-105	82.6	10 -145					
13C-PCB-114	79.0	10 -145					
13C-PCB-118	86.5	10 -145					
13C-PCB-123	79.1	10 -145					
13C-PCB-126	83.2	10 -145					
13C-PCB-127	81.9	10 -145					
13C-PCB-138	87.0	10 -145					
13C-PCB-141	82.6	10 -145					
13C-PCB-153	88.0	10 -145					
13C-PCB-155	65.6	10 -145					
13C-PCB-156	83.3	10 -145					
13C-PCB-157	82.3	10 -145					
13C-PCB-159	81.5	10 -145					
13C-PCB-167	81.3	10 -145					
13C-PCB-169	81.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-WC-02-05-20141012	QC Batch: B4L0084	Lab Sample: B4L0084-DUP1
Source LabNumber: 1400902-01	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 18:23 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.86				PCB-41/64/71/72	1130			
PCB-2	ND	0.284			PCB-42/59	472			
PCB-3	0.203			J	PCB-43/49	1960			
PCB-4/10	28.3				PCB-44	1120			
PCB-5/8	71.8				PCB-45	131			
PCB-6	23.6				PCB-46	38.8			
PCB-7/9	5.77				PCB-47	960			
PCB-11	3.88				PCB-48/75	218			
PCB-12/13	ND	1.01			PCB-50	6.52			
PCB-14	ND	0.901			PCB-51	73.2			
PCB-15	2.97				PCB-52/69	2230			
PCB-16/32	308				PCB-53	125			
PCB-17	160				PCB-54	11.6			
PCB-18	361				PCB-55	33.2			
PCB-19	41.0				PCB-56/60	574			
PCB-20/21/33	116				PCB-57	12.6			
PCB-22	116				PCB-58	8.83			
PCB-23	0.300			J	PCB-61/70	1360			
PCB-24/27	53.3				PCB-62	ND	0.588		
PCB-25	53.2				PCB-63	92.0			
PCB-26	134				PCB-65	ND		0.310	
PCB-28	1050				PCB-66/76	2270			
PCB-29	1.28				PCB-67	33.7			
PCB-30	ND		0.243		PCB-68	26.0			
PCB-31	282				PCB-73	4.82			
PCB-34	5.73				PCB-74	970			
PCB-35	ND	0.316			PCB-77	56.9			
PCB-36	ND	0.316			PCB-78	ND	0.570		
PCB-37	8.16				PCB-79	110			
PCB-38	25.5				PCB-80	ND	1.46		
PCB-39	ND	0.307			PCB-81	9.00			
PCB-40	191				PCB-82	480			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-WC-02-05-20141012	QC Batch: B4L0084	Lab Sample: B4L0084-DUP1
Source LabNumber: 1400902-01	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 18:23 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	ND	0.773			PCB-127	ND	1.30		
PCB-84/92	1980				PCB-128/162	1150			
PCB-85/116	1170				PCB-129	197			
PCB-86	ND	1.15			PCB-130	605			
PCB-87/117/125	1670				PCB-131	ND	3.54		
PCB-88/91	969				PCB-132/161	1380			
PCB-89	20.5				PCB-133/142	218			
PCB-90/101	7590			E	PCB-134/143	281			
PCB-93	ND	0.967			PCB-135	997			
PCB-94	16.4				PCB-136	795			
PCB-95/98/102	3310				PCB-137	320			
PCB-96	27.4				PCB-138/163/164	10000			E
PCB-97	1730			E	PCB-139/149	7120			E
PCB-99	4490			E	PCB-140	53.8			
PCB-100	69.9				PCB-141	1290			
PCB-103	126				PCB-144	384			
PCB-104	1.78				PCB-145	1.55			
PCB-105	2020			E	PCB-146/165	1620			
PCB-106/118	7050			E	PCB-147	255			
PCB-107/109	624				PCB-148	14.6			
PCB-108/112	249				PCB-150	31.5			
PCB-110	5440			E	PCB-151	1980			E
PCB-111/115	98.9				PCB-152	4.49			
PCB-113	5.71				PCB-153	12600			E
PCB-114	108				PCB-154	316			
PCB-119	261				PCB-155	6.45			
PCB-120	34.4				PCB-156	755			
PCB-121	ND	0.574			PCB-157	176			
PCB-122	14.7				PCB-158/160	855			
PCB-123	117				PCB-159	ND	2.65		
PCB-124	219				PCB-166	30.1			
PCB-126	25.2				PCB-167	405			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-WC-02-05-20141012	QC Batch: B4L0084	Lab Sample: B4L0084-DUP1
Source LabNumber: 1400902-01	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 18:23 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	16.7				PCB-201	215			
PCB-169	0.918				PCB-202	432			
PCB-170	2210			E	PCB-204	0.994			
PCB-171	647				PCB-205	45.7			
PCB-172	387				PCB-206	604			
PCB-173	26.7				PCB-207	80.5			
PCB-174	1870			E	PCB-208	231			
PCB-175	133				PCB-209	283			
PCB-176	264				Total monoCB	3.06			
PCB-177	1520			E	Total diCB	136			
PCB-178	738				Total triCB	2720			
PCB-179	1150				Total tetraCB	14200			
PCB-180	5690			E	Total pentaCB	39900			
PCB-181	ND	0.293			Total hexaCB	43900			
PCB-182/187	5270			E	Total heptaCB	23000			
PCB-183	1950			E	Total octaCB	5730			
PCB-184	5.82				Total nonaCB	915			
PCB-185	212				DecaCB	283			
PCB-186	ND	0.262			Total PCB	131000			
PCB-188	20.8								
PCB-189	61.8								
PCB-190	459								
PCB-191	88.8								
PCB-192	ND	0.262							
PCB-193	324								
PCB-194	960								
PCB-195	354								
PCB-196/203	1810								
PCB-197	62.3								
PCB-198	54.7								
PCB-199	1660			E					
PCB-200	135								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-WC-02-05-20141012	QC Batch: B4L0084	Lab Sample: B4L0084-DUP1
Source LabNumber: 1400902-01	Date Extracted: 15-Dec-2014 13:53	Date Analyzed: 24-Dec-14 18:23 Column: ZB-1 Analyst: DMS
Matrix: Tissue		
Sample Size: 10.2 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	80.4	5-145		13C-PCB-156	79.9	10-145	
13C-PCB-3	78.9	5-145		13C-PCB-157	76.5	10-145	
13C-PCB-4	68.1	5-145		13C-PCB-159	79.6	10-145	
13C-PCB-11	74.4	5-145		13C-PCB-167	77.8	10-145	
13C-PCB-9	72.1	5-145		13C-PCB-169	74.8	10-145	
13C-PCB-19	72.5	5-145		13C-PCB-170	77.6	10-145	
13C-PCB-28	80.5	5-145		13C-PCB-180	79.0	10-145	
13C-PCB-32	75.1	5-145		13C-PCB-188	70.5	10-145	
13C-PCB-37	79.2	5-145		13C-PCB-189	72.8	10-145	
13C-PCB-47	74.9	5-145		13C-PCB-194	80.5	10-145	
13C-PCB-52	74.9	5-145		13C-PCB-202	64.1	10-145	
13C-PCB-54	73.6	5-145		13C-PCB-206	79.8	10-145	
13C-PCB-70	78.9	5-145		13C-PCB-208	73.1	10-145	
13C-PCB-77	75.2	10-145		13C-PCB-209	90.8	10-145	
13C-PCB-80	77.5	10-145		CRS 13C-PCB-79	81.9	10-145	
13C-PCB-81	75.5	10-145		13C-PCB-178	77.3	10-145	
13C-PCB-95	75.3	10-145					
13C-PCB-97	76.9	10-145					
13C-PCB-101	79.5	10-145					
13C-PCB-104	72.4	10-145					
13C-PCB-105	79.6	10-145					
13C-PCB-114	75.6	10-145					
13C-PCB-118	81.2	10-145					
13C-PCB-123	73.1	10-145					
13C-PCB-126	79.3	10-145					
13C-PCB-127	79.4	10-145					
13C-PCB-138	83.3	10-145					
13C-PCB-141	78.5	10-145					
13C-PCB-153	83.5	10-145					
13C-PCB-155	64.0	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-WC-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-02
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.24	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	24-Dec-14 19:28
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	9.84				PCB-44	1660			E
PCB-2	0.405			J	PCB-45	190			
PCB-3	0.935				PCB-46	49.2			
PCB-4/10	68.3				PCB-47	1740			E
PCB-5/8	207				PCB-48/75	286			
PCB-6	47.6				PCB-50	10.1			
PCB-7/9	13.5				PCB-51	75.5			
PCB-11	8.69				PCB-52/69	2850			
PCB-12/13	1.13			J	PCB-53	121			
PCB-14	ND	1.01			PCB-54	8.48			
PCB-15	22.9				PCB-55	47.6			
PCB-16/32	449				PCB-56/60	1070			
PCB-17	240				PCB-57	20.4			
PCB-18	515				PCB-58	18.6			
PCB-19	57.2				PCB-61/70	2430			
PCB-20/21/33	242				PCB-62	ND	0.314		
PCB-22	211				PCB-63	181			
PCB-23	0.286			J	PCB-65	0.488			
PCB-24/27	58.6				PCB-66/76	3810			E
PCB-25	94.0				PCB-67	62.6			
PCB-26	164				PCB-68	47.7			
PCB-28	1720			E	PCB-73	6.69			
PCB-29	2.72				PCB-74	1720			E
PCB-30	0.545				PCB-77	101			
PCB-31	557				PCB-78	ND	0.297		
PCB-34	11.7				PCB-79	152			
PCB-35	0.243			J	PCB-80	ND	0.248		
PCB-36	0.398			J	PCB-81	10.0			
PCB-37	50.4				PCB-82	581			
PCB-38	38.4				PCB-83	ND	0.247		
PCB-39	0.836				PCB-84/92	2360			
PCB-40	279				PCB-85/116	1070			
PCB-41/64/71/72	1640				PCB-86	ND	0.367		
PCB-42/59	797				PCB-87/117/125	1860			
PCB-43/49	3160			E	PCB-88/91	1180			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-02	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.24	Date Analyzed :	24-Dec-14 19:28	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	22.2				PCB-136	737			
PCB-90/101	8540			E	PCB-137	306			
PCB-93	ND	0.332			PCB-138/163/164	10400			E
PCB-94	16.9				PCB-139/149	6560			E
PCB-95/98/102	3390				PCB-140	69.7			
PCB-96	31.2				PCB-141	940			
PCB-97	2220			E	PCB-144	250			
PCB-99	6290			E	PCB-145	0.837			
PCB-100	81.8				PCB-146/165	1780			
PCB-103	151				PCB-147	287			
PCB-104	1.90				PCB-148	18.8			
PCB-105	2340			E	PCB-150	31.5			
PCB-106/118	8150			E	PCB-151	1800			E
PCB-107/109	841				PCB-152	3.86			
PCB-108/112	323				PCB-153	12200			E
PCB-110	6010			E	PCB-154	329			
PCB-111/115	98.7				PCB-155	11.0			
PCB-113	ND	0.254			PCB-156	689			
PCB-114	119				PCB-157	195			
PCB-119	332				PCB-158/160	787			
PCB-120	51.1				PCB-159	ND	1.01		
PCB-121	ND	0.197			PCB-166	28.2			
PCB-122	21.8				PCB-167	406			
PCB-123	139				PCB-168	12.8			
PCB-124	213				PCB-169	0.855			
PCB-126	28.8				PCB-170	1760			E
PCB-127	ND	1.01			PCB-171	498			
PCB-128/162	1410				PCB-172	325			
PCB-129	191				PCB-173	20.4			
PCB-130	682				PCB-174	1320			
PCB-131	ND	1.26			PCB-175	90.6			
PCB-132/161	1260				PCB-176	173			
PCB-133/142	234				PCB-177	1300			
PCB-134/143	287				PCB-178	677			
PCB-135	1000				PCB-179	942			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-02 Date Received: 13-Nov-2014 12:35
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084 Date Extracted: 15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.24	Date Analyzed :	24-Dec-14 19:28 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3950			E	Total octaCB	4360			
PCB-181	9.74				Total nonaCB	639			
PCB-182/187	4710			E	DecaCB	177			
PCB-183	1370				Total PCB	140000			
PCB-184	10.6								
PCB-185	141								
PCB-186	ND	0.150							
PCB-188	19.6								
PCB-189	47.4								
PCB-190	374								
PCB-191	64.3								
PCB-192	ND	0.160							
PCB-193	284								
PCB-194	715								
PCB-195	259								
PCB-196/203	1290								
PCB-197	42.6								
PCB-198	35.6								
PCB-199	1360								
PCB-200	96.9								
PCB-201	146								
PCB-202	382								
PCB-204	1.22								
PCB-205	36.2								
PCB-206	424								
PCB-207	54.9								
PCB-208	160								
PCB-209	177								
Total monoCB	11.2								
Total diCB	369								
Total triCB	4410								
Total tetraCB	22500								
Total pentaCB	46500								
Total hexaCB	42900								
Total heptaCB	18100								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-02
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.24	QC Batch:	B4L0084
				Date Analyzed :	24-Dec-14 19:28
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	86.8	5 -145		13C-PCB-170	81.2	10 -145	
13C-PCB-3	85.2	5 -145		13C-PCB-180	85.0	10 -145	
13C-PCB-4	72.9	5 -145		13C-PCB-188	75.1	10 -145	
13C-PCB-11	79.6	5 -145		13C-PCB-189	77.2	10 -145	
13C-PCB-9	78.2	5 -145		13C-PCB-194	86.1	10 -145	
13C-PCB-19	77.8	5 -145		13C-PCB-202	69.4	10 -145	
13C-PCB-28	86.7	5 -145		13C-PCB-206	86.1	10 -145	
13C-PCB-32	80.6	5 -145		13C-PCB-208	78.3	10 -145	
13C-PCB-37	85.9	5 -145		13C-PCB-209	95.7	10 -145	
13C-PCB-47	80.9	5 -145		CRS 13C-PCB-79	96.7	10 -145	
13C-PCB-52	80.4	5 -145		13C-PCB-178	89.8	10 -145	
13C-PCB-54	76.8	5 -145					
13C-PCB-70	83.9	5 -145					
13C-PCB-77	86.0	10 -145					
13C-PCB-80	83.3	10 -145					
13C-PCB-81	85.9	10 -145					
13C-PCB-95	79.6	10 -145					
13C-PCB-97	83.2	10 -145					
13C-PCB-101	82.4	10 -145					
13C-PCB-104	73.9	10 -145					
13C-PCB-105	85.5	10 -145					
13C-PCB-114	82.4	10 -145					
13C-PCB-118	86.6	10 -145					
13C-PCB-123	79.1	10 -145					
13C-PCB-126	86.9	10 -145					
13C-PCB-127	86.0	10 -145					
13C-PCB-138	88.9	10 -145					
13C-PCB-141	84.2	10 -145					
13C-PCB-153	89.1	10 -145					
13C-PCB-155	66.3	10 -145					
13C-PCB-156	87.9	10 -145					
13C-PCB-157	83.9	10 -145					
13C-PCB-159	84.3	10 -145					
13C-PCB-167	84.9	10 -145					
13C-PCB-169	83.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-03
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.86	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	24-Dec-14 20:33
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.24				PCB-44	2290			E
PCB-2	0.324			J	PCB-45	246			
PCB-3	0.308			J	PCB-46	57.7			
PCB-4/10	38.1				PCB-47	2060			E
PCB-5/8	119				PCB-48/75	354			
PCB-6	32.8				PCB-50	13.0			
PCB-7/9	8.53				PCB-51	95.2			
PCB-11	7.16				PCB-52/69	4290			E
PCB-12/13	ND	1.15			PCB-53	172			
PCB-14	ND	1.03			PCB-54	17.7			
PCB-15	7.48				PCB-55	67.6			
PCB-16/32	443				PCB-56/60	1160			
PCB-17	216				PCB-57	24.7			
PCB-18	501				PCB-58	15.0			
PCB-19	59.1				PCB-61/70	2800			
PCB-20/21/33	214				PCB-62	ND	1.14		
PCB-22	226				PCB-63	214			
PCB-23	0.412			J	PCB-65	0.737			
PCB-24/27	73.4				PCB-66/76	4720			E
PCB-25	99.6				PCB-67	62.0			
PCB-26	237				PCB-68	52.6			
PCB-28	1980			E	PCB-73	6.88			
PCB-29	2.02				PCB-74	2240			E
PCB-30	0.479			J	PCB-77	100			
PCB-31	680				PCB-78	ND	1.07		
PCB-34	10.3				PCB-79	229			
PCB-35	ND	0.328			PCB-80	ND	0.890		
PCB-36	ND	0.329			PCB-81	14.6			
PCB-37	12.9				PCB-82	886			
PCB-38	50.0				PCB-83	ND	0.479		
PCB-39	0.627				PCB-84/92	4050			E
PCB-40	365				PCB-85/116	2240			
PCB-41/64/71/72	2220				PCB-86	ND	0.713		
PCB-42/59	970				PCB-87/117/125	3400			
PCB-43/49	3870			E	PCB-88/91	1990			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-03	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.86	Date Analyzed :	24-Dec-14 20:33	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.7				PCB-136	1560			E
PCB-90/101	16100			E	PCB-137	722			
PCB-93	ND	0.611			PCB-138/163/164	21200			E
PCB-94	25.4				PCB-139/149	14500			E
PCB-95/98/102	6500			E	PCB-140	105			
PCB-96	44.5				PCB-141	2750			E
PCB-97	3460			E	PCB-144	738			
PCB-99	9840			E	PCB-145	1.47			
PCB-100	137				PCB-146/165	3400			E
PCB-103	248				PCB-147	521			
PCB-104	2.69				PCB-148	43.9			
PCB-105	4260			E	PCB-150	59.0			
PCB-106/118	15200			E	PCB-151	4160			E
PCB-107/109	1270				PCB-152	7.09			
PCB-108/112	482				PCB-153	26000			E
PCB-110	10900			E	PCB-154	681			
PCB-111/115	205				PCB-155	15.6			
PCB-113	14.7				PCB-156	1600			E
PCB-114	240				PCB-157	371			
PCB-119	525				PCB-158/160	1830			
PCB-120	72.3				PCB-159	ND	3.20		
PCB-121	ND	0.363			PCB-166	63.1			
PCB-122	23.5				PCB-167	825			
PCB-123	218				PCB-168	32.0			
PCB-124	404				PCB-169	1.32			
PCB-126	45.7				PCB-170	4810			E
PCB-127	ND	1.93			PCB-171	1370			
PCB-128/162	2480				PCB-172	836			
PCB-129	378				PCB-173	56.4			
PCB-130	1160				PCB-174	3660			E
PCB-131	ND	4.11			PCB-175	258			
PCB-132/161	2750				PCB-176	521			
PCB-133/142	439				PCB-177	3200			E
PCB-134/143	526				PCB-178	1620			E
PCB-135	2020			E	PCB-179	2370			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-03	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.86	Date Analyzed :	24-Dec-14 20:33	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	12300			E	Total octaCB	12200			
PCB-181	ND	4.54			Total nonaCB	1790			
PCB-182/187	11700			E	DecaCB	518			
PCB-183	4190			E	Total PCB	271000			
PCB-184	11.9								
PCB-185	424								
PCB-186	ND	4.02							
PCB-188	44.8								
PCB-189	112								
PCB-190	989								
PCB-191	187								
PCB-192	ND	4.05							
PCB-193	685								
PCB-194	1890			E					
PCB-195	733								
PCB-196/203	3910			E					
PCB-197	132								
PCB-198	121								
PCB-199	3730			E					
PCB-200	274								
PCB-201	447								
PCB-202	905								
PCB-204	2.05								
PCB-205	83.2								
PCB-206	1180								
PCB-207	156								
PCB-208	456								
PCB-209	518								
Total monoCB	4.87								
Total diCB	213								
Total triCB	4810								
Total tetraCB	28700								
Total pentaCB	82800								
Total hexaCB	90900								
Total heptaCB	49300								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-WC-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-03
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.86	QC Batch:	B4L0084
				Date Analyzed :	24-Dec-14 20:33
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	67.1	5 -145		13C-PCB-170	70.0	10 -145	
13C-PCB-3	69.7	5 -145		13C-PCB-180	73.7	10 -145	
13C-PCB-4	58.9	5 -145		13C-PCB-188	62.9	10 -145	
13C-PCB-11	66.4	5 -145		13C-PCB-189	69.9	10 -145	
13C-PCB-9	64.0	5 -145		13C-PCB-194	73.2	10 -145	
13C-PCB-19	66.5	5 -145		13C-PCB-202	58.8	10 -145	
13C-PCB-28	63.3	5 -145		13C-PCB-206	73.3	10 -145	
13C-PCB-32	70.4	5 -145		13C-PCB-208	65.2	10 -145	
13C-PCB-37	68.4	5 -145		13C-PCB-209	80.3	10 -145	
13C-PCB-47	65.6	5 -145		CRS 13C-PCB-79	77.9	10 -145	
13C-PCB-52	69.5	5 -145		13C-PCB-178	72.6	10 -145	
13C-PCB-54	64.0	5 -145					
13C-PCB-70	70.0	5 -145					
13C-PCB-77	70.3	10 -145					
13C-PCB-80	69.8	10 -145					
13C-PCB-81	69.6	10 -145					
13C-PCB-95	66.0	10 -145					
13C-PCB-97	70.1	10 -145					
13C-PCB-101	70.2	10 -145					
13C-PCB-104	64.9	10 -145					
13C-PCB-105	70.8	10 -145					
13C-PCB-114	67.9	10 -145					
13C-PCB-118	73.3	10 -145					
13C-PCB-123	67.1	10 -145					
13C-PCB-126	72.0	10 -145					
13C-PCB-127	70.7	10 -145					
13C-PCB-138	76.3	10 -145					
13C-PCB-141	70.3	10 -145					
13C-PCB-153	76.3	10 -145					
13C-PCB-155	56.7	10 -145					
13C-PCB-156	74.6	10 -145					
13C-PCB-157	71.3	10 -145					
13C-PCB-159	69.9	10 -145					
13C-PCB-167	70.0	10 -145					
13C-PCB-169	68.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-04	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.57	Date Analyzed:	24-Dec-14 21:37	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.31				PCB-44	1560			E
PCB-2	0.206			J	PCB-45	162			
PCB-3	0.207			J	PCB-46	50.7			
PCB-4/10	35.9				PCB-47	1650			E
PCB-5/8	85.8				PCB-48/75	304			
PCB-6	30.9				PCB-50	9.18			
PCB-7/9	7.03				PCB-51	106			
PCB-11	4.45				PCB-52/69	3290			E
PCB-12/13	ND	1.42			PCB-53	206			
PCB-14	ND	1.26			PCB-54	18.4			
PCB-15	2.78				PCB-55	47.1			
PCB-16/32	416				PCB-56/60	813			
PCB-17	213				PCB-57	19.6			
PCB-18	487				PCB-58	15.5			
PCB-19	62.8				PCB-61/70	1910			
PCB-20/21/33	162				PCB-62	ND	1.36		
PCB-22	149				PCB-63	173			
PCB-23	0.392			J	PCB-65	0.585			
PCB-24/27	85.0				PCB-66/76	4050			E
PCB-25	72.5				PCB-67	44.6			
PCB-26	198				PCB-68	46.9			
PCB-28	1570			E	PCB-73	7.99			
PCB-29	1.59				PCB-74	1830			E
PCB-30	0.308			J	PCB-77	70.2			
PCB-31	369				PCB-78	ND	1.32		
PCB-34	8.43				PCB-79	194			
PCB-35	ND	0.353			PCB-80	ND	1.03		
PCB-36	ND	0.354			PCB-81	12.2			
PCB-37	7.77				PCB-82	731			
PCB-38	39.9				PCB-83	ND	0.323		
PCB-39	ND	0.343			PCB-84/92	3100			E
PCB-40	252				PCB-85/116	1450			
PCB-41/64/71/72	1730				PCB-86	ND	0.481		
PCB-42/59	694				PCB-87/117/125	2850			
PCB-43/49	3040			E	PCB-88/91	1600			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-04	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.57	Date Analyzed:	24-Dec-14 21:37	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.2				PCB-136	1240			
PCB-90/101	13200			E	PCB-137	615			
PCB-93	ND	0.385			PCB-138/163/164	17600			E
PCB-94	23.3				PCB-139/149	11900			E
PCB-95/98/102	4860			E	PCB-140	90.6			
PCB-96	39.5				PCB-141	2170			E
PCB-97	2850			E	PCB-144	591			
PCB-99	8440			E	PCB-145	1.44			
PCB-100	129				PCB-146/165	2930			E
PCB-103	221				PCB-147	437			
PCB-104	2.77				PCB-148	25.4			
PCB-105	3460			E	PCB-150	49.5			
PCB-106/118	13100			E	PCB-151	3440			E
PCB-107/109	1150				PCB-152	6.82			
PCB-108/112	390				PCB-153	22600			E
PCB-110	9120			E	PCB-154	567			
PCB-111/115	146				PCB-155	13.6			
PCB-113	ND	0.289			PCB-156	1320			
PCB-114	192				PCB-157	312			
PCB-119	466				PCB-158/160	1460			
PCB-120	64.5				PCB-159	ND	4.31		
PCB-121	ND	0.229			PCB-166	48.5			
PCB-122	18.9				PCB-167	684			
PCB-123	190				PCB-168	23.4			
PCB-124	323				PCB-169	ND	4.34		
PCB-126	39.8				PCB-170	3560			E
PCB-127	ND	2.90			PCB-171	1050			
PCB-128/162	2040				PCB-172	657			
PCB-129	301				PCB-173	41.7			
PCB-130	950				PCB-174	2860			E
PCB-131	ND	5.70			PCB-175	198			
PCB-132/161	1990				PCB-176	394			
PCB-133/142	370				PCB-177	2470			E
PCB-134/143	426				PCB-178	1280			
PCB-135	1660			E	PCB-179	1870			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-04	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.57	Date Analyzed :	24-Dec-14 21:37	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	9340			E	Total octaCB	9150			
PCB-181	ND	0.563			Total nonaCB	1460			
PCB-182/187	9230			E	DecaCB	451			
PCB-183	3180			E	Total PCB	219000			
PCB-184	11.4								
PCB-185	318								
PCB-186	ND	0.483							
PCB-188	32.6								
PCB-189	86.2								
PCB-190	738								
PCB-191	135								
PCB-192	ND	0.502							
PCB-193	537								
PCB-194	1490			E					
PCB-195	517								
PCB-196/203	2840								
PCB-197	98.9								
PCB-198	103								
PCB-199	2770			E					
PCB-200	205								
PCB-201	335								
PCB-202	723								
PCB-204	1.91								
PCB-205	67.4								
PCB-206	962								
PCB-207	123								
PCB-208	378								
PCB-209	451								
Total monoCB	4.73								
Total diCB	167								
Total triCB	3850								
Total tetraCB	22300								
Total pentaCB	68200								
Total hexaCB	75900								
Total heptaCB	38000								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-04
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.57	QC Batch:	B4L0084
				Date Analyzed :	24-Dec-14 21:37
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.9	5 -145		13C-PCB-170	72.7	10 -145	
13C-PCB-3	71.5	5 -145		13C-PCB-180	74.5	10 -145	
13C-PCB-4	58.8	5 -145		13C-PCB-188	64.2	10 -145	
13C-PCB-11	68.8	5 -145		13C-PCB-189	68.1	10 -145	
13C-PCB-9	64.6	5 -145		13C-PCB-194	78.1	10 -145	
13C-PCB-19	67.8	5 -145		13C-PCB-202	60.1	10 -145	
13C-PCB-28	64.2	5 -145		13C-PCB-206	76.7	10 -145	
13C-PCB-32	72.0	5 -145		13C-PCB-208	68.3	10 -145	
13C-PCB-37	70.7	5 -145		13C-PCB-209	86.4	10 -145	
13C-PCB-47	67.5	5 -145		CRS 13C-PCB-79	75.6	10 -145	
13C-PCB-52	70.4	5 -145		13C-PCB-178	69.2	10 -145	
13C-PCB-54	65.5	5 -145					
13C-PCB-70	71.6	5 -145					
13C-PCB-77	71.5	10 -145					
13C-PCB-80	73.2	10 -145					
13C-PCB-81	71.2	10 -145					
13C-PCB-95	71.1	10 -145					
13C-PCB-97	72.7	10 -145					
13C-PCB-101	76.5	10 -145					
13C-PCB-104	66.8	10 -145					
13C-PCB-105	72.8	10 -145					
13C-PCB-114	67.8	10 -145					
13C-PCB-118	78.2	10 -145					
13C-PCB-123	71.0	10 -145					
13C-PCB-126	73.7	10 -145					
13C-PCB-127	71.9	10 -145					
13C-PCB-138	77.2	10 -145					
13C-PCB-141	72.0	10 -145					
13C-PCB-153	76.7	10 -145					
13C-PCB-155	60.3	10 -145					
13C-PCB-156	74.3	10 -145					
13C-PCB-157	72.5	10 -145					
13C-PCB-159	72.6	10 -145					
13C-PCB-167	72.8	10 -145					
13C-PCB-169	70.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-05
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.895	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 07:30
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.44				PCB-44	1130			
PCB-2	ND		0.202		PCB-45	103			
PCB-3	0.321			J	PCB-46	26.5			
PCB-4/10	20.8				PCB-47	1090			
PCB-5/8	70.8				PCB-48/75	163			
PCB-6	17.3				PCB-50	5.69			
PCB-7/9	5.01				PCB-51	56.0			
PCB-11	3.81				PCB-52/69	2320			
PCB-12/13	ND	0.531			PCB-53	98.0			
PCB-14	ND	0.474			PCB-54	8.05			
PCB-15	3.56				PCB-55	51.0			
PCB-16/32	251				PCB-56/60	549			
PCB-17	127				PCB-57	15.8			
PCB-18	275				PCB-58	10.3			
PCB-19	29.3				PCB-61/70	1490			
PCB-20/21/33	101				PCB-62	ND	0.323		
PCB-22	86.8				PCB-63	111			
PCB-23	ND	0.148			PCB-65	0.605			
PCB-24/27	38.3				PCB-66/76	2790			
PCB-25	42.9				PCB-67	28.8			
PCB-26	109				PCB-68	31.8			
PCB-28	930				PCB-73	5.40			
PCB-29	0.961				PCB-74	1100			
PCB-30	0.222			J	PCB-77	49.9			
PCB-31	248				PCB-78	ND	0.286		
PCB-34	4.77				PCB-79	200			
PCB-35	ND	0.220			PCB-80	ND	0.242		
PCB-36	ND	0.176			PCB-81	37.8			
PCB-37	7.98				PCB-82	593			
PCB-38	50.1				PCB-83	2.30			
PCB-39	0.249			J	PCB-84/92	2620			
PCB-40	161				PCB-85/116	1460			
PCB-41/64/71/72	1110				PCB-86	6.01			
PCB-42/59	443				PCB-87/117/125	2490			
PCB-43/49	2060				PCB-88/91	1350			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-05	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.895	Date Analyzed:	25-Dec-14 07:30	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.5				PCB-136	1180			
PCB-90/101	11800			E	PCB-137	461			
PCB-93	ND	0.286			PCB-138/163/164	15400			E
PCB-94	14.5				PCB-139/149	11100			E
PCB-95/98/102	4250				PCB-140	78.6			
PCB-96	24.5				PCB-141	2150			E
PCB-97	2300			E	PCB-144	556			
PCB-99	7000			E	PCB-145	1.21			
PCB-100	105				PCB-146/165	2580			
PCB-103	184				PCB-147	404			
PCB-104	1.90				PCB-148	29.3			
PCB-105	2990			E	PCB-150	45.5			
PCB-106/118	11500			E	PCB-151	3500			E
PCB-107/109	968				PCB-152	4.00			
PCB-108/112	316				PCB-153	20800			E
PCB-110	7350			E	PCB-154	536			
PCB-111/115	149				PCB-155	12.1			
PCB-113	12.0				PCB-156	1100			
PCB-114	182				PCB-157	254			
PCB-119	387				PCB-158/160	1360			
PCB-120	56.9				PCB-159	ND	3.84		
PCB-121	ND	0.170			PCB-166	47.8			
PCB-122	11.0				PCB-167	573			
PCB-123	151				PCB-168	19.1			
PCB-124	293				PCB-169	ND	0.387		
PCB-126	33.4				PCB-170	3430			E
PCB-127	ND	1.20			PCB-171	1040			
PCB-128/162	1650				PCB-172	623			
PCB-129	248				PCB-173	39.8			
PCB-130	919				PCB-174	2720			E
PCB-131	ND	2.96			PCB-175	188			
PCB-132/161	1830				PCB-176	390			
PCB-133/142	336				PCB-177	2430			E
PCB-134/143	396				PCB-178	1210			
PCB-135	1520			E	PCB-179	1870			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-05	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.895	Date Analyzed :	25-Dec-14 07:30	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8910			E	Total octaCB	9050			
PCB-181	16.1				Total nonaCB	1250			
PCB-182/187	8890			E	DecaCB	358			
PCB-183	3090			E	Total PCB	193000			
PCB-184	9.61								
PCB-185	335								
PCB-186	ND	0.382							
PCB-188	33.4								
PCB-189	67.3								
PCB-190	720								
PCB-191	135								
PCB-192	ND	0.390							
PCB-193	489								
PCB-194	1430								
PCB-195	545								
PCB-196/203	2830								
PCB-197	97.7								
PCB-198	78.8								
PCB-199	2770			E					
PCB-200	198								
PCB-201	345								
PCB-202	694								
PCB-204	1.87								
PCB-205	66.1								
PCB-206	811								
PCB-207	108								
PCB-208	329								
PCB-209	358								
Total monoCB	2.76		2.96						
Total diCB	121								
Total triCB	2300								
Total tetraCB	15200								
Total pentaCB	58600								
Total hexaCB	69100								
Total heptaCB	36600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-06-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-05
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.895	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 07:30
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.4	5 -145		13C-PCB-170	73.9	10 -145	
13C-PCB-3	70.7	5 -145		13C-PCB-180	76.0	10 -145	
13C-PCB-4	59.5	5 -145		13C-PCB-188	67.1	10 -145	
13C-PCB-11	66.4	5 -145		13C-PCB-189	72.5	10 -145	
13C-PCB-9	63.9	5 -145		13C-PCB-194	71.6	10 -145	
13C-PCB-19	65.5	5 -145		13C-PCB-202	61.6	10 -145	
13C-PCB-28	75.9	5 -145		13C-PCB-206	74.8	10 -145	
13C-PCB-32	66.6	5 -145		13C-PCB-208	66.5	10 -145	
13C-PCB-37	62.3	5 -145		13C-PCB-209	85.0	10 -145	
13C-PCB-47	66.1	5 -145		CRS 13C-PCB-79	82.5	10 -145	
13C-PCB-52	68.9	5 -145		13C-PCB-178	76.6	10 -145	
13C-PCB-54	70.2	5 -145					
13C-PCB-70	71.3	5 -145					
13C-PCB-77	70.6	10 -145					
13C-PCB-80	71.9	10 -145					
13C-PCB-81	75.3	10 -145					
13C-PCB-95	65.4	10 -145					
13C-PCB-97	69.1	10 -145					
13C-PCB-101	71.1	10 -145					
13C-PCB-104	64.5	10 -145					
13C-PCB-105	65.8	10 -145					
13C-PCB-114	64.7	10 -145					
13C-PCB-118	71.7	10 -145					
13C-PCB-123	64.0	10 -145					
13C-PCB-126	64.1	10 -145					
13C-PCB-127	65.6	10 -145					
13C-PCB-138	76.2	10 -145					
13C-PCB-141	70.8	10 -145					
13C-PCB-153	77.5	10 -145					
13C-PCB-155	60.0	10 -145					
13C-PCB-156	74.2	10 -145					
13C-PCB-157	70.2	10 -145					
13C-PCB-159	71.6	10 -145					
13C-PCB-167	75.3	10 -145					
13C-PCB-169	68.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-06	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.33	Date Analyzed :	25-Dec-14 08:35	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	7.23				PCB-44	855			
PCB-2	ND		0.177		PCB-45	138			
PCB-3	0.415			J	PCB-46	42.4			
PCB-4/10	63.8				PCB-47	770			
PCB-5/8	172				PCB-48/75	184			
PCB-6	53.0				PCB-50	4.93			
PCB-7/9	10.8				PCB-51	70.4			
PCB-11	3.71				PCB-52/69	1710			
PCB-12/13	ND	0.312			PCB-53	134			
PCB-14	ND	0.289			PCB-54	9.33			
PCB-15	7.39				PCB-55	32.1			
PCB-16/32	474				PCB-56/60	506			
PCB-17	278				PCB-57	10.1			
PCB-18	631				PCB-58	7.47			
PCB-19	72.1				PCB-61/70	1110			
PCB-20/21/33	177				PCB-62	ND	0.648		
PCB-22	156				PCB-63	74.6			
PCB-23	0.481			J	PCB-65	0.517			
PCB-24/27	76.3				PCB-66/76	1630			
PCB-25	53.8				PCB-67	28.7			
PCB-26	132				PCB-68	21.1			
PCB-28	953				PCB-73	4.58			
PCB-29	1.84				PCB-74	751			
PCB-30	0.392			J	PCB-77	44.5			
PCB-31	432				PCB-78	ND	0.340		
PCB-34	6.01				PCB-79	104			
PCB-35	ND	0.161			PCB-80	ND	0.304		
PCB-36	ND	0.296			PCB-81	7.74			
PCB-37	23.4				PCB-82	339			
PCB-38	39.0				PCB-83	1.28			
PCB-39	0.286			J	PCB-84/92	1510			
PCB-40	163				PCB-85/116	788			
PCB-41/64/71/72	943				PCB-86	6.42			
PCB-42/59	352				PCB-87/117/125	1170			
PCB-43/49	1600				PCB-88/91	687			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-06	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.33	Date Analyzed :	25-Dec-14 08:35	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	17.8				PCB-136	542			
PCB-90/101	5390			E	PCB-137	202			
PCB-93	ND	0.377			PCB-138/163/164	6910			E
PCB-94	14.5				PCB-139/149	4850			E
PCB-95/98/102	2390				PCB-140	38.0			
PCB-96	21.5				PCB-141	794			
PCB-97	1270				PCB-144	220			
PCB-99	3340			E	PCB-145	0.764			
PCB-100	51.5				PCB-146/165	1170			
PCB-103	93.8				PCB-147	197			
PCB-104	1.26				PCB-148	15.7			
PCB-105	1440				PCB-150	25.8			
PCB-106/118	5260			E	PCB-151	1380			
PCB-107/109	468				PCB-152	2.98			
PCB-108/112	191				PCB-153	8590			E
PCB-110	3810			E	PCB-154	249			
PCB-111/115	64.9				PCB-155	6.28			
PCB-113	7.92				PCB-156	508			
PCB-114	81.4				PCB-157	121			
PCB-119	201				PCB-158/160	576			
PCB-120	30.8				PCB-159	ND	0.393		
PCB-121	ND	0.224			PCB-166	18.7			
PCB-122	11.8				PCB-167	272			
PCB-123	86.4				PCB-168	9.18			
PCB-124	157				PCB-169	ND	1.04		
PCB-126	19.3				PCB-170	1490			E
PCB-127	ND	1.70			PCB-171	428			
PCB-128/162	820				PCB-172	269			
PCB-129	123				PCB-173	19.2			
PCB-130	444				PCB-174	1160			
PCB-131	ND	0.514			PCB-175	85.1			
PCB-132/161	897				PCB-176	177			
PCB-133/142	169				PCB-177	1060			
PCB-134/143	205				PCB-178	543			
PCB-135	751				PCB-179	783			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-06
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.33	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 08:35
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3610			E	Total octaCB	4000			
PCB-181	ND	0.348			Total nonaCB	638			
PCB-182/187	3860			E	DecaCB	203			
PCB-183	1260				Total PCB	94500			
PCB-184	5.25								
PCB-185	136								
PCB-186	ND	0.304							
PCB-188	19.9								
PCB-189	39.5								
PCB-190	308								
PCB-191	56.1								
PCB-192	ND	0.273							
PCB-193	219								
PCB-194	666								
PCB-195	244								
PCB-196/203	1220								
PCB-197	44.0								
PCB-198	30.2								
PCB-199	1210								
PCB-200	89.0								
PCB-201	148								
PCB-202	319								
PCB-204	1.04								
PCB-205	31.6								
PCB-206	420								
PCB-207	52.5								
PCB-208	165								
PCB-209	203								
Total monoCB	7.65		7.83						
Total diCB	311								
Total triCB	3510								
Total tetraCB	11300								
Total pentaCB	28900								
Total hexaCB	30100								
Total heptaCB	15500								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-07-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-06
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.33	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 08:35
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	66.9	5 -145		13C-PCB-170	75.0	10 -145	
13C-PCB-3	67.7	5 -145		13C-PCB-180	78.8	10 -145	
13C-PCB-4	58.0	5 -145		13C-PCB-188	68.8	10 -145	
13C-PCB-11	69.2	5 -145		13C-PCB-189	73.6	10 -145	
13C-PCB-9	64.1	5 -145		13C-PCB-194	76.1	10 -145	
13C-PCB-19	64.8	5 -145		13C-PCB-202	64.0	10 -145	
13C-PCB-28	81.8	5 -145		13C-PCB-206	79.8	10 -145	
13C-PCB-32	67.4	5 -145		13C-PCB-208	73.5	10 -145	
13C-PCB-37	68.8	5 -145		13C-PCB-209	90.7	10 -145	
13C-PCB-47	70.5	5 -145		CRS 13C-PCB-79	76.8	10 -145	
13C-PCB-52	69.4	5 -145		13C-PCB-178	75.6	10 -145	
13C-PCB-54	73.1	5 -145					
13C-PCB-70	74.2	5 -145					
13C-PCB-77	74.0	10 -145					
13C-PCB-80	69.9	10 -145					
13C-PCB-81	76.0	10 -145					
13C-PCB-95	72.0	10 -145					
13C-PCB-97	74.6	10 -145					
13C-PCB-101	75.6	10 -145					
13C-PCB-104	69.9	10 -145					
13C-PCB-105	67.1	10 -145					
13C-PCB-114	65.6	10 -145					
13C-PCB-118	75.4	10 -145					
13C-PCB-123	71.0	10 -145					
13C-PCB-126	63.5	10 -145					
13C-PCB-127	67.3	10 -145					
13C-PCB-138	79.0	10 -145					
13C-PCB-141	75.4	10 -145					
13C-PCB-153	77.7	10 -145					
13C-PCB-155	64.7	10 -145					
13C-PCB-156	75.0	10 -145					
13C-PCB-157	75.6	10 -145					
13C-PCB-159	76.1	10 -145					
13C-PCB-167	74.2	10 -145					
13C-PCB-169	70.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-07	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.02	Date Analyzed:	25-Dec-14 09:40	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.62				PCB-44	2870			E
PCB-2	0.232			J	PCB-45	250			
PCB-3	0.216			J	PCB-46	61.5			
PCB-4/10	80.8				PCB-47	1870			E
PCB-5/8	149				PCB-48/75	343			
PCB-6	60.1				PCB-50	10.2			
PCB-7/9	13.4				PCB-51	78.3			
PCB-11	3.59				PCB-52/69	5180			E
PCB-12/13	ND	0.513			PCB-53	141			
PCB-14	ND	0.457			PCB-54	17.3			
PCB-15	3.63				PCB-55	79.7			
PCB-16/32	674				PCB-56/60	1210			
PCB-17	349				PCB-57	27.4			
PCB-18	1010				PCB-58	13.7			
PCB-19	108				PCB-61/70	2810			
PCB-20/21/33	317				PCB-62	ND	0.427		
PCB-22	344				PCB-63	197			
PCB-23	0.991				PCB-65	0.861			
PCB-24/27	107				PCB-66/76	5080			E
PCB-25	128				PCB-67	65.9			
PCB-26	418				PCB-68	45.9			
PCB-28	2560			E	PCB-73	4.72			
PCB-29	3.48				PCB-74	2280			E
PCB-30	0.537				PCB-77	88.0			
PCB-31	803				PCB-78	ND	0.391		
PCB-34	12.0				PCB-79	313			
PCB-35	ND	0.141			PCB-80	ND	0.314		
PCB-36	ND	0.141			PCB-81	19.0			
PCB-37	16.2				PCB-82	1010			
PCB-38	83.1				PCB-83	3.10			
PCB-39	0.344			J	PCB-84/92	4600			E
PCB-40	367				PCB-85/116	1970			
PCB-41/64/71/72	1990				PCB-86	10.5			
PCB-42/59	907				PCB-87/117/125	4200			
PCB-43/49	3550			E	PCB-88/91	1990			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-07	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.02	Date Analyzed :	25-Dec-14 09:40	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.6				PCB-136	1510			E
PCB-90/101	17300			E	PCB-137	965			
PCB-93	ND	0.383			PCB-138/163/164	25300			E
PCB-94	21.5				PCB-139/149	14900			E
PCB-95/98/102	7120			E	PCB-140	103			
PCB-96	48.2				PCB-141	3130			E
PCB-97	3800			E	PCB-144	779			
PCB-99	12200			E	PCB-145	1.58			
PCB-100	150				PCB-146/165	4580			E
PCB-103	254				PCB-147	599			
PCB-104	2.65				PCB-148	51.0			
PCB-105	5740			E	PCB-150	55.0			
PCB-106/118	20100			E	PCB-151	4340			E
PCB-107/109	1480				PCB-152	7.15			
PCB-108/112	536				PCB-153	29300			E
PCB-110	12300			E	PCB-154	782			
PCB-111/115	344				PCB-155	13.7			
PCB-113	11.7				PCB-156	2060			E
PCB-114	325				PCB-157	526			
PCB-119	589				PCB-158/160	2590			
PCB-120	67.9				PCB-159	ND	1.27		
PCB-121	ND	0.228			PCB-166	81.1			
PCB-122	27.3				PCB-167	1100			
PCB-123	324				PCB-168	38.7			
PCB-124	463				PCB-169	2.00			
PCB-126	61.7				PCB-170	6260			E
PCB-127	ND	2.24			PCB-171	1630			E
PCB-128/162	2580				PCB-172	1110			
PCB-129	432				PCB-173	56.6			
PCB-130	1260				PCB-174	3860			E
PCB-131	ND	1.87			PCB-175	296			
PCB-132/161	3090			E	PCB-176	518			
PCB-133/142	586				PCB-177	3690			E
PCB-134/143	608				PCB-178	1940			E
PCB-135	2100			E	PCB-179	2230			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-07
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.02	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 09:40
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	16100			E	Total octaCB	15600			
PCB-181	26.7				Total nonaCB	2130			
PCB-182/187	14000			E	DecaCB	609			
PCB-183	4900			E	Total PCB	316000			
PCB-184	10.5								
PCB-185	446								
PCB-186	ND	0.361							
PCB-188	43.8								
PCB-189	145								
PCB-190	1240								
PCB-191	260								
PCB-192	ND	0.381							
PCB-193	850								
PCB-194	2640			E					
PCB-195	999								
PCB-196/203	4770			E					
PCB-197	159								
PCB-198	144								
PCB-199	4860			E					
PCB-200	287								
PCB-201	547								
PCB-202	1090								
PCB-204	2.41								
PCB-205	110								
PCB-206	1420								
PCB-207	179								
PCB-208	536								
PCB-209	609								
Total monoCB	6.07								
Total diCB	310								
Total triCB	6940								
Total tetraCB	29900								
Total pentaCB	97100								
Total hexaCB	103000								
Total heptaCB	59600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-08-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-07
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.02	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 09:40
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	78.9	5 -145		13C-PCB-170	81.8	10 -145	
13C-PCB-3	76.4	5 -145		13C-PCB-180	85.3	10 -145	
13C-PCB-4	64.7	5 -145		13C-PCB-188	75.9	10 -145	
13C-PCB-11	74.6	5 -145		13C-PCB-189	77.4	10 -145	
13C-PCB-9	70.9	5 -145		13C-PCB-194	80.0	10 -145	
13C-PCB-19	74.2	5 -145		13C-PCB-202	68.8	10 -145	
13C-PCB-28	72.3	5 -145		13C-PCB-206	87.9	10 -145	
13C-PCB-32	79.6	5 -145		13C-PCB-208	80.0	10 -145	
13C-PCB-37	91.4	5 -145		13C-PCB-209	97.3	10 -145	
13C-PCB-47	71.6	5 -145		CRS 13C-PCB-79	94.0	10 -145	
13C-PCB-52	77.4	5 -145		13C-PCB-178	89.1	10 -145	
13C-PCB-54	69.9	5 -145					
13C-PCB-70	77.9	5 -145					
13C-PCB-77	76.3	10 -145					
13C-PCB-80	82.4	10 -145					
13C-PCB-81	78.6	10 -145					
13C-PCB-95	75.6	10 -145					
13C-PCB-97	77.6	10 -145					
13C-PCB-101	79.1	10 -145					
13C-PCB-104	70.5	10 -145					
13C-PCB-105	70.8	10 -145					
13C-PCB-114	73.7	10 -145					
13C-PCB-118	79.8	10 -145					
13C-PCB-123	76.1	10 -145					
13C-PCB-126	67.4	10 -145					
13C-PCB-127	71.5	10 -145					
13C-PCB-138	82.2	10 -145					
13C-PCB-141	80.9	10 -145					
13C-PCB-153	79.1	10 -145					
13C-PCB-155	67.6	10 -145					
13C-PCB-156	83.8	10 -145					
13C-PCB-157	81.2	10 -145					
13C-PCB-159	79.9	10 -145					
13C-PCB-167	81.2	10 -145					
13C-PCB-169	78.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-08	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.1 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.28	Date Analyzed :	25-Dec-14 10:44	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.64				PCB-44	1460			
PCB-2	0.313			J	PCB-45	149			
PCB-3	0.279			J	PCB-46	42.1			
PCB-4/10	26.8				PCB-47	1620			E
PCB-5/8	90.6				PCB-48/75	239			
PCB-6	22.5				PCB-50	7.75			
PCB-7/9	6.89				PCB-51	68.7			
PCB-11	7.03				PCB-52/69	3010			E
PCB-12/13	ND	0.469			PCB-53	124			
PCB-14	ND	0.418			PCB-54	12.5			
PCB-15	7.27				PCB-55	96.6			
PCB-16/32	337				PCB-56/60	881			
PCB-17	165				PCB-57	29.2			
PCB-18	381				PCB-58	15.6			
PCB-19	45.5				PCB-61/70	2190			
PCB-20/21/33	162				PCB-62	ND	0.310		
PCB-22	163				PCB-63	177			
PCB-23	0.382			J	PCB-65	0.623			
PCB-24/27	56.6				PCB-66/76	4150			E
PCB-25	74.4				PCB-67	47.7			
PCB-26	178				PCB-68	47.8			
PCB-28	1370				PCB-73	6.27			
PCB-29	1.73				PCB-74	2070			E
PCB-30	0.384			J	PCB-77	70.8			
PCB-31	542				PCB-78	ND	0.290		
PCB-34	7.26				PCB-79	406			
PCB-35	ND	0.532			PCB-80	ND	0.255		
PCB-36	ND	0.532			PCB-81	14.2			
PCB-37	13.9				PCB-82	949			
PCB-38	75.9				PCB-83	3.42			
PCB-39	0.472			J	PCB-84/92	5090			E
PCB-40	232				PCB-85/116	2110			
PCB-41/64/71/72	1420				PCB-86	ND	0.398		
PCB-42/59	618				PCB-87/117/125	4680			E
PCB-43/49	3020			E	PCB-88/91	2460			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-08	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.28	Date Analyzed:	25-Dec-14 10:44	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.3				PCB-136	2550			E
PCB-90/101	24400			E	PCB-137	1060			
PCB-93	ND	0.363			PCB-138/163/164	33400			E
PCB-94	17.3				PCB-139/149	24000			E
PCB-95/98/102	6340			E	PCB-140	174			
PCB-96	33.5				PCB-141	5150			E
PCB-97	4180			E	PCB-144	1460			
PCB-99	14700			E	PCB-145	1.32			
PCB-100	287				PCB-146/165	6910			E
PCB-103	387				PCB-147	1100			
PCB-104	2.50				PCB-148	81.8			
PCB-105	5750			E	PCB-150	147			
PCB-106/118	23100			E	PCB-151	8910			E
PCB-107/109	1830				PCB-152	5.67			
PCB-108/112	528				PCB-153	41100			E
PCB-110	13300			E	PCB-154	1600			E
PCB-111/115	297				PCB-155	32.1			
PCB-113	30.9				PCB-156	2470			E
PCB-114	366				PCB-157	541			
PCB-119	844				PCB-158/160	3190			E
PCB-120	110				PCB-159	ND	1.69		
PCB-121	ND	0.215			PCB-166	96.6			
PCB-122	18.0				PCB-167	1140			
PCB-123	245				PCB-168	65.2			
PCB-124	488				PCB-169	ND	1.74		
PCB-126	57.2				PCB-170	9060			E
PCB-127	ND	2.55			PCB-171	2720			E
PCB-128/162	3540			E	PCB-172	1600			E
PCB-129	543				PCB-173	95.8			
PCB-130	1890			E	PCB-174	6860			E
PCB-131	ND	1.92			PCB-175	482			
PCB-132/161	4520			E	PCB-176	914			
PCB-133/142	840				PCB-177	6050			E
PCB-134/143	889				PCB-178	3190			E
PCB-135	2950			E	PCB-179	4910			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-08
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.28	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 10:44
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	24100			E	Total octaCB	25000			
PCB-181	38.6				Total nonaCB	3300			
PCB-182/187	23600			E	DecaCB	899			
PCB-183	8080			E	Total PCB	415000			
PCB-184	19.1								
PCB-185	873								
PCB-186	ND	0.788							
PCB-188	98.2								
PCB-189	125								
PCB-190	1900			E					
PCB-191	365								
PCB-192	ND	0.829							
PCB-193	1370								
PCB-194	3970			E					
PCB-195	1560			E					
PCB-196/203	7980			E					
PCB-197	263								
PCB-198	214								
PCB-199	7540			E					
PCB-200	535								
PCB-201	906								
PCB-202	1830			E					
PCB-204	4.49								
PCB-205	157								
PCB-206	2210			E					
PCB-207	276								
PCB-208	821								
PCB-209	899								
Total monoCB	3.23								
Total diCB	161								
Total triCB	3570								
Total tetraCB	22200								
Total pentaCB	113000								
Total hexaCB	150000								
Total heptaCB	96400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-09-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-08
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	1.28	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 10:44
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	70.2	5 -145		13C-PCB-170	70.1	10 -145	
13C-PCB-3	69.1	5 -145		13C-PCB-180	72.2	10 -145	
13C-PCB-4	57.7	5 -145		13C-PCB-188	63.6	10 -145	
13C-PCB-11	64.5	5 -145		13C-PCB-189	66.5	10 -145	
13C-PCB-9	61.2	5 -145		13C-PCB-194	69.6	10 -145	
13C-PCB-19	62.5	5 -145		13C-PCB-202	57.1	10 -145	
13C-PCB-28	59.4	5 -145		13C-PCB-206	74.6	10 -145	
13C-PCB-32	67.8	5 -145		13C-PCB-208	65.1	10 -145	
13C-PCB-37	65.3	5 -145		13C-PCB-209	81.7	10 -145	
13C-PCB-47	65.5	5 -145		CRS 13C-PCB-79	81.6	10 -145	
13C-PCB-52	63.5	5 -145		13C-PCB-178	75.0	10 -145	
13C-PCB-54	62.5	5 -145					
13C-PCB-70	65.5	5 -145					
13C-PCB-77	67.2	10 -145					
13C-PCB-80	66.5	10 -145					
13C-PCB-81	71.6	10 -145					
13C-PCB-95	63.4	10 -145					
13C-PCB-97	68.2	10 -145					
13C-PCB-101	67.3	10 -145					
13C-PCB-104	61.7	10 -145					
13C-PCB-105	63.9	10 -145					
13C-PCB-114	62.9	10 -145					
13C-PCB-118	69.3	10 -145					
13C-PCB-123	66.4	10 -145					
13C-PCB-126	62.5	10 -145					
13C-PCB-127	60.4	10 -145					
13C-PCB-138	72.9	10 -145					
13C-PCB-141	69.4	10 -145					
13C-PCB-153	65.5	10 -145					
13C-PCB-155	58.3	10 -145					
13C-PCB-156	72.0	10 -145					
13C-PCB-157	68.5	10 -145					
13C-PCB-159	68.0	10 -145					
13C-PCB-167	71.6	10 -145					
13C-PCB-169	66.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-09
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.229	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 11:49
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.872				PCB-44	234			
PCB-2	ND	0.189			PCB-45	25.3			
PCB-3	ND	0.183			PCB-46	10.7			
PCB-4/10	6.54				PCB-47	322			
PCB-5/8	43.9				PCB-48/75	53.1			
PCB-6	6.03				PCB-50	1.31			
PCB-7/9	1.80			J	PCB-51	24.4			
PCB-11	1.45				PCB-52/69	524			
PCB-12/13	ND	0.132			PCB-53	44.5			
PCB-14	ND	0.118			PCB-54	2.77			
PCB-15	0.470			J	PCB-55	14.3			
PCB-16/32	92.0				PCB-56/60	161			
PCB-17	30.2				PCB-57	5.24			
PCB-18	62.8				PCB-58	4.58			
PCB-19	9.01				PCB-61/70	283			
PCB-20/21/33	36.6				PCB-62	ND	0.0893		
PCB-22	39.1				PCB-63	26.6			
PCB-23	0.104			J	PCB-65	ND	0.0865		
PCB-24/27	12.3				PCB-66/76	676			
PCB-25	11.4				PCB-67	4.98			
PCB-26	25.5				PCB-68	7.32			
PCB-28	254				PCB-73	2.32			
PCB-29	0.295			J	PCB-74	222			
PCB-30	ND	0.0354			PCB-77	15.7			
PCB-31	63.7				PCB-78	8.90			
PCB-34	1.62				PCB-79	37.4			
PCB-35	ND	0.112			PCB-80	ND	0.0671		
PCB-36	ND	0.112			PCB-81	9.53			
PCB-37	2.58				PCB-82	182			
PCB-38	14.6				PCB-83	ND	0.222		
PCB-39	ND	0.109			PCB-84/92	818			
PCB-40	51.4				PCB-85/116	426			
PCB-41/64/71/72	350				PCB-86	ND	0.331		
PCB-42/59	139				PCB-87/117/125	578			
PCB-43/49	481				PCB-88/91	350			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-09
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.229	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 11:49
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	9.35				PCB-136	220			
PCB-90/101	1880				PCB-137	95.9			
PCB-93	ND	0.294			PCB-138/163/164	3060			
PCB-94	10.6				PCB-139/149	2040			
PCB-95/98/102	1140				PCB-140	13.5			
PCB-96	10.2				PCB-141	319			
PCB-97	540				PCB-144	94.4			
PCB-99	1300				PCB-145	0.648			
PCB-100	24.7				PCB-146/165	648			
PCB-103	46.1				PCB-147	104			
PCB-104	1.03				PCB-148	8.17			
PCB-105	771				PCB-150	12.7			
PCB-106/118	2430				PCB-151	682			
PCB-107/109	262				PCB-152	2.01			
PCB-108/112	126				PCB-153	3890			E
PCB-110	2040			E	PCB-154	75.8			
PCB-111/115	32.4				PCB-155	2.74			
PCB-113	ND	0.229			PCB-156	179			
PCB-114	18.8				PCB-157	50.6			
PCB-119	92.6				PCB-158/160	252			
PCB-120	16.8				PCB-159	49.6			
PCB-121	ND	0.174			PCB-166	8.28			
PCB-122	2.75				PCB-167	105			
PCB-123	23.4				PCB-168	6.47			
PCB-124	37.4				PCB-169	ND	0.615		
PCB-126	10.2				PCB-170	507			
PCB-127	ND	0.612			PCB-171	143			
PCB-128/162	408				PCB-172	114			
PCB-129	69.5				PCB-173	7.28			
PCB-130	211				PCB-174	426			
PCB-131	ND	0.815			PCB-175	35.6			
PCB-132/161	440				PCB-176	57.3			
PCB-133/142	89.0				PCB-177	395			
PCB-134/143	127				PCB-178	227			
PCB-135	333				PCB-179	226			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-09
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.229	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 11:49
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1300				Total octaCB	1040			
PCB-181	3.01				Total nonaCB	139			
PCB-182/187	1440				DecaCB	52.7			
PCB-183	431				Total PCB	38000			
PCB-184	1.95								
PCB-185	43.6								
PCB-186	ND	0.169							
PCB-188	6.66								
PCB-189	15.4								
PCB-190	96.7								
PCB-191	20.4								
PCB-192	ND	0.187							
PCB-193	89.1								
PCB-194	177								
PCB-195	63.8								
PCB-196/203	285								
PCB-197	10.1								
PCB-198	10.3								
PCB-199	326								
PCB-200	20.3								
PCB-201	38.6								
PCB-202	96.6								
PCB-204	0.387			J					
PCB-205	8.62								
PCB-206	85.7								
PCB-207	13.6								
PCB-208	39.6								
PCB-209	52.7								
Total monoCB	0.872								
Total diCB	60.2								
Total triCB	656								
Total tetraCB	3740								
Total pentaCB	13200								
Total hexaCB	13600								
Total heptaCB	5580								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-09	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.229	Date Analyzed :	25-Dec-14 11:49	Column:	ZB-1	Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	46.4	5 -145		13C-PCB-170	66.9	10 -145	
13C-PCB-3	49.1	5 -145		13C-PCB-180	66.1	10 -145	
13C-PCB-4	43.7	5 -145		13C-PCB-188	61.4	10 -145	
13C-PCB-11	58.8	5 -145		13C-PCB-189	64.7	10 -145	
13C-PCB-9	50.8	5 -145		13C-PCB-194	68.1	10 -145	
13C-PCB-19	51.8	5 -145		13C-PCB-202	58.5	10 -145	
13C-PCB-28	69.6	5 -145		13C-PCB-206	71.2	10 -145	
13C-PCB-32	59.8	5 -145		13C-PCB-208	65.8	10 -145	
13C-PCB-37	63.3	5 -145		13C-PCB-209	82.4	10 -145	
13C-PCB-47	62.6	5 -145		CRS 13C-PCB-79	66.0	10 -145	
13C-PCB-52	64.3	5 -145		13C-PCB-178	66.9	10 -145	
13C-PCB-54	60.9	5 -145					
13C-PCB-70	64.3	5 -145					
13C-PCB-77	69.3	10 -145					
13C-PCB-80	66.7	10 -145					
13C-PCB-81	64.6	10 -145					
13C-PCB-95	62.2	10 -145					
13C-PCB-97	65.9	10 -145					
13C-PCB-101	65.4	10 -145					
13C-PCB-104	61.1	10 -145					
13C-PCB-105	62.1	10 -145					
13C-PCB-114	61.4	10 -145					
13C-PCB-118	67.0	10 -145					
13C-PCB-123	65.2	10 -145					
13C-PCB-126	60.7	10 -145					
13C-PCB-127	61.6	10 -145					
13C-PCB-138	69.0	10 -145					
13C-PCB-141	68.2	10 -145					
13C-PCB-153	68.0	10 -145					
13C-PCB-155	58.7	10 -145					
13C-PCB-156	69.0	10 -145					
13C-PCB-157	67.9	10 -145					
13C-PCB-159	68.0	10 -145					
13C-PCB-167	66.2	10 -145					
13C-PCB-169	66.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-10	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	Date Analyzed:	25-Dec-14 12:53	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.01				PCB-44	372			
PCB-2	0.115			J	PCB-45	30.0			
PCB-3	0.171			J	PCB-46	13.4			
PCB-4/10	8.66				PCB-47	284			
PCB-5/8	49.6				PCB-48/75	63.7			
PCB-6	7.63				PCB-50	1.74			
PCB-7/9	2.61				PCB-51	33.7			
PCB-11	1.78				PCB-52/69	691			
PCB-12/13	ND	0.0611			PCB-53	71.9			
PCB-14	ND	0.0545			PCB-54	3.41			
PCB-15	0.727			J	PCB-55	14.8			
PCB-16/32	92.4				PCB-56/60	137			
PCB-17	47.2				PCB-57	5.27			
PCB-18	98.7				PCB-58	3.16			
PCB-19	15.5				PCB-61/70	265			
PCB-20/21/33	69.9				PCB-62	ND	0.140		
PCB-22	44.0				PCB-63	17.6			
PCB-23	ND	0.104			PCB-65	ND	0.136		
PCB-24/27	13.8				PCB-66/76	620			
PCB-25	12.6				PCB-67	4.52			
PCB-26	32.7				PCB-68	5.42			
PCB-28	266				PCB-73	2.83			
PCB-29	0.693				PCB-74	159			
PCB-30	0.174			J	PCB-77	14.0			
PCB-31	65.8				PCB-78	8.35			
PCB-34	2.34				PCB-79	43.3			
PCB-35	ND	0.105			PCB-80	ND	0.107		
PCB-36	ND	0.105			PCB-81	28.4			
PCB-37	3.30				PCB-82	189			
PCB-38	12.9				PCB-83	ND	0.0941		
PCB-39	ND	0.102			PCB-84/92	797			
PCB-40	60.4				PCB-85/116	379			
PCB-41/64/71/72	322				PCB-86	ND	0.140		
PCB-42/59	152				PCB-87/117/125	642			
PCB-43/49	581				PCB-88/91	359			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-10
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	25-Dec-14 12:53
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.69				PCB-136	232			
PCB-90/101	2950			E	PCB-137	100			
PCB-93	ND	0.124			PCB-138/163/164	2810			
PCB-94	14.4				PCB-139/149	2380			
PCB-95/98/102	1390				PCB-140	11.3			
PCB-96	12.5				PCB-141	412			
PCB-97	707				PCB-144	134			
PCB-99	1530			E	PCB-145	0.863			
PCB-100	32.9				PCB-146/165	551			
PCB-103	59.5				PCB-147	111			
PCB-104	2.79				PCB-148	11.2			
PCB-105	711				PCB-150	15.8			
PCB-106/118	2200				PCB-151	658			
PCB-107/109	235				PCB-152	3.22			
PCB-108/112	115				PCB-153	3670			E
PCB-110	1930			E	PCB-154	119			
PCB-111/115	33.4				PCB-155	3.07			
PCB-113	ND	0.0928			PCB-156	157			
PCB-114	16.1				PCB-157	44.2			
PCB-119	93.4				PCB-158/160	248			
PCB-120	11.5				PCB-159	43.7			
PCB-121	ND	0.0736			PCB-166	7.54			
PCB-122	2.28				PCB-167	92.1			
PCB-123	17.5				PCB-168	6.67			
PCB-124	34.9				PCB-169	ND	0.428		
PCB-126	9.81				PCB-170	471			
PCB-127	ND	0.316			PCB-171	137			
PCB-128/162	366				PCB-172	103			
PCB-129	77.0				PCB-173	7.60			
PCB-130	197				PCB-174	461			
PCB-131	ND	0.549			PCB-175	32.2			
PCB-132/161	434				PCB-176	68.7			
PCB-133/142	85.6				PCB-177	372			
PCB-134/143	131				PCB-178	201			
PCB-135	283				PCB-179	211			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-10	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	Date Analyzed :	25-Dec-14 12:53	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1170				Total octaCB	975			
PCB-181	ND	0.186			Total nonaCB	124			
PCB-182/187	1290				DecaCB	43.8			
PCB-183	410				Total PCB	39100			
PCB-184	1.83								
PCB-185	49.8								
PCB-186	ND	0.148							
PCB-188	6.53								
PCB-189	13.4								
PCB-190	89.0								
PCB-191	17.9								
PCB-192	ND	0.166							
PCB-193	78.6								
PCB-194	165								
PCB-195	58.7								
PCB-196/203	269								
PCB-197	10.7								
PCB-198	8.54								
PCB-199	300								
PCB-200	24.5								
PCB-201	39.7								
PCB-202	89.6								
PCB-204	0.482								
PCB-205	8.26								
PCB-206	77.3								
PCB-207	12.7								
PCB-208	34.4								
PCB-209	43.8								
Total monoCB	1.30								
Total diCB	71.0								
Total triCB	779								
Total tetraCB	4010								
Total pentaCB	14500								
Total hexaCB	13400								
Total heptaCB	5190								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-02-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-10
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 12:53
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	60.3	5 -145		13C-PCB-170	70.4	10 -145	
13C-PCB-3	63.2	5 -145		13C-PCB-180	71.9	10 -145	
13C-PCB-4	57.6	5 -145		13C-PCB-188	67.8	10 -145	
13C-PCB-11	66.9	5 -145		13C-PCB-189	68.9	10 -145	
13C-PCB-9	62.9	5 -145		13C-PCB-194	69.7	10 -145	
13C-PCB-19	40.4	5 -145		13C-PCB-202	62.6	10 -145	
13C-PCB-28	60.9	5 -145		13C-PCB-206	71.8	10 -145	
13C-PCB-32	65.1	5 -145		13C-PCB-208	66.9	10 -145	
13C-PCB-37	71.8	5 -145		13C-PCB-209	83.2	10 -145	
13C-PCB-47	67.9	5 -145		CRS 13C-PCB-79	81.4	10 -145	
13C-PCB-52	68.0	5 -145		13C-PCB-178	76.0	10 -145	
13C-PCB-54	65.4	5 -145					
13C-PCB-70	70.5	5 -145					
13C-PCB-77	71.3	10 -145					
13C-PCB-80	72.8	10 -145					
13C-PCB-81	71.8	10 -145					
13C-PCB-95	67.1	10 -145					
13C-PCB-97	71.4	10 -145					
13C-PCB-101	71.6	10 -145					
13C-PCB-104	66.5	10 -145					
13C-PCB-105	66.8	10 -145					
13C-PCB-114	67.6	10 -145					
13C-PCB-118	71.8	10 -145					
13C-PCB-123	68.4	10 -145					
13C-PCB-126	65.5	10 -145					
13C-PCB-127	69.1	10 -145					
13C-PCB-138	74.8	10 -145					
13C-PCB-141	78.0	10 -145					
13C-PCB-153	75.7	10 -145					
13C-PCB-155	63.0	10 -145					
13C-PCB-156	71.9	10 -145					
13C-PCB-157	72.3	10 -145					
13C-PCB-159	74.7	10 -145					
13C-PCB-167	72.0	10 -145					
13C-PCB-169	73.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-11
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.534	QC Batch:	B4L0084
				Date Analyzed:	25-Dec-14 13:58
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.04				PCB-44	748			
PCB-2	ND	0.158			PCB-45	67.3			
PCB-3	0.224			J	PCB-46	29.3			
PCB-4/10	8.80				PCB-47	586			
PCB-5/8	66.6				PCB-48/75	167			
PCB-6	9.84				PCB-50	3.56			
PCB-7/9	2.74				PCB-51	57.9			
PCB-11	2.39				PCB-52/69	1360			
PCB-12/13	ND	0.119			PCB-53	141			
PCB-14	ND	0.106			PCB-54	4.97			
PCB-15	0.931			J	PCB-55	27.5			
PCB-16/32	157				PCB-56/60	266			
PCB-17	84.8				PCB-57	10.0			
PCB-18	165				PCB-58	7.11			
PCB-19	23.9				PCB-61/70	557			
PCB-20/21/33	98.3				PCB-62	ND	0.181		
PCB-22	68.3				PCB-63	40.4			
PCB-23	0.167			J	PCB-65	ND	0.175		
PCB-24/27	21.1				PCB-66/76	1440			
PCB-25	17.1				PCB-67	8.79			
PCB-26	48.1				PCB-68	12.5			
PCB-28	472				PCB-73	3.76			
PCB-29	1.13				PCB-74	375			
PCB-30	ND		0.380		PCB-77	28.5			
PCB-31	114				PCB-78	15.0			
PCB-34	3.29				PCB-79	87.0			
PCB-35	ND	0.120			PCB-80	ND	0.131		
PCB-36	ND	0.120			PCB-81	17.4			
PCB-37	4.58				PCB-82	376			
PCB-38	26.9				PCB-83	0.429			J
PCB-39	ND	0.117			PCB-84/92	1590			
PCB-40	120				PCB-85/116	722			
PCB-41/64/71/72	673				PCB-86	ND	0.197		
PCB-42/59	319				PCB-87/117/125	1170			
PCB-43/49	1150				PCB-88/91	709			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-11
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.534	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed :	25-Dec-14 13:58
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.7				PCB-136	509			
PCB-90/101	5720			E	PCB-137	182			
PCB-93	ND	0.174			PCB-138/163/164	5630			E
PCB-94	25.1				PCB-139/149	4690			E
PCB-95/98/102	2800				PCB-140	26.1			
PCB-96	25.0				PCB-141	785			
PCB-97	1360				PCB-144	249			
PCB-99	3120			E	PCB-145	1.56			
PCB-100	47.8				PCB-146/165	1080			
PCB-103	104				PCB-147	179			
PCB-104	1.87				PCB-148	17.1			
PCB-105	1350				PCB-150	24.1			
PCB-106/118	4320			E	PCB-151	1350			
PCB-107/109	459				PCB-152	4.26			
PCB-108/112	214				PCB-153	7350			E
PCB-110	3740			E	PCB-154	202			
PCB-111/115	57.3				PCB-155	5.01			
PCB-113	ND	0.130			PCB-156	327			
PCB-114	36.5				PCB-157	90.0			
PCB-119	178				PCB-158/160	463			
PCB-120	25.6				PCB-159	88.7			
PCB-121	ND	0.103			PCB-166	13.3			
PCB-122	7.30				PCB-167	187			
PCB-123	41.8				PCB-168	11.6			
PCB-124	79.5				PCB-169	0.910			
PCB-126	18.3				PCB-170	956			
PCB-127	ND	0.398			PCB-171	287			
PCB-128/162	695				PCB-172	211			
PCB-129	133				PCB-173	14.4			
PCB-130	363				PCB-174	944			
PCB-131	ND	0.794			PCB-175	54.4			
PCB-132/161	833				PCB-176	133			
PCB-133/142	160				PCB-177	771			
PCB-134/143	240				PCB-178	395			
PCB-135	607				PCB-179	448			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-11
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.534	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 13:58
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2510			E	Total octaCB	1900			
PCB-181	ND	0.186			Total nonaCB	251			
PCB-182/187	2540				DecaCB	91.3			
PCB-183	832				Total PCB	77400			
PCB-184	3.33								
PCB-185	103								
PCB-186	ND	0.150							
PCB-188	10.7								
PCB-189	30.0								
PCB-190	183								
PCB-191	39.8								
PCB-192	ND	0.166							
PCB-193	159								
PCB-194	329								
PCB-195	114								
PCB-196/203	534								
PCB-197	19.2								
PCB-198	18.1								
PCB-199	584								
PCB-200	44.8								
PCB-201	72.8								
PCB-202	168								
PCB-204	0.453			J					
PCB-205	15.6								
PCB-206	161								
PCB-207	22.6								
PCB-208	67.9								
PCB-209	91.3								
Total monoCB	1.26								
Total diCB	91.3								
Total triCB	1310								
Total tetraCB	8310								
Total pentaCB	28300								
Total hexaCB	26500								
Total heptaCB	10600								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-LF-03-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-11
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.534	QC Batch:	B4L0084
				Date Analyzed :	25-Dec-14 13:58
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	42.2	5 -145		13C-PCB-170	59.9	10 -145	
13C-PCB-3	48.0	5 -145		13C-PCB-180	60.2	10 -145	
13C-PCB-4	43.8	5 -145		13C-PCB-188	58.4	10 -145	
13C-PCB-11	54.3	5 -145		13C-PCB-189	59.2	10 -145	
13C-PCB-9	51.2	5 -145		13C-PCB-194	63.1	10 -145	
13C-PCB-19	21.7	5 -145		13C-PCB-202	53.9	10 -145	
13C-PCB-28	65.1	5 -145		13C-PCB-206	65.0	10 -145	
13C-PCB-32	54.2	5 -145		13C-PCB-208	60.5	10 -145	
13C-PCB-37	62.4	5 -145		13C-PCB-209	73.0	10 -145	
13C-PCB-47	60.6	5 -145		CRS 13C-PCB-79	71.3	10 -145	
13C-PCB-52	57.8	5 -145		13C-PCB-178	65.4	10 -145	
13C-PCB-54	57.8	5 -145					
13C-PCB-70	61.1	5 -145					
13C-PCB-77	66.5	10 -145					
13C-PCB-80	64.9	10 -145					
13C-PCB-81	64.6	10 -145					
13C-PCB-95	59.7	10 -145					
13C-PCB-97	64.2	10 -145					
13C-PCB-101	63.1	10 -145					
13C-PCB-104	58.2	10 -145					
13C-PCB-105	56.6	10 -145					
13C-PCB-114	58.3	10 -145					
13C-PCB-118	62.9	10 -145					
13C-PCB-123	59.8	10 -145					
13C-PCB-126	59.2	10 -145					
13C-PCB-127	58.9	10 -145					
13C-PCB-138	65.0	10 -145					
13C-PCB-141	64.7	10 -145					
13C-PCB-153	65.0	10 -145					
13C-PCB-155	54.9	10 -145					
13C-PCB-156	63.0	10 -145					
13C-PCB-157	61.5	10 -145					
13C-PCB-159	63.3	10 -145					
13C-PCB-167	62.8	10 -145					
13C-PCB-169	62.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-12
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.215	QC Batch:	B4L0084
				Date Analyzed:	27-Dec-14 02:38
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.900				PCB-44	320			
PCB-2	ND	0.350			PCB-45	29.2			
PCB-3	ND	0.339			PCB-46	12.8			
PCB-4/10	8.89				PCB-47	234			
PCB-5/8	73.9				PCB-48/75	65.9			
PCB-6	9.75				PCB-50	1.51			
PCB-7/9	2.64				PCB-51	22.1			
PCB-11	1.48				PCB-52/69	567			
PCB-12/13	ND	1.48			PCB-53	59.2			
PCB-14	ND	1.32			PCB-54	2.36			
PCB-15	1.13				PCB-55	9.57			
PCB-16/32	85.6				PCB-56/60	121			
PCB-17	48.0				PCB-57	3.62			
PCB-18	117				PCB-58	3.06			
PCB-19	12.0				PCB-61/70	214			
PCB-20/21/33	59.3				PCB-62	ND	0.312		
PCB-22	64.7				PCB-63	18.1			
PCB-23	0.121			J	PCB-65	ND	0.302		
PCB-24/27	12.4				PCB-66/76	532			
PCB-25	9.87				PCB-67	3.43			
PCB-26	29.0				PCB-68	4.92			
PCB-28	235				PCB-73	1.66			
PCB-29	0.721				PCB-74	147			
PCB-30	ND	0.0909			PCB-77	9.16			
PCB-31	72.3				PCB-78	ND	0.279		
PCB-34	1.60				PCB-79	32.3			
PCB-35	ND	0.422			PCB-80	ND	0.238		
PCB-36	ND	0.422			PCB-81	4.84			
PCB-37	2.01				PCB-82	112			
PCB-38	8.23				PCB-83	ND	0.410		
PCB-39	ND	0.409			PCB-84/92	507			
PCB-40	52.0				PCB-85/116	354			
PCB-41/64/71/72	279				PCB-86	1.97			
PCB-42/59	128				PCB-87/117/125	401			
PCB-43/49	439				PCB-88/91	239			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-LF-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-12
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.215	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed:	27-Dec-14 02:38
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	4.86				PCB-136	141			
PCB-90/101	1900				PCB-137	65.5			
PCB-93	ND	0.504			PCB-138/163/164	2080			
PCB-94	8.15				PCB-139/149	1480			
PCB-95/98/102	877				PCB-140	7.39			
PCB-96	7.78				PCB-141	274			
PCB-97	461				PCB-144	75.4			
PCB-99	1040				PCB-145	0.434			J
PCB-100	15.4				PCB-146/165	391			
PCB-103	32.1				PCB-147	58.4			
PCB-104	0.733				PCB-148	5.25			
PCB-105	511				PCB-150	7.79			
PCB-106/118	1480				PCB-151	400			
PCB-107/109	161				PCB-152	1.55			
PCB-108/112	76.6				PCB-153	2700			E
PCB-110	1310				PCB-154	60.9			
PCB-111/115	21.5				PCB-155	1.51			
PCB-113	3.60				PCB-156	114			
PCB-114	12.4				PCB-157	33.9			
PCB-119	62.9				PCB-158/160	172			
PCB-120	9.54				PCB-159	ND	0.448		
PCB-121	ND	0.299			PCB-166	6.06			
PCB-122	1.99				PCB-167	62.2			
PCB-123	12.2				PCB-168	3.74			
PCB-124	23.4				PCB-169	ND	0.487		
PCB-126	6.39				PCB-170	321			
PCB-127	ND	0.425			PCB-171	88.6			
PCB-128/162	252				PCB-172	63.1			
PCB-129	45.2				PCB-173	4.75			
PCB-130	129				PCB-174	302			
PCB-131	ND	0.614			PCB-175	21.4			
PCB-132/161	288				PCB-176	43.7			
PCB-133/142	54.3				PCB-177	245			
PCB-134/143	78.8				PCB-178	134			
PCB-135	180				PCB-179	140			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-12	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.215	Date Analyzed :	27-Dec-14 02:38	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	764				Total octaCB	628			
PCB-181	ND	0.222			Total nonaCB	93.2			
PCB-182/187	865				DecaCB	37.9			
PCB-183	272				Total PCB	27200			
PCB-184	0.957								
PCB-185	33.4								
PCB-186	ND	0.187							
PCB-188	3.93								
PCB-189	9.74								
PCB-190	62.7								
PCB-191	12.6								
PCB-192	ND	0.198							
PCB-193	50.9								
PCB-194	103								
PCB-195	36.7								
PCB-196/203	175								
PCB-197	7.04								
PCB-198	6.13								
PCB-199	195								
PCB-200	14.8								
PCB-201	25.1								
PCB-202	59.4								
PCB-204	ND	0.307							
PCB-205	5.49								
PCB-206	57.1								
PCB-207	9.41								
PCB-208	26.6								
PCB-209	37.9								
Total monoCB	0.900								
Total diCB	97.7								
Total triCB	758								
Total tetraCB	3320								
Total pentaCB	9650								
Total hexaCB	9160								
Total heptaCB	3440								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-04-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-12
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.215	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 02:38
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	44.2	5 -145		13C-PCB-170	53.9	10 -145	
13C-PCB-3	46.9	5 -145		13C-PCB-180	57.9	10 -145	
13C-PCB-4	47.7	5 -145		13C-PCB-188	54.5	10 -145	
13C-PCB-11	55.4	5 -145		13C-PCB-189	55.0	10 -145	
13C-PCB-9	50.8	5 -145		13C-PCB-194	63.1	10 -145	
13C-PCB-19	50.5	5 -145		13C-PCB-202	48.8	10 -145	
13C-PCB-28	61.7	5 -145		13C-PCB-206	54.8	10 -145	
13C-PCB-32	46.7	5 -145		13C-PCB-208	50.6	10 -145	
13C-PCB-37	60.7	5 -145		13C-PCB-209	55.4	10 -145	
13C-PCB-47	58.5	5 -145		CRS 13C-PCB-79	69.4	10 -145	
13C-PCB-52	61.3	5 -145		13C-PCB-178	61.4	10 -145	
13C-PCB-54	58.7	5 -145					
13C-PCB-70	58.5	5 -145					
13C-PCB-77	61.6	10 -145					
13C-PCB-80	61.3	10 -145					
13C-PCB-81	62.2	10 -145					
13C-PCB-95	58.0	10 -145					
13C-PCB-97	60.5	10 -145					
13C-PCB-101	63.4	10 -145					
13C-PCB-104	58.1	10 -145					
13C-PCB-105	75.9	10 -145					
13C-PCB-114	68.3	10 -145					
13C-PCB-118	64.7	10 -145					
13C-PCB-123	59.3	10 -145					
13C-PCB-126	76.7	10 -145					
13C-PCB-127	74.0	10 -145					
13C-PCB-138	65.0	10 -145					
13C-PCB-141	67.0	10 -145					
13C-PCB-153	65.3	10 -145					
13C-PCB-155	57.0	10 -145					
13C-PCB-156	62.1	10 -145					
13C-PCB-157	60.0	10 -145					
13C-PCB-159	64.5	10 -145					
13C-PCB-167	63.8	10 -145					
13C-PCB-169	61.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-13	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.0 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	Date Analyzed :	27-Dec-14 03:42	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.867				PCB-44	637			
PCB-2	ND	0.316			PCB-45	64.2			
PCB-3	ND	0.306			PCB-46	22.0			
PCB-4/10	6.92				PCB-47	416			
PCB-5/8	62.3				PCB-48/75	144			
PCB-6	9.15				PCB-50	3.21			
PCB-7/9	2.45				PCB-51	41.9			
PCB-11	1.71				PCB-52/69	1120			
PCB-12/13	ND	0.844			PCB-53	118			
PCB-14	ND	0.753			PCB-54	4.12			
PCB-15	ND	0.813			PCB-55	15.7			
PCB-16/32	201				PCB-56/60	238			
PCB-17	142				PCB-57	6.70			
PCB-18	233				PCB-58	4.83			
PCB-19	11.5				PCB-61/70	489			
PCB-20/21/33	190				PCB-62	ND	0.230		
PCB-22	133				PCB-63	33.0			
PCB-23	0.275			J	PCB-65	ND	0.334		
PCB-24/27	23.7				PCB-66/76	926			
PCB-25	21.3				PCB-67	6.20			
PCB-26	92.1				PCB-68	9.16			
PCB-28	627				PCB-73	2.46			
PCB-29	1.61				PCB-74	305			
PCB-30	0.237			J	PCB-77	16.0			
PCB-31	179				PCB-78	ND	0.209		
PCB-34	4.52				PCB-79	50.3			
PCB-35	ND	0.372			PCB-80	ND	0.176		
PCB-36	ND	0.372			PCB-81	9.81			
PCB-37	3.03				PCB-82	185			
PCB-38	14.5				PCB-83	1.19			
PCB-39	ND	0.360			PCB-84/92	838			
PCB-40	108				PCB-85/116	567			
PCB-41/64/71/72	603				PCB-86	2.65			
PCB-42/59	219				PCB-87/117/125	663			
PCB-43/49	724				PCB-88/91	340			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-13
Project:		Sample Size:	10.0 g	QC Batch:	B4L0084
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed:	27-Dec-14 03:42
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.28				PCB-136	243			
PCB-90/101	3170			E	PCB-137	111			
PCB-93	ND	0.401			PCB-138/163/164	3450			
PCB-94	13.6				PCB-139/149	2610			
PCB-95/98/102	1530				PCB-140	12.5			
PCB-96	13.0				PCB-141	473			
PCB-97	719				PCB-144	133			
PCB-99	1530			E	PCB-145	0.937			
PCB-100	23.7				PCB-146/165	620			
PCB-103	54.1				PCB-147	96.7			
PCB-104	ND		0.852		PCB-148	8.56			
PCB-105	860				PCB-150	12.3			
PCB-106/118	2490				PCB-151	728			
PCB-107/109	264				PCB-152	2.32			
PCB-108/112	128				PCB-153	4460			E
PCB-110	2160			E	PCB-154	103			
PCB-111/115	38.2				PCB-155	2.42			
PCB-113	5.32				PCB-156	213			
PCB-114	23.5				PCB-157	54.1			
PCB-119	101				PCB-158/160	296			
PCB-120	14.1				PCB-159	ND	0.310		
PCB-121	ND	0.375			PCB-166	9.57			
PCB-122	3.49				PCB-167	115			
PCB-123	22.2				PCB-168	4.75			
PCB-124	48.7				PCB-169	0.289			J
PCB-126	10.6				PCB-170	572			
PCB-127	ND	0.365			PCB-171	154			
PCB-128/162	413				PCB-172	114			
PCB-129	73.2				PCB-173	8.44			
PCB-130	204				PCB-174	535			
PCB-131	ND	0.384			PCB-175	40.5			
PCB-132/161	464				PCB-176	70.0			
PCB-133/142	85.5				PCB-177	429			
PCB-134/143	127				PCB-178	244			
PCB-135	319				PCB-179	261			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-13
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 03:42
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1440				Total octaCB	1160			
PCB-181	ND	0.124			Total nonaCB	163			
PCB-182/187	1620				DecaCB	60.4			
PCB-183	516				Total PCB	47300			
PCB-184	1.56								
PCB-185	53.7								
PCB-186	ND	0.107							
PCB-188	6.55								
PCB-189	17.8								
PCB-190	113								
PCB-191	24.6								
PCB-192	ND	0.111							
PCB-193	92.5								
PCB-194	185								
PCB-195	73.7								
PCB-196/203	322								
PCB-197	10.8								
PCB-198	10.3								
PCB-199	372								
PCB-200	27.1								
PCB-201	43.2								
PCB-202	110								
PCB-204	ND	0.479							
PCB-205	9.70								
PCB-206	99.6								
PCB-207	15.5								
PCB-208	47.7								
PCB-209	60.4								
Total monoCB	0.867								
Total diCB	82.6								
Total triCB	1880								
Total tetraCB	6340								
Total pentaCB	15800								
Total hexaCB	15500								
Total heptaCB	6310								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-LF-05-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-13
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:35
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.279	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 03:42
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	42.8	5 -145		13C-PCB-170	63.1	10 -145	
13C-PCB-3	47.1	5 -145		13C-PCB-180	66.8	10 -145	
13C-PCB-4	49.3	5 -145		13C-PCB-188	59.8	10 -145	
13C-PCB-11	60.5	5 -145		13C-PCB-189	62.3	10 -145	
13C-PCB-9	54.3	5 -145		13C-PCB-194	66.0	10 -145	
13C-PCB-19	53.6	5 -145		13C-PCB-202	54.9	10 -145	
13C-PCB-28	71.2	5 -145		13C-PCB-206	61.4	10 -145	
13C-PCB-32	48.4	5 -145		13C-PCB-208	54.9	10 -145	
13C-PCB-37	66.7	5 -145		13C-PCB-209	62.6	10 -145	
13C-PCB-47	62.6	5 -145		CRS 13C-PCB-79	70.8	10 -145	
13C-PCB-52	64.5	5 -145		13C-PCB-178	63.6	10 -145	
13C-PCB-54	62.6	5 -145					
13C-PCB-70	67.4	5 -145					
13C-PCB-77	67.9	10 -145					
13C-PCB-80	66.3	10 -145					
13C-PCB-81	66.0	10 -145					
13C-PCB-95	63.8	10 -145					
13C-PCB-97	66.8	10 -145					
13C-PCB-101	69.8	10 -145					
13C-PCB-104	62.7	10 -145					
13C-PCB-105	79.7	10 -145					
13C-PCB-114	81.7	10 -145					
13C-PCB-118	73.8	10 -145					
13C-PCB-123	64.1	10 -145					
13C-PCB-126	84.7	10 -145					
13C-PCB-127	83.7	10 -145					
13C-PCB-138	75.3	10 -145					
13C-PCB-141	77.6	10 -145					
13C-PCB-153	77.3	10 -145					
13C-PCB-155	60.4	10 -145					
13C-PCB-156	69.3	10 -145					
13C-PCB-157	69.2	10 -145					
13C-PCB-159	71.2	10 -145					
13C-PCB-167	70.2	10 -145					
13C-PCB-169	72.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-01-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-14	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.54	Date Analyzed :	27-Dec-14 04:46	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	8.71				PCB-44	1020			
PCB-2	0.736				PCB-45	95.9			
PCB-3	1.25				PCB-46	26.7			
PCB-4/10	33.7				PCB-47	926			
PCB-5/8	121				PCB-48/75	184			
PCB-6	24.8				PCB-50	4.81			
PCB-7/9	9.52				PCB-51	52.0			
PCB-11	17.5				PCB-52/69	1760			
PCB-12/13	0.553			J	PCB-53	83.3			
PCB-14	ND	0.714			PCB-54	6.02			
PCB-15	10.5				PCB-55	35.2			
PCB-16/32	232				PCB-56/60	723			
PCB-17	134				PCB-57	12.1			
PCB-18	263				PCB-58	9.59			
PCB-19	25.8				PCB-61/70	1590			
PCB-20/21/33	131				PCB-62	ND	0.326		
PCB-22	110				PCB-63	102			
PCB-23	0.180			J	PCB-65	0.271			J
PCB-24/27	30.6				PCB-66/76	2250			
PCB-25	48.3				PCB-67	46.3			
PCB-26	79.9				PCB-68	27.2			
PCB-28	796				PCB-73	4.52			
PCB-29	1.54				PCB-74	983			
PCB-30	0.238			J	PCB-77	86.9			
PCB-31	320				PCB-78	ND	0.324		
PCB-34	6.40				PCB-79	124			
PCB-35	ND	0.263			PCB-80	ND	0.266		
PCB-36	0.350			J	PCB-81	21.0			
PCB-37	23.7				PCB-82	345			
PCB-38	33.3				PCB-83	1.48			
PCB-39	0.696				PCB-84/92	1410			
PCB-40	154				PCB-85/116	1350			
PCB-41/64/71/72	970				PCB-86	3.32			
PCB-42/59	437				PCB-87/117/125	1230			
PCB-43/49	1700				PCB-88/91	685			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-01-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-14	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.54	Date Analyzed :	27-Dec-14 04:46	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.2				PCB-136	470			
PCB-90/101	6060			E	PCB-137	272			
PCB-93	ND	0.520			PCB-138/163/164	7290			E
PCB-94	11.4				PCB-139/149	4690			E
PCB-95/98/102	2330				PCB-140	39.4			
PCB-96	17.9				PCB-141	817			
PCB-97	1370				PCB-144	194			
PCB-99	3790			E	PCB-145	0.645			
PCB-100	46.4				PCB-146/165	1130			
PCB-103	87.4				PCB-147	188			
PCB-104	ND		1.11		PCB-148	13.7			
PCB-105	1620			E	PCB-150	16.9			
PCB-106/118	5640			E	PCB-151	1140			
PCB-107/109	559				PCB-152	2.38			
PCB-108/112	206				PCB-153	8460			E
PCB-110	4240			E	PCB-154	181			
PCB-111/115	72.1				PCB-155	4.09			
PCB-113	9.75				PCB-156	571			
PCB-114	92.3				PCB-157	133			
PCB-119	202				PCB-158/160	584			
PCB-120	35.9				PCB-159	ND	0.316		
PCB-121	ND	0.309			PCB-166	21.2			
PCB-122	14.9				PCB-167	282			
PCB-123	85.9				PCB-168	7.88			
PCB-124	161				PCB-169	0.922			
PCB-126	26.2				PCB-170	1220			
PCB-127	ND	0.982			PCB-171	353			
PCB-128/162	953				PCB-172	216			
PCB-129	117				PCB-173	14.6			
PCB-130	441				PCB-174	953			
PCB-131	ND	0.363			PCB-175	61.8			
PCB-132/161	959				PCB-176	124			
PCB-133/142	146				PCB-177	857			
PCB-134/143	186				PCB-178	412			
PCB-135	656				PCB-179	536			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-01-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-14	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.54	Date Analyzed :	27-Dec-14 04:46	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2910			E	Total octaCB	2540			
PCB-181	ND	0.167			Total nonaCB	322			
PCB-182/187	2950			E	DecaCB	64.2			
PCB-183	971				Total PCB	92700			
PCB-184	5.00								
PCB-185	102								
PCB-186	ND	0.138							
PCB-188	10.3								
PCB-189	34.1								
PCB-190	256								
PCB-191	43.5								
PCB-192	ND	0.149							
PCB-193	185								
PCB-194	416								
PCB-195	165								
PCB-196/203	761								
PCB-197	27.0								
PCB-198	26.4								
PCB-199	761								
PCB-200	57.8								
PCB-201	91.3								
PCB-202	215								
PCB-204	0.811								
PCB-205	20.4								
PCB-206	213								
PCB-207	29.8								
PCB-208	79.6								
PCB-209	64.2								
Total monoCB	10.7								
Total diCB	218								
Total triCB	2240								
Total tetraCB	13400								
Total pentaCB	31700								
Total hexaCB	30000								
Total heptaCB	12200								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IA-FF-WC-01-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-14 Date Received: 13-Nov-2014 12:35
Project:		Sample Size:	10.2 g	QC Batch:	B4L0084 Date Extracted: 15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.54	Date Analyzed :	27-Dec-14 04:46 Column: ZB-1 Analyst: MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.3	5 -145		13C-PCB-170	76.4	10 -145	
13C-PCB-3	70.7	5 -145		13C-PCB-180	79.8	10 -145	
13C-PCB-4	74.0	5 -145		13C-PCB-188	72.3	10 -145	
13C-PCB-11	80.9	5 -145		13C-PCB-189	77.7	10 -145	
13C-PCB-9	78.7	5 -145		13C-PCB-194	83.8	10 -145	
13C-PCB-19	64.6	5 -145		13C-PCB-202	64.5	10 -145	
13C-PCB-28	92.3	5 -145		13C-PCB-206	80.9	10 -145	
13C-PCB-32	65.8	5 -145		13C-PCB-208	70.6	10 -145	
13C-PCB-37	89.4	5 -145		13C-PCB-209	85.6	10 -145	
13C-PCB-47	77.1	5 -145		CRS 13C-PCB-79	92.5	10 -145	
13C-PCB-52	79.1	5 -145		13C-PCB-178	75.4	10 -145	
13C-PCB-54	78.4	5 -145					
13C-PCB-70	79.2	5 -145					
13C-PCB-77	88.5	10 -145					
13C-PCB-80	77.2	10 -145					
13C-PCB-81	77.7	10 -145					
13C-PCB-95	79.4	10 -145					
13C-PCB-97	82.2	10 -145					
13C-PCB-101	86.0	10 -145					
13C-PCB-104	74.3	10 -145					
13C-PCB-105	101	10 -145					
13C-PCB-114	94.8	10 -145					
13C-PCB-118	95.3	10 -145					
13C-PCB-123	79.0	10 -145					
13C-PCB-126	96.3	10 -145					
13C-PCB-127	98.4	10 -145					
13C-PCB-138	95.2	10 -145					
13C-PCB-141	83.9	10 -145					
13C-PCB-153	96.8	10 -145					
13C-PCB-155	73.7	10 -145					
13C-PCB-156	86.3	10 -145					
13C-PCB-157	83.6	10 -145					
13C-PCB-159	84.1	10 -145					
13C-PCB-167	84.1	10 -145					
13C-PCB-169	83.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-02-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-15
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.48	QC Batch:	B4L0084
				Date Analyzed:	27-Dec-14 05:51
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.39				PCB-44	724			
PCB-2	0.594				PCB-45	77.8			
PCB-3	0.812				PCB-46	21.3			
PCB-4/10	23.6				PCB-47	705			
PCB-5/8	78.0				PCB-48/75	125			
PCB-6	14.9				PCB-50	4.24			
PCB-7/9	5.33				PCB-51	39.1			
PCB-11	11.8				PCB-52/69	1610			
PCB-12/13	ND	0.915			PCB-53	55.7			
PCB-14	ND	0.817			PCB-54	5.24			
PCB-15	6.17				PCB-55	31.9			
PCB-16/32	163				PCB-56/60	470			
PCB-17	79.4				PCB-57	9.51			
PCB-18	152				PCB-58	6.54			
PCB-19	18.2				PCB-61/70	1120			
PCB-20/21/33	61.3				PCB-62	ND	0.530		
PCB-22	59.5				PCB-63	71.4			
PCB-23	ND	0.147			PCB-65	ND	0.514		
PCB-24/27	18.9				PCB-66/76	1790			
PCB-25	28.3				PCB-67	29.1			
PCB-26	55.9				PCB-68	19.8			
PCB-28	646				PCB-73	2.91			
PCB-29	0.834				PCB-74	815			
PCB-30	0.184			J	PCB-77	60.1			
PCB-31	193				PCB-78	ND	0.490		
PCB-34	3.76				PCB-79	117			
PCB-35	ND	0.173			PCB-80	ND	0.413		
PCB-36	0.363			J	PCB-81	25.0			
PCB-37	11.8				PCB-82	388			
PCB-38	28.7				PCB-83	1.77			
PCB-39	0.413			J	PCB-84/92	1590			
PCB-40	117				PCB-85/116	1480			
PCB-41/64/71/72	746				PCB-86	4.15			
PCB-42/59	308				PCB-87/117/125	1440			
PCB-43/49	1260				PCB-88/91	683			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-02-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-15
Project:		Sample Size:	10.1 g	QC Batch:	B4L0084
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.48	Date Received:	13-Nov-2014 12:35
				Date Analyzed:	27-Dec-14 05:51
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.6				PCB-136	421			
PCB-90/101	6280			E	PCB-137	354			
PCB-93	ND	0.235			PCB-138/163/164	7380			E
PCB-94	10.6				PCB-139/149	4420			E
PCB-95/98/102	2410				PCB-140	35.3			
PCB-96	15.6				PCB-141	847			
PCB-97	1480				PCB-144	228			
PCB-99	3640			E	PCB-145	0.693			
PCB-100	55.7				PCB-146/165	1050			
PCB-103	87.2				PCB-147	202			
PCB-104	2.30				PCB-148	14.6			
PCB-105	1880			E	PCB-150	17.7			
PCB-106/118	6310			E	PCB-151	1020			
PCB-107/109	552				PCB-152	3.48			
PCB-108/112	216				PCB-153	7780			E
PCB-110	4810			E	PCB-154	187			
PCB-111/115	106				PCB-155	4.86			
PCB-113	14.0				PCB-156	581			
PCB-114	103				PCB-157	141			
PCB-119	191				PCB-158/160	684			
PCB-120	26.2				PCB-159	ND	0.719		
PCB-121	ND	0.139			PCB-166	26.5			
PCB-122	13.0				PCB-167	288			
PCB-123	91.8				PCB-168	8.69			
PCB-124	173				PCB-169	ND	0.400		
PCB-126	24.7				PCB-170	908			
PCB-127	ND	0.784			PCB-171	276			
PCB-128/162	1030				PCB-172	166			
PCB-129	171				PCB-173	13.7			
PCB-130	502				PCB-174	655			
PCB-131	ND	0.887			PCB-175	52.3			
PCB-132/161	1020				PCB-176	101			
PCB-133/142	160				PCB-177	642			
PCB-134/143	191				PCB-178	346			
PCB-135	621				PCB-179	425			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-02-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-15	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.1 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.48	Date Analyzed :	27-Dec-14 05:51	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2130			E	Total octaCB	1970			
PCB-181	7.84				Total nonaCB	289			
PCB-182/187	2420				DecaCB	89.4			
PCB-183	779				Total PCB	87200			
PCB-184	4.80								
PCB-185	64.5								
PCB-186	ND	0.261							
PCB-188	9.24								
PCB-189	25.2								
PCB-190	184								
PCB-191	38.2								
PCB-192	ND	0.231							
PCB-193	136								
PCB-194	325								
PCB-195	131								
PCB-196/203	567								
PCB-197	19.7								
PCB-198	20.4								
PCB-199	610								
PCB-200	41.1								
PCB-201	72.0								
PCB-202	169								
PCB-204	0.639								
PCB-205	15.2								
PCB-206	186								
PCB-207	25.8								
PCB-208	76.9								
PCB-209	89.4								
Total monoCB	6.80								
Total diCB	140								
Total triCB	1520								
Total tetraCB	10400								
Total pentaCB	34100								
Total hexaCB	29400								
Total heptaCB	9380								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-02-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-15
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.48	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 05:51
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	40.9	5 -145		13C-PCB-170	60.3	10 -145	
13C-PCB-3	43.8	5 -145		13C-PCB-180	63.0	10 -145	
13C-PCB-4	48.8	5 -145		13C-PCB-188	51.0	10 -145	
13C-PCB-11	58.3	5 -145		13C-PCB-189	61.5	10 -145	
13C-PCB-9	54.6	5 -145		13C-PCB-194	63.1	10 -145	
13C-PCB-19	42.6	5 -145		13C-PCB-202	52.0	10 -145	
13C-PCB-28	58.4	5 -145		13C-PCB-206	62.0	10 -145	
13C-PCB-32	46.5	5 -145		13C-PCB-208	56.0	10 -145	
13C-PCB-37	56.4	5 -145		13C-PCB-209	62.8	10 -145	
13C-PCB-47	57.7	5 -145		CRS 13C-PCB-79	68.3	10 -145	
13C-PCB-52	59.5	5 -145		13C-PCB-178	55.9	10 -145	
13C-PCB-54	55.4	5 -145					
13C-PCB-70	62.6	5 -145					
13C-PCB-77	62.7	10 -145					
13C-PCB-80	62.3	10 -145					
13C-PCB-81	62.8	10 -145					
13C-PCB-95	59.9	10 -145					
13C-PCB-97	60.4	10 -145					
13C-PCB-101	63.4	10 -145					
13C-PCB-104	56.9	10 -145					
13C-PCB-105	72.4	10 -145					
13C-PCB-114	68.6	10 -145					
13C-PCB-118	67.0	10 -145					
13C-PCB-123	58.4	10 -145					
13C-PCB-126	73.3	10 -145					
13C-PCB-127	70.3	10 -145					
13C-PCB-138	66.7	10 -145					
13C-PCB-141	59.6	10 -145					
13C-PCB-153	68.4	10 -145					
13C-PCB-155	54.0	10 -145					
13C-PCB-156	66.5	10 -145					
13C-PCB-157	63.9	10 -145					
13C-PCB-159	62.5	10 -145					
13C-PCB-167	66.1	10 -145					
13C-PCB-169	67.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-03-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-16
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.06	QC Batch:	B4L0084
				Date Analyzed:	27-Dec-14 06:55
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	5.66				PCB-44	946			
PCB-2	0.618				PCB-45	95.2			
PCB-3	0.836				PCB-46	26.8			
PCB-4/10	29.5				PCB-47	767			
PCB-5/8	109				PCB-48/75	155			
PCB-6	25.6				PCB-50	4.65			
PCB-7/9	9.30				PCB-51	45.9			
PCB-11	11.9				PCB-52/69	1700			
PCB-12/13	ND	0.891			PCB-53	87.8			
PCB-14	ND	0.795			PCB-54	6.61			
PCB-15	7.42				PCB-55	31.1			
PCB-16/32	260				PCB-56/60	530			
PCB-17	154				PCB-57	11.5			
PCB-18	323				PCB-58	7.87			
PCB-19	32.6				PCB-61/70	1330			
PCB-20/21/33	147				PCB-62	ND	0.416		
PCB-22	139				PCB-63	80.0			
PCB-23	0.252			J	PCB-65	ND	0.403		
PCB-24/27	40.6				PCB-66/76	1800			
PCB-25	65.4				PCB-67	42.5			
PCB-26	127				PCB-68	19.9			
PCB-28	928				PCB-68	19.9			
PCB-29	1.81				PCB-73	3.01			
PCB-30	0.384			J	PCB-74	814			
PCB-31	399				PCB-77	72.9			
PCB-34	5.14				PCB-78	ND	0.424		
PCB-35	ND	0.149			PCB-79	101			
PCB-36	ND	0.324			PCB-80	ND	0.334		
PCB-37	20.3				PCB-81	18.4			
PCB-38	33.4				PCB-82	284			
PCB-39	0.465			J	PCB-83	1.13			
PCB-40	157				PCB-84/92	1240			
PCB-41/64/71/72	903				PCB-85/116	1160			
PCB-42/59	392				PCB-86	3.49			
PCB-43/49	1460				PCB-87/117/125	1090			
					PCB-88/91	606			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-03-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-16
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.06	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed:	27-Dec-14 06:55
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	9.57				PCB-136	402			
PCB-90/101	5320			E	PCB-137	219			
PCB-93	ND	0.248			PCB-138/163/164	6350			E
PCB-94	10.2				PCB-139/149	4130			E
PCB-95/98/102	2170				PCB-140	30.8			
PCB-96	13.9				PCB-141	758			
PCB-97	1170				PCB-144	204			
PCB-99	2890			E	PCB-145	0.760			
PCB-100	40.2				PCB-146/165	938			
PCB-103	78.4				PCB-147	150			
PCB-104	0.988				PCB-148	11.4			
PCB-105	1410				PCB-150	16.0			
PCB-106/118	4540			E	PCB-151	1080			
PCB-107/109	409				PCB-152	2.24			
PCB-108/112	170				PCB-153	7270			E
PCB-110	3580			E	PCB-154	153			
PCB-111/115	57.1				PCB-155	2.72			
PCB-113	11.7				PCB-156	456			
PCB-114	78.1				PCB-157	101			
PCB-119	166				PCB-158/160	480			
PCB-120	28.9				PCB-159	ND	0.935		
PCB-121	ND	0.147			PCB-166	17.1			
PCB-122	11.6				PCB-167	218			
PCB-123	64.2				PCB-168	6.53			
PCB-124	138				PCB-169	ND	0.911		
PCB-126	21.7				PCB-170	1060			
PCB-127	ND	0.807			PCB-171	302			
PCB-128/162	749				PCB-172	184			
PCB-129	115				PCB-173	12.9			
PCB-130	335				PCB-174	864			
PCB-131	ND	1.08			PCB-175	56.2			
PCB-132/161	836				PCB-176	117			
PCB-133/142	121				PCB-177	737			
PCB-134/143	158				PCB-178	352			
PCB-135	560				PCB-179	474			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-03-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-16	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.06	Date Analyzed :	27-Dec-14 06:55	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2740			E	Total octaCB	2440			
PCB-181	ND	0.519			Total nonaCB	356			
PCB-182/187	2540				DecaCB	81.8			
PCB-183	902				Total PCB	80900			
PCB-184	3.26								
PCB-185	95.6								
PCB-186	ND	0.446							
PCB-188	9.25								
PCB-189	27.4								
PCB-190	217								
PCB-191	38.4								
PCB-192	ND	0.462							
PCB-193	157								
PCB-194	430								
PCB-195	154								
PCB-196/203	737								
PCB-197	27.1								
PCB-198	23.4								
PCB-199	715								
PCB-200	57.3								
PCB-201	85.1								
PCB-202	188								
PCB-204	0.916								
PCB-205	19.0								
PCB-206	232								
PCB-207	35.5								
PCB-208	88.1								
PCB-209	81.8								
Total monoCB	7.11								
Total diCB	193								
Total triCB	2680								
Total tetraCB	11600								
Total pentaCB	26800								
Total hexaCB	25900								
Total heptaCB	10900								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IA-FF-WC-03-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-16
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.06	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 06:55
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	40.5	5 -145		13C-PCB-170	67.3	10 -145	
13C-PCB-3	42.0	5 -145		13C-PCB-180	69.9	10 -145	
13C-PCB-4	48.1	5 -145		13C-PCB-188	62.2	10 -145	
13C-PCB-11	63.3	5 -145		13C-PCB-189	65.3	10 -145	
13C-PCB-9	55.6	5 -145		13C-PCB-194	67.3	10 -145	
13C-PCB-19	44.0	5 -145		13C-PCB-202	57.8	10 -145	
13C-PCB-28	60.4	5 -145		13C-PCB-206	61.8	10 -145	
13C-PCB-32	49.6	5 -145		13C-PCB-208	53.0	10 -145	
13C-PCB-37	66.5	5 -145		13C-PCB-209	61.3	10 -145	
13C-PCB-47	65.8	5 -145		CRS 13C-PCB-79	75.0	10 -145	
13C-PCB-52	67.8	5 -145		13C-PCB-178	65.0	10 -145	
13C-PCB-54	60.3	5 -145					
13C-PCB-70	68.1	5 -145					
13C-PCB-77	69.4	10 -145					
13C-PCB-80	68.4	10 -145					
13C-PCB-81	65.7	10 -145					
13C-PCB-95	67.6	10 -145					
13C-PCB-97	67.7	10 -145					
13C-PCB-101	72.7	10 -145					
13C-PCB-104	64.1	10 -145					
13C-PCB-105	77.8	10 -145					
13C-PCB-114	74.5	10 -145					
13C-PCB-118	73.1	10 -145					
13C-PCB-123	64.9	10 -145					
13C-PCB-126	78.0	10 -145					
13C-PCB-127	77.7	10 -145					
13C-PCB-138	77.5	10 -145					
13C-PCB-141	70.5	10 -145					
13C-PCB-153	79.3	10 -145					
13C-PCB-155	62.7	10 -145					
13C-PCB-156	69.7	10 -145					
13C-PCB-157	69.7	10 -145					
13C-PCB-159	68.6	10 -145					
13C-PCB-167	69.5	10 -145					
13C-PCB-169	69.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-04-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-17
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.27	Date Received:	13-Nov-2014 12:35
				Date Extracted:	15-Dec-2014 13:53
				Date Analyzed:	27-Dec-14 08:00
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	6.20				PCB-44	856			
PCB-2	0.501				PCB-45	83.7			
PCB-3	0.792				PCB-46	20.9			
PCB-4/10	24.8				PCB-47	653			
PCB-5/8	75.1				PCB-48/75	120			
PCB-6	16.5				PCB-50	3.78			
PCB-7/9	5.94				PCB-51	28.2			
PCB-11	10.4				PCB-52/69	1540			
PCB-12/13	ND	0.695			PCB-53	50.1			
PCB-14	ND	0.620			PCB-54	4.25			
PCB-15	6.13				PCB-55	27.6			
PCB-16/32	160				PCB-56/60	471			
PCB-17	85.4				PCB-57	8.60			
PCB-18	195				PCB-58	5.99			
PCB-19	20.3				PCB-61/70	1130			
PCB-20/21/33	73.1				PCB-62	ND	0.241		
PCB-22	78.5				PCB-63	68.6			
PCB-23	ND		0.124		PCB-65	ND		0.425	
PCB-24/27	22.1				PCB-66/76	1650			
PCB-25	34.2				PCB-67	29.1			
PCB-26	67.9				PCB-68	18.4			
PCB-28	664				PCB-73	2.74			
PCB-29	0.994				PCB-74	745			
PCB-30	0.186			J	PCB-77	55.9			
PCB-31	244				PCB-78	ND	0.226		
PCB-34	3.77				PCB-79	99.8			
PCB-35	ND	0.235			PCB-80	ND	0.175		
PCB-36	ND	0.257			PCB-81	18.9			
PCB-37	12.2				PCB-82	285			
PCB-38	26.5				PCB-83	1.10			
PCB-39	0.355			J	PCB-84/92	1310			
PCB-40	130				PCB-85/116	1090			
PCB-41/64/71/72	697				PCB-86	2.62			
PCB-42/59	336				PCB-87/117/125	1120			
PCB-43/49	1260				PCB-88/91	587			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-04-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-17	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.27	Date Analyzed:	27-Dec-14 08:00	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	7.09				PCB-136	448			
PCB-90/101	5470			E	PCB-137	238			
PCB-93	ND	0.636			PCB-138/163/164	6570			E
PCB-94	8.06				PCB-139/149	4510			E
PCB-95/98/102	2270				PCB-140	33.7			
PCB-96	13.8				PCB-141	797			
PCB-97	1170				PCB-144	203			
PCB-99	3070			E	PCB-145	0.423			J
PCB-100	37.4				PCB-146/165	996			
PCB-103	72.2				PCB-147	150			
PCB-104	0.825				PCB-148	12.4			
PCB-105	1360				PCB-150	14.3			
PCB-106/118	4570			E	PCB-151	1130			
PCB-107/109	413				PCB-152	2.05			
PCB-108/112	178				PCB-153	7830			E
PCB-110	3640			E	PCB-154	157			
PCB-111/115	77.9				PCB-155	3.62			
PCB-113	12.4				PCB-156	490			
PCB-114	81.0				PCB-157	106			
PCB-119	158				PCB-158/160	531			
PCB-120	28.2				PCB-159	ND	0.446		
PCB-121	ND	0.377			PCB-166	20.5			
PCB-122	11.4				PCB-167	242			
PCB-123	60.9				PCB-168	7.05			
PCB-124	133				PCB-169	0.716			
PCB-126	19.2				PCB-170	1110			
PCB-127	ND	0.604			PCB-171	321			
PCB-128/162	794				PCB-172	196			
PCB-129	125				PCB-173	14.9			
PCB-130	378				PCB-174	902			
PCB-131	ND	0.501			PCB-175	61.3			
PCB-132/161	935				PCB-176	128			
PCB-133/142	132				PCB-177	781			
PCB-134/143	169				PCB-178	404			
PCB-135	632				PCB-179	542			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-04-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-17	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.27	Date Analyzed :	27-Dec-14 08:00	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2730			E	Total octaCB	2510			
PCB-181	5.66				Total nonaCB	314			
PCB-182/187	2890				DecaCB	76.7			
PCB-183	967				Total PCB	81400			
PCB-184	4.72								
PCB-185	96.7								
PCB-186	ND	0.241							
PCB-188	8.59								
PCB-189	26.6								
PCB-190	227								
PCB-191	40.3								
PCB-192	ND	0.292							
PCB-193	169								
PCB-194	411								
PCB-195	156								
PCB-196/203	751								
PCB-197	26.3								
PCB-198	25.5								
PCB-199	763								
PCB-200	58.1								
PCB-201	90.6								
PCB-202	207								
PCB-204	0.638								
PCB-205	19.4								
PCB-206	207								
PCB-207	29.1								
PCB-208	77.8								
PCB-209	76.7								
Total monoCB	7.49								
Total diCB	139								
Total triCB	1690								
Total tetraCB	10100								
Total pentaCB	27300								
Total hexaCB	27700								
Total heptaCB	11600								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-04-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-17
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.27	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 08:00
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	60.3	5 -145		13C-PCB-170	69.0	10 -145	
13C-PCB-3	58.8	5 -145		13C-PCB-180	72.1	10 -145	
13C-PCB-4	64.0	5 -145		13C-PCB-188	61.7	10 -145	
13C-PCB-11	69.9	5 -145		13C-PCB-189	66.7	10 -145	
13C-PCB-9	68.8	5 -145		13C-PCB-194	72.6	10 -145	
13C-PCB-19	55.3	5 -145		13C-PCB-202	57.1	10 -145	
13C-PCB-28	64.7	5 -145		13C-PCB-206	65.8	10 -145	
13C-PCB-32	56.3	5 -145		13C-PCB-208	61.9	10 -145	
13C-PCB-37	67.9	5 -145		13C-PCB-209	68.1	10 -145	
13C-PCB-47	66.1	5 -145		CRS 13C-PCB-79	77.9	10 -145	
13C-PCB-52	69.6	5 -145		13C-PCB-178	65.7	10 -145	
13C-PCB-54	68.0	5 -145					
13C-PCB-70	70.2	5 -145					
13C-PCB-77	70.7	10 -145					
13C-PCB-80	71.9	10 -145					
13C-PCB-81	70.2	10 -145					
13C-PCB-95	67.8	10 -145					
13C-PCB-97	69.2	10 -145					
13C-PCB-101	72.5	10 -145					
13C-PCB-104	64.6	10 -145					
13C-PCB-105	84.6	10 -145					
13C-PCB-114	80.9	10 -145					
13C-PCB-118	80.2	10 -145					
13C-PCB-123	68.3	10 -145					
13C-PCB-126	85.1	10 -145					
13C-PCB-127	84.0	10 -145					
13C-PCB-138	79.5	10 -145					
13C-PCB-141	71.7	10 -145					
13C-PCB-153	83.4	10 -145					
13C-PCB-155	63.0	10 -145					
13C-PCB-156	74.5	10 -145					
13C-PCB-157	73.5	10 -145					
13C-PCB-159	72.2	10 -145					
13C-PCB-167	73.6	10 -145					
13C-PCB-169	72.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-05-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-18	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	Date Analyzed :	27-Dec-14 09:04	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	12.1				PCB-44	1590			E
PCB-2	0.665				PCB-45	168			
PCB-3	1.04				PCB-46	41.8			
PCB-4/10	50.9				PCB-47	1200			
PCB-5/8	132				PCB-48/75	262			
PCB-6	38.4				PCB-50	7.58			
PCB-7/9	14.2				PCB-51	73.4			
PCB-11	14.7				PCB-52/69	2810			
PCB-12/13	ND	0.683			PCB-53	134			
PCB-14	ND	0.474			PCB-54	10.3			
PCB-15	8.57				PCB-55	45.7			
PCB-16/32	439				PCB-56/60	872			
PCB-17	259				PCB-57	17.6			
PCB-18	622				PCB-58	10.7			
PCB-19	56.0				PCB-61/70	1880			
PCB-20/21/33	220				PCB-62	ND	0.435		
PCB-22	238				PCB-63	117			
PCB-23	0.798				PCB-65	ND		0.495	
PCB-24/27	70.9				PCB-66/76	2500			
PCB-25	90.0				PCB-67	64.5			
PCB-26	202				PCB-68	29.6			
PCB-28	1480			E	PCB-73	5.97			
PCB-29	2.65				PCB-74	1190			
PCB-30	0.508				PCB-77	108			
PCB-31	644				PCB-78	ND	0.428		
PCB-34	8.20				PCB-79	141			
PCB-35	ND	0.429			PCB-80	ND	0.340		
PCB-36	0.493				PCB-81	30.0			
PCB-37	33.0				PCB-82	471			
PCB-38	46.8				PCB-83	1.86			
PCB-39	0.485			J	PCB-84/92	1920			
PCB-40	264				PCB-85/116	1460			
PCB-41/64/71/72	1440				PCB-86	6.76			
PCB-42/59	653				PCB-87/117/125	1610			
PCB-43/49	2420				PCB-88/91	924			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-05-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-18	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	Date Analyzed :	27-Dec-14 09:04	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	14.0				PCB-136	713			
PCB-90/101	7840			E	PCB-137	297			
PCB-93	ND	0.354			PCB-138/163/164	9350			E
PCB-94	18.2				PCB-139/149	7100			E
PCB-95/98/102	3500				PCB-140	46.3			
PCB-96	28.2				PCB-141	1240			
PCB-97	1780			E	PCB-144	298			
PCB-99	4190			E	PCB-145	1.19			
PCB-100	64.5				PCB-146/165	1420			
PCB-103	129				PCB-147	240			
PCB-104	1.97				PCB-148	16.4			
PCB-105	1880			E	PCB-150	26.7			
PCB-106/118	6480			E	PCB-151	1870			E
PCB-107/109	614				PCB-152	5.07			
PCB-108/112	261				PCB-153	11200			E
PCB-110	5400			E	PCB-154	232			
PCB-111/115	87.0				PCB-155	4.43			
PCB-113	10.9				PCB-156	653			
PCB-114	109				PCB-157	152			
PCB-119	238				PCB-158/160	728			
PCB-120	43.0				PCB-159	ND	0.430		
PCB-121	ND	0.210			PCB-166	21.9			
PCB-122	24.8				PCB-167	366			
PCB-123	97.9				PCB-168	13.3			
PCB-124	207				PCB-169	0.854			
PCB-126	32.0				PCB-170	1840			E
PCB-127	ND	1.07			PCB-171	495			
PCB-128/162	1080				PCB-172	324			
PCB-129	177				PCB-173	25.8			
PCB-130	583				PCB-174	1480			E
PCB-131	ND	0.498			PCB-175	97.9			
PCB-132/161	1350				PCB-176	216			
PCB-133/142	187				PCB-177	1210			
PCB-134/143	261				PCB-178	582			
PCB-135	934				PCB-179	856			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-05-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-18	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.3 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	Date Analyzed :	27-Dec-14 09:04	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	4760			E	Total octaCB	4500			
PCB-181	6.19				Total nonaCB	615			
PCB-182/187	4500			E	DecaCB	138			
PCB-183	1500			E	Total PCB	127000			
PCB-184	5.10								
PCB-185	160								
PCB-186	ND	0.228							
PCB-188	16.6								
PCB-189	49.3								
PCB-190	352								
PCB-191	60.5								
PCB-192	ND	0.853							
PCB-193	250								
PCB-194	773								
PCB-195	268								
PCB-196/203	1390								
PCB-197	45.6								
PCB-198	36.9								
PCB-199	1370								
PCB-200	103								
PCB-201	157								
PCB-202	324								
PCB-204	1.08								
PCB-205	33.5								
PCB-206	404								
PCB-207	55.2								
PCB-208	156								
PCB-209	138								
Total monoCB	13.8								
Total diCB	259								
Total triCB	4410								
Total tetraCB	18100								
Total pentaCB	39400								
Total hexaCB	40600								
Total heptaCB	18800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-05-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-18
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.14	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 09:04
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	54.5	5 -145		13C-PCB-170	71.4	10 -145	
13C-PCB-3	57.3	5 -145		13C-PCB-180	74.6	10 -145	
13C-PCB-4	61.3	5 -145		13C-PCB-188	63.3	10 -145	
13C-PCB-11	69.4	5 -145		13C-PCB-189	72.5	10 -145	
13C-PCB-9	66.5	5 -145		13C-PCB-194	77.1	10 -145	
13C-PCB-19	54.8	5 -145		13C-PCB-202	57.5	10 -145	
13C-PCB-28	63.7	5 -145		13C-PCB-206	70.4	10 -145	
13C-PCB-32	57.0	5 -145		13C-PCB-208	63.7	10 -145	
13C-PCB-37	63.9	5 -145		13C-PCB-209	72.8	10 -145	
13C-PCB-47	69.4	5 -145		CRS 13C-PCB-79	76.8	10 -145	
13C-PCB-52	71.8	5 -145		13C-PCB-178	66.8	10 -145	
13C-PCB-54	70.4	5 -145					
13C-PCB-70	70.3	5 -145					
13C-PCB-77	72.4	10 -145					
13C-PCB-80	69.3	10 -145					
13C-PCB-81	69.3	10 -145					
13C-PCB-95	68.4	10 -145					
13C-PCB-97	71.9	10 -145					
13C-PCB-101	75.6	10 -145					
13C-PCB-104	64.0	10 -145					
13C-PCB-105	87.1	10 -145					
13C-PCB-114	81.4	10 -145					
13C-PCB-118	82.1	10 -145					
13C-PCB-123	66.5	10 -145					
13C-PCB-126	81.7	10 -145					
13C-PCB-127	84.3	10 -145					
13C-PCB-138	82.3	10 -145					
13C-PCB-141	72.9	10 -145					
13C-PCB-153	85.7	10 -145					
13C-PCB-155	61.6	10 -145					
13C-PCB-156	78.7	10 -145					
13C-PCB-157	74.5	10 -145					
13C-PCB-159	76.0	10 -145					
13C-PCB-167	75.7	10 -145					
13C-PCB-169	74.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-06-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-19	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.0 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.50	Date Analyzed:	27-Dec-14 10:09	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	11.5				PCB-44	1550			E
PCB-2	0.997				PCB-45	149			
PCB-3	1.53				PCB-46	48.2			
PCB-4/10	47.2				PCB-47	1220			
PCB-5/8	186				PCB-48/75	294			
PCB-6	38.9				PCB-50	6.74			
PCB-7/9	14.6				PCB-51	80.4			
PCB-11	22.7				PCB-52/69	2830			
PCB-12/13	1.01			J	PCB-53	140			
PCB-14	ND	0.648			PCB-54	8.62			
PCB-15	15.0				PCB-55	53.1			
PCB-16/32	368				PCB-56/60	1030			
PCB-17	231				PCB-57	18.7			
PCB-18	457				PCB-58	12.1			
PCB-19	40.8				PCB-61/70	2730			
PCB-20/21/33	255				PCB-62	ND	0.329		
PCB-22	197				PCB-63	128			
PCB-23	0.324			J	PCB-65	ND	0.319		
PCB-24/27	50.5				PCB-66/76	3220			E
PCB-25	82.0				PCB-67	69.7			
PCB-26	153				PCB-68	33.2			
PCB-28	1370				PCB-73	5.20			
PCB-29	2.57				PCB-74	1380			
PCB-30	0.487			J	PCB-77	146			
PCB-31	567				PCB-78	ND	0.339		
PCB-34	9.64				PCB-79	170			
PCB-35	ND	0.400			PCB-80	ND	0.278		
PCB-36	0.604				PCB-81	16.8			
PCB-37	53.0				PCB-82	575			
PCB-38	47.9				PCB-83	2.62			
PCB-39	1.28				PCB-84/92	2300			
PCB-40	243				PCB-85/116	1740			
PCB-41/64/71/72	1500				PCB-86	7.40			
PCB-42/59	642				PCB-87/117/125	2000			
PCB-43/49	2410				PCB-88/91	1050			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-06-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-19	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	10.0 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.50	Date Analyzed :	27-Dec-14 10:09	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	27.6				PCB-136	910			
PCB-90/101	9440			E	PCB-137	391			
PCB-93	ND	0.319			PCB-138/163/164	12000			E
PCB-94	20.3				PCB-139/149	8200			E
PCB-95/98/102	3910				PCB-140	59.8			
PCB-96	30.6				PCB-141	1470			
PCB-97	2090			E	PCB-144	406			
PCB-99	5190			E	PCB-145	1.59			
PCB-100	67.6				PCB-146/165	1710			
PCB-103	134				PCB-147	266			
PCB-104	1.98				PCB-148	18.4			
PCB-105	2530			E	PCB-150	26.8			
PCB-106/118	8400			E	PCB-151	2160			E
PCB-107/109	779				PCB-152	5.39			
PCB-108/112	315				PCB-153	14000			E
PCB-110	6750			E	PCB-154	267			
PCB-111/115	116				PCB-155	5.90			
PCB-113	17.1				PCB-156	909			
PCB-114	143				PCB-157	198			
PCB-119	279				PCB-158/160	960			
PCB-120	54.6				PCB-159	ND	0.821		
PCB-121	ND	0.189			PCB-166	32.6			
PCB-122	28.4				PCB-167	460			
PCB-123	132				PCB-168	12.1			
PCB-124	288				PCB-169	0.878			
PCB-126	41.1				PCB-170	2270			E
PCB-127	ND	0.724			PCB-171	603			
PCB-128/162	1430				PCB-172	377			
PCB-129	230				PCB-173	28.1			
PCB-130	674				PCB-174	1770			E
PCB-131	ND	0.976			PCB-175	109			
PCB-132/161	1500				PCB-176	247			
PCB-133/142	221				PCB-177	1500			E
PCB-134/143	311				PCB-178	668			
PCB-135	1120				PCB-179	1040			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-06-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-19
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.50	QC Batch:	B4L0084
				Date Analyzed:	27-Dec-14 10:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	5580			E	Total octaCB	4620			
PCB-181	ND	1.14			Total nonaCB	534			
PCB-182/187	5110			E	DecaCB	118			
PCB-183	1810			E	Total PCB	150000			
PCB-184	6.96								
PCB-185	195								
PCB-186	ND	0.199							
PCB-188	14.8								
PCB-189	65.2								
PCB-190	451								
PCB-191	81.1								
PCB-192	ND	1.65							
PCB-193	312								
PCB-194	780								
PCB-195	293								
PCB-196/203	1440								
PCB-197	46.8								
PCB-198	42.3								
PCB-199	1350								
PCB-200	110								
PCB-201	159								
PCB-202	349								
PCB-204	1.46								
PCB-205	37.3								
PCB-206	353								
PCB-207	47.4								
PCB-208	133								
PCB-209	118								
Total monoCB	14.1								
Total diCB	325								
Total triCB	3890								
Total tetraCB	20100								
Total pentaCB	48500								
Total hexaCB	50000								
Total heptaCB	22200								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-06-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-19	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.0 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.50	Date Analyzed :	27-Dec-14 10:09	Column:	ZB-1	Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	56.3	5 -145		13C-PCB-170	65.4	10 -145	
13C-PCB-3	55.0	5 -145		13C-PCB-180	67.0	10 -145	
13C-PCB-4	58.7	5 -145		13C-PCB-188	57.8	10 -145	
13C-PCB-11	64.7	5 -145		13C-PCB-189	65.7	10 -145	
13C-PCB-9	62.7	5 -145		13C-PCB-194	69.2	10 -145	
13C-PCB-19	50.1	5 -145		13C-PCB-202	54.6	10 -145	
13C-PCB-28	64.9	5 -145		13C-PCB-206	63.0	10 -145	
13C-PCB-32	51.3	5 -145		13C-PCB-208	56.9	10 -145	
13C-PCB-37	67.8	5 -145		13C-PCB-209	65.1	10 -145	
13C-PCB-47	67.0	5 -145		CRS 13C-PCB-79	73.3	10 -145	
13C-PCB-52	65.6	5 -145		13C-PCB-178	57.9	10 -145	
13C-PCB-54	64.9	5 -145					
13C-PCB-70	67.3	5 -145					
13C-PCB-77	68.4	10 -145					
13C-PCB-80	68.8	10 -145					
13C-PCB-81	65.4	10 -145					
13C-PCB-95	63.3	10 -145					
13C-PCB-97	66.3	10 -145					
13C-PCB-101	68.3	10 -145					
13C-PCB-104	60.4	10 -145					
13C-PCB-105	72.8	10 -145					
13C-PCB-114	75.6	10 -145					
13C-PCB-118	74.1	10 -145					
13C-PCB-123	60.3	10 -145					
13C-PCB-126	76.2	10 -145					
13C-PCB-127	74.2	10 -145					
13C-PCB-138	76.3	10 -145					
13C-PCB-141	67.7	10 -145					
13C-PCB-153	78.2	10 -145					
13C-PCB-155	58.4	10 -145					
13C-PCB-156	69.8	10 -145					
13C-PCB-157	68.0	10 -145					
13C-PCB-159	66.1	10 -145					
13C-PCB-167	66.6	10 -145					
13C-PCB-169	68.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-07-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-20	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.73	Date Analyzed:	27-Dec-14 11:13	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	10.1				PCB-44	1260			
PCB-2	0.518				PCB-45	109			
PCB-3	0.767				PCB-46	22.0			
PCB-4/10	33.8				PCB-47	1030			
PCB-5/8	75.0				PCB-48/75	141			
PCB-6	18.7				PCB-50	4.90			
PCB-7/9	7.52				PCB-51	25.6			
PCB-11	11.8				PCB-52/69	2270			
PCB-12/13	ND	0.575			PCB-53	44.5			
PCB-14	ND	0.513			PCB-54	5.27			
PCB-15	5.88				PCB-55	49.9			
PCB-16/32	167				PCB-56/60	771			
PCB-17	86.4				PCB-57	13.9			
PCB-18	227				PCB-58	8.56			
PCB-19	23.7				PCB-61/70	1460			
PCB-20/21/33	90.4				PCB-62	ND	0.488		
PCB-22	115				PCB-63	121			
PCB-23	0.334			J	PCB-65	ND	0.473		
PCB-24/27	23.6				PCB-66/76	2680			
PCB-25	45.0				PCB-67	42.5			
PCB-26	96.9				PCB-68	29.5			
PCB-28	940				PCB-73	2.68			
PCB-29	0.942				PCB-74	1290			
PCB-30	0.259			J	PCB-77	79.7			
PCB-31	337				PCB-78	ND	0.448		
PCB-34	4.51				PCB-79	180			
PCB-35	ND	0.313			PCB-80	ND	0.386		
PCB-36	0.334			J	PCB-81	22.4			
PCB-37	18.4				PCB-82	512			
PCB-38	42.0				PCB-83	2.64			
PCB-39	0.373			J	PCB-84/92	2240			
PCB-40	188				PCB-85/116	1780			
PCB-41/64/71/72	1060				PCB-86	3.79			
PCB-42/59	502				PCB-87/117/125	2140			
PCB-43/49	1910				PCB-88/91	1020			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-07-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-20	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.73	Date Analyzed:	27-Dec-14 11:13	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.38				PCB-136	881			
PCB-90/101	9700			E	PCB-137	447			
PCB-93	ND	0.598			PCB-138/163/164	12700			E
PCB-94	8.07				PCB-139/149	8900			E
PCB-95/98/102	3650				PCB-140	62.1			
PCB-96	16.3				PCB-141	1660			E
PCB-97	2070			E	PCB-144	403			
PCB-99	5310			E	PCB-145	0.580			
PCB-100	67.2				PCB-146/165	1790			
PCB-103	122				PCB-147	290			
PCB-104	1.18				PCB-148	13.9			
PCB-105	2640			E	PCB-150	26.3			
PCB-106/118	9130			E	PCB-151	2290			E
PCB-107/109	806				PCB-152	2.51			
PCB-108/112	310				PCB-153	14800			E
PCB-110	6730			E	PCB-154	288			
PCB-111/115	122				PCB-155	6.05			
PCB-113	6.94				PCB-156	992			
PCB-114	156				PCB-157	221			
PCB-119	278				PCB-158/160	1040			
PCB-120	48.8				PCB-159	ND	0.874		
PCB-121	ND	0.355			PCB-166	34.8			
PCB-122	15.3				PCB-167	446			
PCB-123	104				PCB-168	13.6			
PCB-124	197				PCB-169	ND	0.861		
PCB-126	37.3				PCB-170	2240			E
PCB-127	ND	1.24			PCB-171	643			
PCB-128/162	1590				PCB-172	374			
PCB-129	236				PCB-173	22.6			
PCB-130	748				PCB-174	1820			E
PCB-131	ND	0.712			PCB-175	120			
PCB-132/161	1710				PCB-176	259			
PCB-133/142	238				PCB-177	1540			E
PCB-134/143	311				PCB-178	741			
PCB-135	1240				PCB-179	1080			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-07-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-20	Date Received:	13-Nov-2014 12:35		
Project:		Sample Size:	10.4 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.73	Date Analyzed:	27-Dec-14 11:13	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	5570			E	Total octaCB	4510			
PCB-181	ND	0.745			Total nonaCB	493			
PCB-182/187	5360			E	DecaCB	102			
PCB-183	1910			E	Total PCB	148000			
PCB-184	7.35								
PCB-185	196								
PCB-186	ND	0.625							
PCB-188	14.9								
PCB-189	45.4								
PCB-190	440								
PCB-191	75.0								
PCB-192	ND	0.664							
PCB-193	304								
PCB-194	760								
PCB-195	307								
PCB-196/203	1390								
PCB-197	47.7								
PCB-198	44.0								
PCB-199	1320								
PCB-200	101								
PCB-201	159								
PCB-202	353								
PCB-204	1.11								
PCB-205	34.5								
PCB-206	327								
PCB-207	44.9								
PCB-208	121								
PCB-209	102								
Total monoCB	11.4								
Total diCB	153								
Total triCB	2220								
Total tetraCB	15300								
Total pentaCB	49200								
Total hexaCB	53400								
Total heptaCB	22800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-07-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-20
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:35
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.73	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 11:13
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	49.1	5 -145		13C-PCB-170	64.4	10 -145	
13C-PCB-3	51.4	5 -145		13C-PCB-180	67.3	10 -145	
13C-PCB-4	54.2	5 -145		13C-PCB-188	56.7	10 -145	
13C-PCB-11	64.0	5 -145		13C-PCB-189	60.9	10 -145	
13C-PCB-9	59.9	5 -145		13C-PCB-194	68.6	10 -145	
13C-PCB-19	48.9	5 -145		13C-PCB-202	52.3	10 -145	
13C-PCB-28	60.6	5 -145		13C-PCB-206	65.0	10 -145	
13C-PCB-32	52.0	5 -145		13C-PCB-208	59.1	10 -145	
13C-PCB-37	64.7	5 -145		13C-PCB-209	68.6	10 -145	
13C-PCB-47	63.4	5 -145		CRS 13C-PCB-79	75.1	10 -145	
13C-PCB-52	65.7	5 -145		13C-PCB-178	61.8	10 -145	
13C-PCB-54	63.5	5 -145					
13C-PCB-70	67.9	5 -145					
13C-PCB-77	68.8	10 -145					
13C-PCB-80	64.9	10 -145					
13C-PCB-81	67.6	10 -145					
13C-PCB-95	62.1	10 -145					
13C-PCB-97	64.5	10 -145					
13C-PCB-101	70.1	10 -145					
13C-PCB-104	58.9	10 -145					
13C-PCB-105	79.3	10 -145					
13C-PCB-114	75.2	10 -145					
13C-PCB-118	76.6	10 -145					
13C-PCB-123	62.6	10 -145					
13C-PCB-126	79.7	10 -145					
13C-PCB-127	79.0	10 -145					
13C-PCB-138	78.3	10 -145					
13C-PCB-141	67.3	10 -145					
13C-PCB-153	80.9	10 -145					
13C-PCB-155	56.6	10 -145					
13C-PCB-156	71.1	10 -145					
13C-PCB-157	66.1	10 -145					
13C-PCB-159	66.1	10 -145					
13C-PCB-167	67.3	10 -145					
13C-PCB-169	65.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-21	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	1.03 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.64	Date Analyzed :	27-Dec-14 21:06	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	17.4		D	PCB-44	3200			D
PCB-2	ND	18.8		D	PCB-45	111			D
PCB-3	ND	18.3		D	PCB-46	49.3			D
PCB-4/10	ND	104		D	PCB-47	1740			D
PCB-5/8	ND	79.9		D	PCB-48/75	334			D
PCB-6	ND	78.2		D	PCB-50	ND	45.1		D
PCB-7/9	ND	77.7		D	PCB-51	ND	41.7		D
PCB-11	ND	70.4		D	PCB-52/69	4940			D
PCB-12/13	ND	74.2		D	PCB-53	172			D
PCB-14	ND	66.2		D	PCB-54	ND	36.4		D
PCB-15	ND	67.5		D	PCB-55	127			D
PCB-16/32	65.6			J, D	PCB-56/60	2010			D
PCB-17	96.9			D	PCB-57	67.0			D
PCB-18	368			D	PCB-58	57.8			D
PCB-19	ND	18.3		D	PCB-61/70	10300			D
PCB-20/21/33	ND		51.6	D	PCB-62	ND	38.6		D
PCB-22	ND		197	D	PCB-63	543			D
PCB-23	ND	31.4		D	PCB-65	ND	37.3		D
PCB-24/27	23.6			J, D	PCB-66/76	7370			D
PCB-25	51.8			D	PCB-67	187			D
PCB-26	153			D	PCB-68	290			D
PCB-28	1430			D	PCB-73	ND	35.0		D
PCB-29	ND	31.0		D	PCB-74	3660			D
PCB-30	ND	12.9		D	PCB-77	236			D
PCB-31	978			D	PCB-78	ND	32.6		D
PCB-34	ND	32.6		D	PCB-79	875			D
PCB-35	ND	35.4		D	PCB-80	ND	25.4		D
PCB-36	ND	35.4		D	PCB-81	76.2			D
PCB-37	ND	35.1		D	PCB-82	205			D
PCB-38	86.0			D	PCB-83	ND	51.5		D
PCB-39	ND	34.4		D	PCB-84/92	8710			D
PCB-40	201			D	PCB-85/116	14400			D
PCB-41/64/71/72	2910			D	PCB-86	ND	76.6		D
PCB-42/59	570			D	PCB-87/117/125	8350			D
PCB-43/49	2610			D	PCB-88/91	2460			D

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Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-21	Date Received:	13-Nov-2014 12:35
Project:		Sample Size:	1.03 g	QC Batch:	B4L0084	Date Extracted:	15-Dec-2014 13:53
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.64	Date Analyzed:	27-Dec-14 21:06	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	43.1			J, D	PCB-136	1650			D
PCB-90/101	34400			D	PCB-137	4710			D
PCB-93	ND	83.2		D	PCB-138/163/164	126000			D
PCB-94	78.5			D	PCB-139/149	26500			D
PCB-95/98/102	13200			D	PCB-140	625			D
PCB-96	ND	57.4		D	PCB-141	10800			D
PCB-97	4820			D	PCB-144	1630			D
PCB-99	23200			D	PCB-145	ND	47.0		D
PCB-100	116			D	PCB-146/165	23100			D
PCB-103	170			D	PCB-147	1790			D
PCB-104	ND	49.8		D	PCB-148	200			D
PCB-105	20000			D	PCB-150	57.5			D
PCB-106/118	51900			D	PCB-151	8130			D
PCB-107/109	6820			D	PCB-152	ND	46.8		D
PCB-108/112	1060			D	PCB-153	163000			E, D
PCB-110	25600			D	PCB-154	1270			D
PCB-111/115	791			D	PCB-155	122			D
PCB-113	85.4			D	PCB-156	7920			D
PCB-114	1230			D	PCB-157	2050			D
PCB-119	1070			D	PCB-158/160	6510			D
PCB-120	575			D	PCB-159	ND	166		D
PCB-121	96.2			D	PCB-166	500			D
PCB-122	104			D	PCB-167	4860			D
PCB-123	987			D	PCB-168	200			D
PCB-124	2130			D	PCB-169	93.8			D
PCB-126	376			D	PCB-170	24500			D
PCB-127	ND	99.1		D	PCB-171	6450			D
PCB-128/162	17600			D	PCB-172	6850			D
PCB-129	628			D	PCB-173	ND	101		D
PCB-130	6630			D	PCB-174	7720			D
PCB-131	ND	207		D	PCB-175	1370			D
PCB-132/161	4010			D	PCB-176	487			D
PCB-133/142	3210			D	PCB-177	12900			D
PCB-134/143	1220			D	PCB-178	9940			D
PCB-135	7350			D	PCB-179	4810			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

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Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-21 Date Received: 13-Nov-2014 12:35
Project:		Sample Size:	1.03 g	QC Batch:	B4L0084 Date Extracted: 15-Dec-2014 13:53
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.64	Date Analyzed :	27-Dec-14 21:06 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	70900			D	Total octaCB	66100			
PCB-181	194			D	Total nonaCB	7790			
PCB-182/187	59600			D	DecaCB	976			
PCB-183	20300			D	Total PCB	1020000			
PCB-184	402			D					
PCB-185	1650			D					
PCB-186	ND	71.4		D					
PCB-188	347			D					
PCB-189	1310			D					
PCB-190	6220			D					
PCB-191	806			D					
PCB-192	ND	77.0		D					
PCB-193	4920			D					
PCB-194	12700			D					
PCB-195	4020			D					
PCB-196/203	21300			D					
PCB-197	1280			D					
PCB-198	933			D					
PCB-199	17900			D					
PCB-200	213			D					
PCB-201	2520			D					
PCB-202	4320			D					
PCB-204	140			D					
PCB-205	824			D					
PCB-206	4780			D					
PCB-207	1330			D					
PCB-208	1680			D					
PCB-209	976			D					
Total monoCB	ND	18.8							
Total diCB	ND	104							
Total triCB	3250		3500						
Total tetraCB	42600								
Total pentaCB	223000								
Total hexaCB	433000								
Total heptaCB	242000								

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Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400902-21
Project:		Sample Size:	1.03 g	Date Received:	13-Nov-2014 12:35
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.64	QC Batch:	B4L0084
				Date Analyzed :	27-Dec-14 21:06
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	56.1	5 -145	D	13C-PCB-170	65.0	10 -145	D
13C-PCB-3	53.3	5 -145	D	13C-PCB-180	68.0	10 -145	D
13C-PCB-4	54.5	5 -145	D	13C-PCB-188	62.2	10 -145	D
13C-PCB-11	63.8	5 -145	D	13C-PCB-189	65.8	10 -145	D
13C-PCB-9	59.1	5 -145	D	13C-PCB-194	71.9	10 -145	D
13C-PCB-19	51.8	5 -145	D	13C-PCB-202	60.4	10 -145	D
13C-PCB-28	76.4	5 -145	D	13C-PCB-206	61.6	10 -145	D
13C-PCB-32	55.1	5 -145	D	13C-PCB-208	50.5	10 -145	D
13C-PCB-37	79.3	5 -145	D	13C-PCB-209	60.3	10 -145	D
13C-PCB-47	70.9	5 -145	D	CRS 13C-PCB-79	81.6	10 -145	D
13C-PCB-52	76.5	5 -145	D	13C-PCB-178	61.3	10 -145	D
13C-PCB-54	69.6	5 -145	D				
13C-PCB-70	76.9	5 -145	D				
13C-PCB-77	95.7	10 -145	D				
13C-PCB-80	80.6	10 -145	D				
13C-PCB-81	83.2	10 -145	D				
13C-PCB-95	54.6	10 -145	D				
13C-PCB-97	66.8	10 -145	D				
13C-PCB-101	70.8	10 -145	D				
13C-PCB-104	61.7	10 -145	D				
13C-PCB-105	76.8	10 -145	D				
13C-PCB-114	74.8	10 -145	D				
13C-PCB-118	71.6	10 -145	D				
13C-PCB-123	69.3	10 -145	D				
13C-PCB-126	78.7	10 -145	D				
13C-PCB-127	78.2	10 -145	D				
13C-PCB-138	75.5	10 -145	D				
13C-PCB-141	68.4	10 -145	D				
13C-PCB-153	72.9	10 -145	D				
13C-PCB-155	66.7	10 -145	D				
13C-PCB-156	69.0	10 -145	D				
13C-PCB-157	69.1	10 -145	D				
13C-PCB-159	71.2	10 -145	D				
13C-PCB-167	70.7	10 -145	D				
13C-PCB-169	69.4	10 -145	D				

DL - Sample specific estimated detection limit

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Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400902-01	IB-FF-WC-02-05-20141012	21.6	28-Dec-2014	B4L0083
1400902-02	IB-FF-WC-03-05-20141012	24.2	28-Dec-2014	B4L0083
1400902-03	IB-FF-WC-04-05-20141012	22.4	28-Dec-2014	B4L0083
1400902-04	IB-FF-WC-05-05-20141012	23.7	28-Dec-2014	B4L0083
1400902-05	IB-FF-WC-06-05-20141012	22.9	28-Dec-2014	B4L0083
1400902-06	IB-FF-WC-07-05-20141012	22.8	28-Dec-2014	B4L0083
1400902-07	IB-FF-WC-08-05-20141012	20.9	28-Dec-2014	B4L0083
1400902-08	IB-FF-WC-09-05-20141012	22.8	28-Dec-2014	B4L0083
1400902-09	IB-FF-LF-01-05-20141012	21.6	28-Dec-2014	B4L0083
1400902-10	IB-FF-LF-02-05-20141012	21.3	28-Dec-2014	B4L0083
1400902-11	IB-FF-LF-03-05-20141012	21.8	28-Dec-2014	B4L0083
1400902-12	IB-FF-LF-04-05-20141012	22.7	28-Dec-2014	B4L0083
1400902-13	IB-FF-LF-05-05-20141012	22.2	28-Dec-2014	B4L0083
1400902-14	IA-FF-WC-01-07-20141011	23.3	28-Dec-2014	B4L0083
1400902-15	IA-FF-WC-02-07-20141011	23.8	28-Dec-2014	B4L0083
1400902-16	IA-FF-WC-03-07-20141011	23.2	28-Dec-2014	B4L0083
1400902-17	IA-FF-WC-04-07-20141011	21.6	28-Dec-2014	B4L0083
1400902-18	IA-FF-WC-05-07-20141011	23.7	28-Dec-2014	B4L0083
1400902-19	IA-FF-WC-06-07-20141011	23.5	28-Dec-2014	B4L0083
1400902-20	IA-FF-WC-07-07-20141011	24.1	28-Dec-2014	B4L0083

Fish Scale Measurements

Field Sample ID	Lab ID	No.	Measurements of Scaled Fish		
			Total Length (cm)	Standard Length (cm)	Mass (g)
IB-FF-WC-04-05-20141012	1400902-03	2	21.5	18.5	124.57
IB-FF-WC-05-05-20141012	1400902-04	2	21.9	18.0	117.57
IB-FF-LF-01-05-20141012	1400902-09	2	26.5	22.5	108.0
IB-FF-LF-02-05-20141012	1400902-10	2	25.9	22.7	95.23
IB-FF-LF-03-05-20141012	1400902-11	2	27.3	23.3	113.69
IB-FF-LF-04-05-20141012	1400902-12	1	30.1	25.9	177.38
IB-FF-LF-05-05-20141012	1400902-13	1	30.3	25.3	145.39
IA-FF-WC-01-07-20141011	1400902-14	2	18.9	15.3	80.25
IA-FF-WC-03-07-20141011	1400902-16	2	21.2	17.2	109.67

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Szamansky
 Phone Number: (855) 300-4350
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 168C	PCBs (low res) E270 Congeners - is conducted on sample ID FF/OF - ONLY (NOT Offal (OF) - CALSCIENCE	W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to	Scales, measure and use	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, no testing / keep frozen	See notes section at bottom, FF/OF will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfperch	1	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfperch	1	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfperch	6	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size). 130g
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size). 130g
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=24cm, SL=21cm.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=24cm, SL=21cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	X		X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	X	X	X	X	X	X	X	X	X	X			Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6													Scales already collected. Skin-Off Fillets + Offal from this replicate.
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	X		X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = Otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/03/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: _____ Date/Time: _____
 Received By: _____ Company: _____ Date/Time: _____
 Signature/Printed Name: _____ Date/Time: _____

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊖ 1400906

ANCHOR OEA
 0.20g, 0.30g, -2.10g
 1400902

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	Vista Test Parameters (Sub's noted in Bold)										Comments		Comments/Preservation			
					PBS (high res) epa 1668C	PBS (low-res) 8270 Congeners - Is conducted on sample ID FF/OF sample fish, but test fish filets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (CN Stable Isotop)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label zbrock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.				
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2																
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3																TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1	X	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. Skin-Off Filets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4																TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	X															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <i>Via Email 10/03/14</i>	Company: Anchor OEA
Signature/Printed Name	Date/Time
Received By: <i>Bethie Benedict</i>	Company: Vista
Signature/Printed Name	Date/Time
Received By:	Company:
Signature/Printed Name	Date/Time

7 1400902
 B 1400903
 A 1400904
 O 1400906

ANCHOR OEA
 1400902
 0.2°C, -0.3°C, -2.1°C

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time: <u>11/13/14 0849</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u>
Logged In:	Date/Time: <u>12/04/14 1235</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <u>UBSB 1/9/15</u>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

Sample ID: LB-FF-LF-02-05-20141012
 ↓ 03-05 ↓
 05-05
 04-05
 01-05

Note "LB" is written on one label "IB" on the other label

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: JBB	Location: WF-2 Shelf/Rack: NA
Logged In:	Date/Time 12/04/14 1235	Initials: JBB	Location: WF-2 Shelf/Rack: C1
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
	None		
Temp °C: -0.3 (uncorrected)	Time: 0903		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 4 of 9 Trk # 7718 4040 1461	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		JBB 1/9/15
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA		COC	Sample Container
		None	
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID: 1A-FF-WC-01-07-20141011

↓
 04-07
 07-07
 02-07
 03-07
 06-07
 05-07
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time: 11/13/14 0849	Initials: PBB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time: 12/04/14 1235	Initials: PBB	Location: WF2
			Shelf/Rack: C1
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: -2.1 (uncorrected)	Time: 0906	Thermometer ID: IR-1	
Temp °C: -2.1 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		PBB/9/15
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	NA	COC	Sample Container
		None	
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain
			<input checked="" type="checkbox"/> Return
			Dispose

Comments:

Sample Label ID:

- LB-FF-WC-02-05-20141012
- LB-FF-WC-04-05-20141012
- LB-FF-WC-03-05-20141012
- LB-FF-WC-06-05-20141012
- 05-05
- 08-05
- 07-05
- 09-05

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400902
 Date Received: 13-Nov-14 12:35
 Documented by/date: B.Benedict 01/09/2015

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>MM 1/9/15</u>
Client Comments/Instructions <u>rec'd by email</u>	

February 03, 2015

Vista Project I.D.: 1400903

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400903

Case Narrative

Sample Condition on Receipt:

Twelve tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

As requested, scales were collected from all samples except "IA-FF-WC-10-07-20141011". The physical measurements of each scaled fish are included in the report. Heads were removed from each scaled fish and were shipped to Southern California Marine Institute. For sample "IA-FF-WC-10-07-20141011", the head was collected from the fish with a Total Length of 27cm and a Standard Length of 23cm.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "CS-FF-CH-09-03-20141010" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400903-01	IA-FF-WC-08-07-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-02	IA-FF-WC-10-07-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-03	CS-FF-CH-01-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-04	CS-FF-CH-02-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-05	CS-FF-CH-03-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-06	CS-FF-CH-04-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-07	CS-FF-CH-05-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-08	CS-FF-CH-06-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-09	CS-FF-CH-07-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-10	CS-FF-CH-09-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-11	CS-FF-CH-10-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400903-12	CS-FF-LF-02-03-20141010	10-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0548			PCB-43/49	ND		0.104	
PCB-2	ND	0.0559			PCB-44	ND		0.118	
PCB-3	ND	0.0554			PCB-45	ND	0.0728		
PCB-4/10	ND	0.199			PCB-46	ND	0.0772		
PCB-5/8	ND	0.168			PCB-47	0.581			
PCB-6	ND	0.163			PCB-48/75	ND	0.0528		
PCB-7/9	ND	0.164			PCB-50	ND	0.0727		
PCB-11	ND		0.720		PCB-51	ND	0.0639		
PCB-12/13	ND	0.172			PCB-52/69	ND		0.126	
PCB-14	ND	0.145			PCB-53	ND	0.0658		
PCB-15	ND	0.152			PCB-54	ND	0.0583		
PCB-16/32	ND		0.142		PCB-55	ND	0.0435		
PCB-17	ND	0.0680			PCB-56/60	0.125			J
PCB-18	ND	0.0740			PCB-57	ND	0.0472		
PCB-19	ND	0.0748			PCB-58	ND	0.0453		
PCB-20/21/33	0.166			J	PCB-61/70	0.154			J
PCB-22	0.154			J	PCB-62	ND	0.0546		
PCB-23	ND	0.0521			PCB-63	ND	0.0449		
PCB-24/27	ND	0.0502			PCB-65	ND	0.0560		
PCB-25	ND	0.0584			PCB-66/76	ND		0.113	
PCB-26	ND	0.0530			PCB-67	ND	0.0484		
PCB-28	0.196			J	PCB-68	ND		0.112	
PCB-29	ND	0.0522			PCB-73	ND	0.0529		
PCB-30	ND	0.0474			PCB-74	ND		0.0630	
PCB-31	ND		0.131		PCB-77	0.0880			J
PCB-34	ND	0.0533			PCB-78	ND	0.0491		
PCB-35	0.0930			J	PCB-79	ND	0.0455		
PCB-36	ND	0.0492			PCB-80	ND	0.0396		
PCB-37	ND	0.0477			PCB-81	ND	0.0458		
PCB-38	ND	0.0506			PCB-82	ND	0.0690		
PCB-39	ND	0.0477			PCB-83	ND	0.0431		
PCB-40	ND	0.0836			PCB-84/92	ND	0.0563		
PCB-41/64/71/72	0.182			J	PCB-85/116	ND	0.0515		
PCB-42/59	ND		0.0700		PCB-86	ND	0.0661		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND		0.0580		PCB-133/142	ND	0.0540		
PCB-88/91	ND	0.0626			PCB-134/143	ND	0.0526		
PCB-89	ND	0.0587			PCB-135	ND	0.0351		
PCB-90/101	ND		0.109		PCB-136	ND	0.0258		
PCB-93	ND	0.0616			PCB-137	ND	0.0540		
PCB-94	ND	0.0635			PCB-138/163/164	ND	0.0458		
PCB-95/98/102	ND	0.0566			PCB-139/149	ND	0.0320		
PCB-96	ND	0.0466			PCB-140	ND	0.0350		
PCB-97	ND	0.0541			PCB-141	ND	0.0549		
PCB-99	ND	0.0501			PCB-144	ND	0.0333		
PCB-100	ND	0.0520			PCB-145	ND	0.0269		
PCB-103	ND	0.0510			PCB-146/165	ND	0.0449		
PCB-104	ND	0.0407			PCB-147	ND	0.0370		
PCB-105	0.0814			J	PCB-148	ND	0.0355		
PCB-106/118	0.108			J	PCB-150	ND	0.0257		
PCB-107/109	ND	0.0398			PCB-151	ND	0.0350		
PCB-108/112	ND	0.0503			PCB-152	ND	0.0258		
PCB-110	ND		0.0750		PCB-153	ND	0.0440		
PCB-111/115	ND	0.0394			PCB-154	ND	0.0327		
PCB-113	ND	0.0456			PCB-155	ND	0.0246		
PCB-114	ND	0.0419			PCB-156	ND	0.0385		
PCB-119	ND	0.0384			PCB-157	ND	0.0395		
PCB-120	ND	0.0376			PCB-158/160	ND	0.0426		
PCB-121	ND	0.0414			PCB-159	ND	0.0412		
PCB-122	ND	0.0486			PCB-166	ND	0.0442		
PCB-123	ND	0.0402			PCB-167	ND	0.0420		
PCB-124	ND	0.0397			PCB-168	ND	0.0375		
PCB-126	ND		0.0440		PCB-169	ND		0.0390	
PCB-127	ND	0.0466			PCB-170	ND	0.0343		
PCB-128/162	ND	0.0488			PCB-171	ND	0.0294		
PCB-129	ND	0.0626			PCB-172	ND	0.0294		
PCB-130	ND	0.0631			PCB-173	ND	0.0357		
PCB-131	ND	0.0577			PCB-174	ND	0.0332		
PCB-132/161	ND	0.0458			PCB-175	ND	0.0319		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.0233			Total triCB	0.608		0.881	
PCB-177	ND	0.0336			Total tetraCB	1.13		1.84	
PCB-178	ND	0.0310			Total pentaCB	0.189		0.475	
PCB-179	ND	0.0246			Total hexaCB	ND		0.0390	
PCB-180	ND	0.0301			Total heptaCB	0.0344			
PCB-181	ND	0.0303			Total octaCB	ND		0.0730	
PCB-182/187	ND	0.0291			Total nonaCB	ND	0.0275		
PCB-183	ND	0.0276			DecaCB	ND		0.0280	
PCB-184	ND	0.0250			Total PCB	1.96			
PCB-185	ND	0.0300							
PCB-186	ND	0.0234							
PCB-188	ND	0.0226							
PCB-189	0.0344			J					
PCB-190	ND	0.0258							
PCB-191	ND	0.0229							
PCB-192	ND	0.0243							
PCB-193	ND	0.0233							
PCB-194	ND		0.0730						
PCB-195	ND	0.0608							
PCB-196/203	ND	0.0427							
PCB-197	ND	0.0304							
PCB-198	ND	0.0440							
PCB-199	ND	0.0456							
PCB-200	ND	0.0343							
PCB-201	ND	0.0323							
PCB-202	ND	0.0352							
PCB-204	ND	0.0345							
PCB-205	ND	0.0460							
PCB-206	ND	0.0275							
PCB-207	ND	0.0199							
PCB-208	ND	0.0193							
PCB-209	ND		0.0280						
Total monoCB	ND	0.0559							
Total diCB	ND		0.720						

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	56.9	5 - 145		13C-PCB-157	88.7	10 - 145	
13C-PCB-3	62.1	5 - 145		13C-PCB-159	85.2	10 - 145	
13C-PCB-4	68.6	5 - 145		13C-PCB-167	88.5	10 - 145	
13C-PCB-11	76.4	5 - 145		13C-PCB-169	88.6	10 - 145	
13C-PCB-9	73.0	5 - 145		13C-PCB-170	83.3	10 - 145	
13C-PCB-19	74.9	5 - 145		13C-PCB-180	86.6	10 - 145	
13C-PCB-28	78.8	5 - 145		13C-PCB-188	85.4	10 - 145	
13C-PCB-32	75.6	5 - 145		13C-PCB-189	90.6	10 - 145	
13C-PCB-37	83.9	5 - 145		13C-PCB-194	88.0	10 - 145	
13C-PCB-47	76.0	5 - 145		13C-PCB-202	85.5	10 - 145	
13C-PCB-52	75.9	5 - 145		13C-PCB-206	83.4	10 - 145	
13C-PCB-54	68.9	5 - 145		13C-PCB-208	74.8	10 - 145	
13C-PCB-70	84.5	5 - 145		13C-PCB-209	75.6	10 - 145	
13C-PCB-77	84.8	10 - 145		CRS 13C-PCB-79	82.8	10 - 145	
13C-PCB-80	83.2	10 - 145		13C-PCB-178	82.2	10 - 145	
13C-PCB-81	85.6	10 - 145					
13C-PCB-95	80.3	10 - 145					
13C-PCB-97	85.8	10 - 145					
13C-PCB-101	83.9	10 - 145					
13C-PCB-104	77.7	10 - 145					
13C-PCB-105	98.6	10 - 145					
13C-PCB-114	93.1	10 - 145					
13C-PCB-118	84.4	10 - 145					
13C-PCB-123	86.9	10 - 145					
13C-PCB-126	97.1	10 - 145					
13C-PCB-127	99.3	10 - 145					
13C-PCB-138	86.7	10 - 145					
13C-PCB-141	87.2	10 - 145					
13C-PCB-153	90.6	10 - 145					
13C-PCB-155	87.6	10 - 145					
13C-PCB-156	88.6	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B5A0018
Date Extracted: 06-Jan-2015 13:14Lab Sample: B5A0018-BS1
Date Analyzed: 13-Jan-15 19:08 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	104	100	104	60 - 135	IS 13C-PCB-1	56.7	15 - 145
PCB-3	104	100	104	60 - 135	IS 13C-PCB-3	63.2	15 - 145
PCB-4/10	231	200	116	60 - 135	IS 13C-PCB-4	69.6	15 - 145
PCB-15	118	100	118	60 - 135	IS 13C-PCB-9	72.6	15 - 145
PCB-19	99.6	100	99.6	60 - 135	IS 13C-PCB-11	77.5	15 - 145
PCB-37	112	100	112	60 - 135	IS 13C-PCB-19	74.8	15 - 145
PCB-54	106	100	106	60 - 135	IS 13C-PCB-28	75.8	15 - 145
PCB-77	106	100	106	60 - 135	IS 13C-PCB-32	80.3	15 - 145
PCB-81	106	100	106	60 - 135	IS 13C-PCB-37	84.3	15 - 145
PCB-104	104	100	104	60 - 135	IS 13C-PCB-47	84.7	15 - 145
PCB-105	113	100	113	60 - 135	IS 13C-PCB-52	83.2	15 - 145
PCB-106/118	212	200	106	60 - 135	IS 13C-PCB-54	75.6	15 - 145
PCB-114	117	100	117	60 - 135	IS 13C-PCB-70	84.9	15 - 145
PCB-123	101	100	101	60 - 135	IS 13C-PCB-77	92.4	40 - 145
PCB-126	110	100	110	60 - 135	IS 13C-PCB-80	85.3	40 - 145
PCB-155	101	100	101	60 - 135	IS 13C-PCB-81	90.9	40 - 145
PCB-156	106	100	106	60 - 135	IS 13C-PCB-95	81.2	40 - 145
PCB-157	106	100	106	60 - 135	IS 13C-PCB-97	91.4	40 - 145
PCB-167	104	100	104	60 - 135	IS 13C-PCB-101	88.0	40 - 145
PCB-169	105	100	105	60 - 135	IS 13C-PCB-104	82.2	40 - 145
PCB-188	103	100	103	60 - 135	IS 13C-PCB-105	99.0	40 - 145
PCB-189	105	100	105	60 - 135	IS 13C-PCB-114	92.3	40 - 145
PCB-202	99.7	100	99.7	60 - 135	IS 13C-PCB-118	95.3	40 - 145
PCB-205	108	100	108	60 - 135	IS 13C-PCB-123	99.0	40 - 145
PCB-206	104	100	104	60 - 135	IS 13C-PCB-126	99.2	40 - 145
PCB-208	107	100	107	60 - 135	IS 13C-PCB-127	98.5	40 - 145
PCB-209	102	100	102	60 - 135	IS 13C-PCB-138	88.9	40 - 145
					IS 13C-PCB-141	91.1	40 - 145
					IS 13C-PCB-153	89.6	40 - 145
					IS 13C-PCB-155	91.8	40 - 145
					IS 13C-PCB-156	89.6	40 - 145
					IS 13C-PCB-157	89.2	40 - 145
					IS 13C-PCB-159	88.8	40 - 145
					IS 13C-PCB-167	90.1	40 - 145
					IS 13C-PCB-169	92.0	40 - 145
					IS 13C-PCB-170	88.8	40 - 145
					IS 13C-PCB-180	94.5	40 - 145
					IS 13C-PCB-188	88.0	40 - 145
					IS 13C-PCB-189	89.9	40 - 145
					IS 13C-PCB-194	91.5	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0018
Date Extracted: 06-Jan-2015 13:14

Lab Sample: B5A0018-BS1
Date Analyzed: 13-Jan-15 19:08 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	88.4	40 - 145
					IS 13C-PCB-206	84.9	40 - 145
					IS 13C-PCB-208	78.9	40 - 145
					IS 13C-PCB-209	79.1	40 - 145
					CRS 13C-PCB-79	88.9	40 - 145
					CRS 13C-PCB-178	88.2	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: IA-FF-WC-08-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-01	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.14 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.389	Date Analyzed :	13-Jan-15 22:17	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	2.97				PCB-44	871			
PCB-2	0.304			J	PCB-45	65.3			
PCB-3	0.431			J	PCB-46	14.3			
PCB-4/10	13.1				PCB-47	816			B
PCB-5/8	38.3				PCB-48/75	136			
PCB-6	8.53				PCB-50	3.44			
PCB-7/9	3.12				PCB-51	22.5			
PCB-11	6.72				PCB-52/69	1640			
PCB-12/13	ND	0.308			PCB-53	39.6			
PCB-14	ND	0.260			PCB-54	3.09			
PCB-15	2.82				PCB-55	21.1			
PCB-16/32	98.4				PCB-56/60	458			B
PCB-17	52.6				PCB-57	7.14			
PCB-18	138				PCB-58	5.95			
PCB-19	11.6				PCB-61/70	990			B
PCB-20/21/33	60.2			B	PCB-62	ND	0.465		
PCB-22	64.7			B	PCB-63	81.0			
PCB-23	ND		0.0820		PCB-65	ND	0.477		
PCB-24/27	12.1				PCB-66/76	2050			
PCB-25	26.7				PCB-67	20.9			
PCB-26	56.3				PCB-68	18.3			
PCB-28	592			B	PCB-73	3.62			
PCB-29	0.569			J	PCB-74	1060			
PCB-30	ND	0.0774			PCB-77	38.6			B
PCB-31	201				PCB-78	8.25			
PCB-34	2.27				PCB-79	92.5			
PCB-35	ND	0.329			PCB-80	ND	0.385		
PCB-36	ND	0.310			PCB-81	15.2			
PCB-37	7.12				PCB-82	319			
PCB-38	20.7				PCB-83	1.55			
PCB-39	ND	0.301			PCB-84/92	1400			
PCB-40	109				PCB-85/116	875			
PCB-41/64/71/72	744			B	PCB-86	4.46			
PCB-42/59	324				PCB-87/117/125	1370			
PCB-43/49	1460				PCB-88/91	655			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-08-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-01	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.14 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.389	Date Analyzed :	13-Jan-15 22:17	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	8.41				PCB-136	410			
PCB-90/101	6430				PCB-137	282			
PCB-93	ND	0.279			PCB-138/163/164	7030			E
PCB-94	6.44				PCB-139/149	4320			
PCB-95/98/102	2010				PCB-140	33.5			
PCB-96	10.7				PCB-141	788			
PCB-97	1380				PCB-144	217			
PCB-99	3960			E	PCB-145	0.576			J
PCB-100	39.7				PCB-146/165	1230			
PCB-103	64.0				PCB-147	222			
PCB-104	0.748			J	PCB-148	15.4			
PCB-105	1750			B	PCB-150	14.8			
PCB-106/118	5730			B	PCB-151	1050			
PCB-107/109	472				PCB-152	2.33			
PCB-108/112	166				PCB-153	8270			E
PCB-110	4410			E	PCB-154	173			
PCB-111/115	90.9				PCB-155	2.76			
PCB-113	ND	0.227			PCB-156	568			
PCB-114	92.6				PCB-157	117			
PCB-119	168				PCB-158/160	641			
PCB-120	29.5				PCB-159	ND	0.497		
PCB-121	ND	0.187			PCB-166	19.3			
PCB-122	6.84				PCB-167	254			
PCB-123	75.0				PCB-168	8.38			
PCB-124	127				PCB-169	ND	0.525		
PCB-126	19.4				PCB-170	971			
PCB-127	ND	0.474			PCB-171	306			
PCB-128/162	980				PCB-172	167			
PCB-129	154				PCB-173	12.0			
PCB-130	438				PCB-174	912			
PCB-131	ND	0.764			PCB-175	51.4			
PCB-132/161	1090				PCB-176	104			
PCB-133/142	159				PCB-177	734			
PCB-134/143	182				PCB-178	307			
PCB-135	564				PCB-179	432			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-08-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-01	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.14 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.389	Date Analyzed :	13-Jan-15 22:17	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2760				Total octaCB	2170			
PCB-181	6.75				Total nonaCB	307			
PCB-182/187	2320				DecaCB	56.4			
PCB-183	841				Total PCB	86400			B
PCB-184	2.81								
PCB-185	77.9								
PCB-186	ND	0.295							
PCB-188	11.8								
PCB-189	22.0			B					
PCB-190	190								
PCB-191	34.1								
PCB-192	ND	0.292							
PCB-193	137								
PCB-194	405								
PCB-195	152								
PCB-196/203	631								
PCB-197	19.2								
PCB-198	18.9								
PCB-199	639								
PCB-200	41.1								
PCB-201	76.0								
PCB-202	178								
PCB-204	0.724			J					
PCB-205	13.8								
PCB-206	213								
PCB-207	24.3								
PCB-208	70.4								
PCB-209	56.4								
Total monoCB	3.71								
Total diCB	72.5								
Total triCB	1340			B					
Total tetraCB	11100			B					
Total pentaCB	31700			B					
Total hexaCB	29200								
Total heptaCB	10400			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-08-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-01
Project:		Sample Size:	5.14 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.389	QC Batch:	B5A0018
				Date Analyzed :	13-Jan-15 22:17
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	65.3	5 -145		13C-PCB-170	85.8	10 -145	
13C-PCB-3	68.7	5 -145		13C-PCB-180	86.8	10 -145	
13C-PCB-4	75.1	5 -145		13C-PCB-188	78.6	10 -145	
13C-PCB-11	80.9	5 -145		13C-PCB-189	82.6	10 -145	
13C-PCB-9	79.1	5 -145		13C-PCB-194	88.1	10 -145	
13C-PCB-19	76.6	5 -145		13C-PCB-202	80.4	10 -145	
13C-PCB-28	88.9	5 -145		13C-PCB-206	80.8	10 -145	
13C-PCB-32	76.9	5 -145		13C-PCB-208	77.1	10 -145	
13C-PCB-37	83.3	5 -145		13C-PCB-209	74.5	10 -145	
13C-PCB-47	91.2	5 -145		CRS 13C-PCB-79	89.9	10 -145	
13C-PCB-52	91.4	5 -145		13C-PCB-178	80.5	10 -145	
13C-PCB-54	78.9	5 -145					
13C-PCB-70	87.9	5 -145					
13C-PCB-77	91.7	10 -145					
13C-PCB-80	84.2	10 -145					
13C-PCB-81	89.8	10 -145					
13C-PCB-95	79.2	10 -145					
13C-PCB-97	84.2	10 -145					
13C-PCB-101	82.5	10 -145					
13C-PCB-104	81.3	10 -145					
13C-PCB-105	97.7	10 -145					
13C-PCB-114	90.5	10 -145					
13C-PCB-118	85.7	10 -145					
13C-PCB-123	85.9	10 -145					
13C-PCB-126	94.6	10 -145					
13C-PCB-127	94.4	10 -145					
13C-PCB-138	86.1	10 -145					
13C-PCB-141	83.4	10 -145					
13C-PCB-153	84.7	10 -145					
13C-PCB-155	79.3	10 -145					
13C-PCB-156	87.2	10 -145					
13C-PCB-157	86.3	10 -145					
13C-PCB-159	82.6	10 -145					
13C-PCB-167	86.0	10 -145					
13C-PCB-169	86.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-10-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-02	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.55	Date Analyzed:	13-Jan-15 23:19	Column:	ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	6.68				PCB-44	1990			E
PCB-2	0.730				PCB-45	205			
PCB-3	1.15				PCB-46	26.7			
PCB-4/10	28.9				PCB-47	1730			B
PCB-5/8	84.0				PCB-48/75	221			
PCB-6	18.4				PCB-50	8.75			
PCB-7/9	6.92				PCB-51	57.5			
PCB-11	19.2				PCB-52/69	4010			E
PCB-12/13	ND	0.126			PCB-53	84.8			
PCB-14	ND	0.0248			PCB-54	13.7			
PCB-15	13.0				PCB-55	49.6			
PCB-16/32	284				PCB-56/60	1160			B
PCB-17	120				PCB-57	ND	0.192		
PCB-18	364				PCB-58	10.4			
PCB-19	36.1				PCB-61/70	2660			B
PCB-20/21/33	164			B	PCB-62	ND	0.216		
PCB-22	294			B	PCB-63	161			
PCB-23	0.476			J	PCB-65	ND	0.222		
PCB-24/27	36.1				PCB-66/76	3930			E
PCB-25	122				PCB-67	58.8			
PCB-26	247				PCB-68	38.5			
PCB-28	2230			B, E	PCB-73	10.3			
PCB-29	1.28				PCB-74	1870			
PCB-30	0.297			J	PCB-77	112			B
PCB-31	854				PCB-78	14.6			
PCB-34	6.61				PCB-79	155			
PCB-35	ND	1.60			PCB-80	ND	0.154		
PCB-36	0.531				PCB-81	18.0			
PCB-37	33.7				PCB-82	611			
PCB-38	44.9				PCB-83	2.21			
PCB-39	0.653				PCB-84/92	2710			
PCB-40	299				PCB-85/116	1330			
PCB-41/64/71/72	1590			B	PCB-86	ND	0.143		
PCB-42/59	757				PCB-87/117/125	2230			
PCB-43/49	3410				PCB-88/91	1290			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-10-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-02
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.55	Date Received:	13-Nov-2014 12:36
				Date Extracted:	06-Jan-2015 13:14
				Date Analyzed :	13-Jan-15 23:19 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	11.6				PCB-136	1030			
PCB-90/101	10200			E	PCB-137	532			
PCB-93	ND	0.125			PCB-138/163/164	14200			E
PCB-94	9.56				PCB-139/149	8230			E
PCB-95/98/102	4320				PCB-140	59.4			
PCB-96	23.2				PCB-141	1720			
PCB-97	2200			E	PCB-144	495			
PCB-99	7150			E	PCB-145	0.450			J
PCB-100	227				PCB-146/165	2740			
PCB-103	251				PCB-147	536			
PCB-104	6.85				PCB-148	53.8			
PCB-105	2960			B, E	PCB-150	72.0			
PCB-106/118	10100			B, E	PCB-151	2690			E
PCB-107/109	807				PCB-152	4.36			
PCB-108/112	308				PCB-153	19200			E
PCB-110	6810			E	PCB-154	661			
PCB-111/115	151				PCB-155	11.0			
PCB-113	42.9				PCB-156	1090			
PCB-114	171				PCB-157	247			
PCB-119	379				PCB-158/160	1280			
PCB-120	59.1				PCB-159	ND	0.399		
PCB-121	ND	0.0837			PCB-166	34.5			
PCB-122	19.4				PCB-167	603			
PCB-123	127				PCB-168	23.5			
PCB-124	300				PCB-169	1.07			
PCB-126	39.2				PCB-170	2810			E
PCB-127	ND	0.326			PCB-171	845			
PCB-128/162	1680				PCB-172	521			
PCB-129	282				PCB-173	32.5			
PCB-130	845				PCB-174	2350			E
PCB-131	ND	0.676			PCB-175	102			
PCB-132/161	2160				PCB-176	318			
PCB-133/142	365				PCB-177	2140			E
PCB-134/143	421				PCB-178	987			
PCB-135	1220				PCB-179	1440			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-10-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-02	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.55	Date Analyzed :	13-Jan-15 23:19	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8080			E	Total octaCB	7340			
PCB-181	19.3				Total nonaCB	1140			
PCB-182/187	7000			E	DecaCB	283			
PCB-183	2500			E	Total PCB	186000			B
PCB-184	6.36								
PCB-185	250								
PCB-186	0.177			J					
PCB-188	30.6								
PCB-189	76.1			B					
PCB-190	553								
PCB-191	116								
PCB-192	ND	0.266							
PCB-193	400								
PCB-194	1390								
PCB-195	549								
PCB-196/203	2140								
PCB-197	66.6								
PCB-198	68.3								
PCB-199	2110			E					
PCB-200	146								
PCB-201	256								
PCB-202	564								
PCB-204	1.30								
PCB-205	55.6								
PCB-206	788								
PCB-207	85.5								
PCB-208	264								
PCB-209	283								
Total monoCB	8.56								
Total diCB	170								
Total triCB	4840			B					
Total tetraCB	24600			B					
Total pentaCB	54900			B					
Total hexaCB	62600								
Total heptaCB	30600			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-10-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-02
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.55	QC Batch:	B5A0018
				Date Analyzed :	13-Jan-15 23:19
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	69.6	5 -145		13C-PCB-170	84.2	10 -145	
13C-PCB-3	67.2	5 -145		13C-PCB-180	87.6	10 -145	
13C-PCB-4	78.1	5 -145		13C-PCB-188	74.6	10 -145	
13C-PCB-11	85.8	5 -145		13C-PCB-189	83.4	10 -145	
13C-PCB-9	82.4	5 -145		13C-PCB-194	90.0	10 -145	
13C-PCB-19	78.0	5 -145		13C-PCB-202	77.6	10 -145	
13C-PCB-28	90.0	5 -145		13C-PCB-206	88.9	10 -145	
13C-PCB-32	81.9	5 -145		13C-PCB-208	78.6	10 -145	
13C-PCB-37	94.8	5 -145		13C-PCB-209	86.2	10 -145	
13C-PCB-47	81.7	5 -145		CRS 13C-PCB-79	84.8	10 -145	
13C-PCB-52	78.7	5 -145		13C-PCB-178	75.4	10 -145	
13C-PCB-54	71.5	5 -145					
13C-PCB-70	87.1	5 -145					
13C-PCB-77	87.5	10 -145					
13C-PCB-80	85.9	10 -145					
13C-PCB-81	86.7	10 -145					
13C-PCB-95	87.0	10 -145					
13C-PCB-97	89.3	10 -145					
13C-PCB-101	86.2	10 -145					
13C-PCB-104	80.5	10 -145					
13C-PCB-105	98.9	10 -145					
13C-PCB-114	91.5	10 -145					
13C-PCB-118	78.8	10 -145					
13C-PCB-123	85.7	10 -145					
13C-PCB-126	100	10 -145					
13C-PCB-127	97.0	10 -145					
13C-PCB-138	86.5	10 -145					
13C-PCB-141	83.6	10 -145					
13C-PCB-153	84.6	10 -145					
13C-PCB-155	85.7	10 -145					
13C-PCB-156	91.7	10 -145					
13C-PCB-157	89.1	10 -145					
13C-PCB-159	85.9	10 -145					
13C-PCB-167	87.8	10 -145					
13C-PCB-169	86.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-03	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 00:22	Column:	ZB-1	Analyst:	AC

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.0800		PCB-44	14.1			
PCB-2	ND	0.0384			PCB-45	3.90			
PCB-3	ND	0.0380			PCB-46	ND		0.288	
PCB-4/10	0.704			J	PCB-47	146			B
PCB-5/8	2.49				PCB-48/75	26.0			
PCB-6	0.564				PCB-50	0.686			
PCB-7/9	ND	0.106			PCB-51	138			
PCB-11	2.33				PCB-52/69	630			
PCB-12/13	ND	0.112			PCB-53	64.3			
PCB-14	ND	0.0943			PCB-54	11.1			
PCB-15	ND	0.0987			PCB-55	2.79			
PCB-16/32	22.8				PCB-56/60	59.8			B
PCB-17	7.45				PCB-57	2.28			
PCB-18	17.7				PCB-58	1.75			
PCB-19	1.38				PCB-61/70	47.3			B
PCB-20/21/33	9.32			B	PCB-62	ND	0.144		
PCB-22	20.3			B	PCB-63	6.66			
PCB-23	ND	0.0991			PCB-65	ND	0.148		
PCB-24/27	1.80				PCB-66/76	244			
PCB-25	1.78				PCB-67	0.561			
PCB-26	18.4				PCB-68	1.67			
PCB-28	64.9			B	PCB-73	4.78			
PCB-29	0.0927			J	PCB-74	90.2			
PCB-30	ND	0.0378			PCB-77	ND		0.779	
PCB-31	24.7				PCB-78	ND	0.133		
PCB-34	0.427			J	PCB-79	14.4			
PCB-35	ND	0.120			PCB-80	ND	0.121		
PCB-36	ND	0.113			PCB-81	6.11			
PCB-37	0.289			J	PCB-82	7.21			
PCB-38	3.65				PCB-83	0.304			J
PCB-39	ND	0.110			PCB-84/92	170			
PCB-40	ND		0.733		PCB-85/116	108			
PCB-41/64/71/72	163			B	PCB-86	ND	0.169		
PCB-42/59	23.6				PCB-87/117/125	171			
PCB-43/49	371				PCB-88/91	96.1			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-FF-CH-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-03
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Received:	13-Nov-2014 12:36
				Date Extracted:	06-Jan-2015 13:14
				Date Analyzed:	14-Jan-15 00:22
				Column:	ZB-1
				Analyst:	AC

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		0.776		PCB-136	40.7			
PCB-90/101	925				PCB-137	52.1			
PCB-93	ND	0.168			PCB-138/163/164	1170			
PCB-94	2.98				PCB-139/149	783			
PCB-95/98/102	310				PCB-140	2.88			
PCB-96	3.89				PCB-141	165			
PCB-97	111				PCB-144	45.7			
PCB-99	616				PCB-145	ND	0.0851		
PCB-100	45.6				PCB-146/165	253			
PCB-103	43.5				PCB-147	89.1			
PCB-104	6.56				PCB-148	6.92			
PCB-105	259			B	PCB-150	8.21			
PCB-106/118	726			B	PCB-151	293			
PCB-107/109	62.7				PCB-152	3.07			
PCB-108/112	2.52				PCB-153	1820			
PCB-110	598				PCB-154	124			
PCB-111/115	14.7				PCB-155	2.03			
PCB-113	ND	0.126			PCB-156	68.7			
PCB-114	5.26				PCB-157	15.7			
PCB-119	42.2				PCB-158/160	114			
PCB-120	3.89				PCB-159	23.1			
PCB-121	ND	0.113			PCB-166	3.06			
PCB-122	1.37				PCB-167	36.1			
PCB-123	5.51				PCB-168	4.05			
PCB-124	4.68				PCB-169	ND	0.186		
PCB-126	3.17				PCB-170	213			
PCB-127	ND	0.191			PCB-171	61.4			
PCB-128/162	150				PCB-172	42.5			
PCB-129	15.8				PCB-173	1.91			
PCB-130	55.8				PCB-174	149			
PCB-131	ND	0.250			PCB-175	13.7			
PCB-132/161	82.9				PCB-176	18.0			
PCB-133/142	27.9				PCB-177	128			
PCB-134/143	11.4				PCB-178	90.0			
PCB-135	36.9				PCB-179	57.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-03	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 00:22	Column:	ZB-1	Analyst:	AC

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	693				Total octaCB	561			
PCB-181	ND	0.122			Total nonaCB	71.5			
PCB-182/187	640				DecaCB	14.5			
PCB-183	211				Total PCB	15200			B
PCB-184	0.762								
PCB-185	18.8								
PCB-186	ND	0.0948							
PCB-188	5.38								
PCB-189	6.36			B					
PCB-190	42.5								
PCB-191	8.23								
PCB-192	ND	0.0981							
PCB-193	35.5								
PCB-194	114								
PCB-195	39.5								
PCB-196/203	171								
PCB-197	5.47								
PCB-198	5.08								
PCB-199	149								
PCB-200	8.23								
PCB-201	20.8								
PCB-202	44.0								
PCB-204	0.126			J					
PCB-205	4.23								
PCB-206	49.4								
PCB-207	7.44								
PCB-208	14.6								
PCB-209	14.5								
Total monoCB	ND		0.0800						
Total diCB	6.10								
Total triCB	195			B					
Total tetraCB	2070		2080	B					
Total pentaCB	4350			B					
Total hexaCB	5510								
Total heptaCB	2440			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-01-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-03
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 00:22
				Column:	ZB-1
				Analyst:	AC

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.1	5 -145		13C-PCB-170	78.8	10 -145	
13C-PCB-3	66.0	5 -145		13C-PCB-180	84.2	10 -145	
13C-PCB-4	74.8	5 -145		13C-PCB-188	77.3	10 -145	
13C-PCB-11	83.8	5 -145		13C-PCB-189	79.9	10 -145	
13C-PCB-9	77.3	5 -145		13C-PCB-194	87.7	10 -145	
13C-PCB-19	78.6	5 -145		13C-PCB-202	75.6	10 -145	
13C-PCB-28	85.7	5 -145		13C-PCB-206	86.3	10 -145	
13C-PCB-32	78.9	5 -145		13C-PCB-208	75.6	10 -145	
13C-PCB-37	84.4	5 -145		13C-PCB-209	79.7	10 -145	
13C-PCB-47	87.0	5 -145		CRS 13C-PCB-79	88.3	10 -145	
13C-PCB-52	87.1	5 -145		13C-PCB-178	81.6	10 -145	
13C-PCB-54	80.3	5 -145					
13C-PCB-70	83.9	5 -145					
13C-PCB-77	93.4	10 -145					
13C-PCB-80	83.2	10 -145					
13C-PCB-81	90.8	10 -145					
13C-PCB-95	76.2	10 -145					
13C-PCB-97	85.7	10 -145					
13C-PCB-101	80.7	10 -145					
13C-PCB-104	77.5	10 -145					
13C-PCB-105	95.8	10 -145					
13C-PCB-114	90.8	10 -145					
13C-PCB-118	89.1	10 -145					
13C-PCB-123	90.3	10 -145					
13C-PCB-126	93.7	10 -145					
13C-PCB-127	97.0	10 -145					
13C-PCB-138	85.7	10 -145					
13C-PCB-141	85.3	10 -145					
13C-PCB-153	84.9	10 -145					
13C-PCB-155	82.0	10 -145					
13C-PCB-156	84.3	10 -145					
13C-PCB-157	85.1	10 -145					
13C-PCB-159	83.3	10 -145					
13C-PCB-167	84.0	10 -145					
13C-PCB-169	82.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-04
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	QC Batch:	B5A0018
				Date Analyzed:	14-Jan-15 01:25
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0627			PCB-44	18.6			
PCB-2	ND	0.0645			PCB-45	4.15			
PCB-3	ND	0.0639			PCB-46	ND	0.298		
PCB-4/10	0.919			J	PCB-47	154			B
PCB-5/8	3.03				PCB-48/75	23.8			
PCB-6	ND		0.661		PCB-50	ND		0.564	
PCB-7/9	ND	0.192			PCB-51	74.9			
PCB-11	3.10				PCB-52/69	493			
PCB-12/13	ND	0.202			PCB-53	38.6			
PCB-14	ND	0.170			PCB-54	7.06			
PCB-15	ND	0.178			PCB-55	3.27			
PCB-16/32	16.3				PCB-56/60	55.4			B
PCB-17	6.90				PCB-57	2.41			
PCB-18	15.3				PCB-58	ND	0.173		
PCB-19	1.47				PCB-61/70	43.4			B
PCB-20/21/33	8.94			B	PCB-62	ND	0.226		
PCB-22	18.5			B	PCB-63	6.13			
PCB-23	ND	0.129			PCB-65	ND	0.232		
PCB-24/27	1.83				PCB-66/76	250			
PCB-25	1.73				PCB-67	2.87			
PCB-26	10.9				PCB-68	1.88			
PCB-28	64.4			B	PCB-73	ND		3.04	
PCB-29	ND	0.129			PCB-74	79.3			
PCB-30	ND	0.0505			PCB-77	1.37			B
PCB-31	20.9				PCB-78	ND	0.182		
PCB-34	0.348			J	PCB-79	19.9			
PCB-35	ND	0.140			PCB-80	ND	0.168		
PCB-36	ND	0.132			PCB-81	ND		0.536	
PCB-37	1.29				PCB-82	9.28			
PCB-38	3.93				PCB-83	ND		0.407	
PCB-39	ND	0.128			PCB-84/92	194			
PCB-40	ND		1.10		PCB-85/116	125			
PCB-41/64/71/72	158			B	PCB-86	ND	0.191		
PCB-42/59	26.4				PCB-87/117/125	200			
PCB-43/49	334				PCB-88/91	101			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-04	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.4 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	Date Analyzed:	14-Jan-15 01:25	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		0.243		PCB-136	46.5			
PCB-90/101	1180				PCB-137	68.4			
PCB-93	ND	0.172			PCB-138/163/164	1630			
PCB-94	3.12				PCB-139/149	979			
PCB-95/98/102	301				PCB-140	4.35			
PCB-96	3.27				PCB-141	241			
PCB-97	116				PCB-144	63.8			
PCB-99	806				PCB-145	ND	0.0719		
PCB-100	62.0				PCB-146/165	368			
PCB-103	50.7				PCB-147	129			
PCB-104	5.90				PCB-148	10.1			
PCB-105	304			B	PCB-150	10.4			
PCB-106/118	879			B	PCB-151	395			
PCB-107/109	78.3				PCB-152	3.56			
PCB-108/112	3.30				PCB-153	2710			E
PCB-110	681				PCB-154	205			
PCB-111/115	15.3				PCB-155	ND		2.81	
PCB-113	ND	0.131			PCB-156	89.0			
PCB-114	5.12				PCB-157	19.2			
PCB-119	58.1				PCB-158/160	143			
PCB-120	4.24				PCB-159	ND	0.186		
PCB-121	ND	0.116			PCB-166	3.25			
PCB-122	2.01				PCB-167	46.1			
PCB-123	5.55				PCB-168	6.08			
PCB-124	5.25				PCB-169	ND	0.210		
PCB-126	3.16				PCB-170	325			
PCB-127	ND	0.222			PCB-171	94.6			
PCB-128/162	188				PCB-172	66.5			
PCB-129	16.2				PCB-173	2.74			
PCB-130	74.7				PCB-174	196			
PCB-131	ND	0.282			PCB-175	20.6			
PCB-132/161	96.8				PCB-176	22.2			
PCB-133/142	36.2				PCB-177	164			
PCB-134/143	12.9				PCB-178	145			
PCB-135	45.6				PCB-179	67.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-04	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	Date Analyzed :	14-Jan-15 01:25	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1120				Total octaCB	930			
PCB-181	ND	0.163			Total nonaCB	105			
PCB-182/187	1030				DecaCB	21.5			
PCB-183	337				Total PCB	19700			B
PCB-184	0.922								
PCB-185	31.8								
PCB-186	ND	0.132							
PCB-188	10.1								
PCB-189	10.0			B					
PCB-190	67.5								
PCB-191	14.0								
PCB-192	ND	0.130							
PCB-193	63.3								
PCB-194	187								
PCB-195	64.6								
PCB-196/203	279								
PCB-197	8.33								
PCB-198	9.53								
PCB-199	258								
PCB-200	13.4								
PCB-201	33.7								
PCB-202	70.1								
PCB-204	0.262			J					
PCB-205	7.16								
PCB-206	73.2								
PCB-207	10.8								
PCB-208	21.2								
PCB-209	21.5								
Total monoCB	ND	0.0645							
Total diCB	7.05		7.71						
Total triCB	173			B					
Total tetraCB	1800			B					
Total pentaCB	5210			B					
Total hexaCB	7640								
Total heptaCB	3780			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-04
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 01:25
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	42.5	5 -145		13C-PCB-170	74.8	10 -145	
13C-PCB-3	47.6	5 -145		13C-PCB-180	73.2	10 -145	
13C-PCB-4	55.4	5 -145		13C-PCB-188	67.1	10 -145	
13C-PCB-11	63.8	5 -145		13C-PCB-189	75.8	10 -145	
13C-PCB-9	59.1	5 -145		13C-PCB-194	76.5	10 -145	
13C-PCB-19	58.4	5 -145		13C-PCB-202	68.6	10 -145	
13C-PCB-28	62.4	5 -145		13C-PCB-206	70.3	10 -145	
13C-PCB-32	62.1	5 -145		13C-PCB-208	66.7	10 -145	
13C-PCB-37	70.4	5 -145		13C-PCB-209	65.3	10 -145	
13C-PCB-47	68.9	5 -145		CRS 13C-PCB-79	80.4	10 -145	
13C-PCB-52	72.5	5 -145		13C-PCB-178	73.7	10 -145	
13C-PCB-54	55.0	5 -145					
13C-PCB-70	75.5	5 -145					
13C-PCB-77	79.0	10 -145					
13C-PCB-80	73.6	10 -145					
13C-PCB-81	77.6	10 -145					
13C-PCB-95	69.8	10 -145					
13C-PCB-97	74.7	10 -145					
13C-PCB-101	72.7	10 -145					
13C-PCB-104	66.6	10 -145					
13C-PCB-105	80.6	10 -145					
13C-PCB-114	76.2	10 -145					
13C-PCB-118	78.5	10 -145					
13C-PCB-123	80.5	10 -145					
13C-PCB-126	83.2	10 -145					
13C-PCB-127	81.1	10 -145					
13C-PCB-138	74.9	10 -145					
13C-PCB-141	72.0	10 -145					
13C-PCB-153	74.7	10 -145					
13C-PCB-155	70.1	10 -145					
13C-PCB-156	75.8	10 -145					
13C-PCB-157	75.7	10 -145					
13C-PCB-159	73.3	10 -145					
13C-PCB-167	74.2	10 -145					
13C-PCB-169	75.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-05	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00990	Date Analyzed :	14-Jan-15 03:31	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0487			PCB-44	7.95			
PCB-2	ND	0.0501			PCB-45	1.70			
PCB-3	ND	0.0497			PCB-46	0.207			J
PCB-4/10	ND	0.152			PCB-47	43.5			B
PCB-5/8	1.44				PCB-48/75	8.15			
PCB-6	ND	0.124			PCB-50	ND		0.197	
PCB-7/9	ND	0.125			PCB-51	20.4			
PCB-11	0.919				PCB-52/69	135			
PCB-12/13	ND	0.132			PCB-53	13.5			
PCB-14	ND	0.111			PCB-54	2.04			
PCB-15	ND	0.116			PCB-55	1.20			
PCB-16/32	5.70				PCB-56/60	19.6			B
PCB-17	2.74				PCB-57	0.707			
PCB-18	6.56				PCB-58	0.482			J
PCB-19	0.563				PCB-61/70	17.7			B
PCB-20/21/33	3.84			B	PCB-62	ND	0.124		
PCB-22	7.82			B	PCB-63	2.16			
PCB-23	ND	0.0825			PCB-65	ND	0.127		
PCB-24/27	0.703			J	PCB-66/76	76.9			
PCB-25	0.709				PCB-67	0.455			J
PCB-26	3.06				PCB-68	0.632			
PCB-28	26.2			B	PCB-73	0.913			
PCB-29	ND	0.0827			PCB-74	24.2			
PCB-30	ND	0.0402			PCB-77	0.945			B
PCB-31	8.25				PCB-78	0.320			J
PCB-34	ND	0.0844			PCB-79	5.31			
PCB-35	0.403			J, B	PCB-80	ND	0.0930		
PCB-36	0.224			J	PCB-81	ND		0.327	
PCB-37	ND		0.500		PCB-82	4.47			
PCB-38	1.53				PCB-83	ND	0.0643		
PCB-39	ND		0.186		PCB-84/92	52.5			
PCB-40	0.601				PCB-85/116	34.3			
PCB-41/64/71/72	47.0			B	PCB-86	ND	0.0986		
PCB-42/59	10.0				PCB-87/117/125	57.5			
PCB-43/49	94.3				PCB-88/91	29.6			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-05
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00990	Date Received:	13-Nov-2014 12:36
				Date Extracted:	06-Jan-2015 13:14
				Date Analyzed:	14-Jan-15 03:31
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.349			J	PCB-136	14.6			
PCB-90/101	320				PCB-137	15.5			
PCB-93	ND	0.0950			PCB-138/163/164	400			
PCB-94	1.24				PCB-139/149	240			
PCB-95/98/102	97.1				PCB-140	ND		0.689	
PCB-96	1.14				PCB-141	56.3			
PCB-97	41.3				PCB-144	13.6			
PCB-99	196				PCB-145	ND	0.0518		
PCB-100	10.8				PCB-146/165	84.4			
PCB-103	11.6				PCB-147	23.0			
PCB-104	ND		1.32		PCB-148	ND	0.0684		
PCB-105	84.2			B	PCB-150	2.49			
PCB-106/118	243			B	PCB-151	82.7			
PCB-107/109	20.7				PCB-152	0.959			
PCB-108/112	ND		1.05		PCB-153	632			
PCB-110	197				PCB-154	31.0			
PCB-111/115	4.25				PCB-155	0.589			
PCB-113	ND	0.0716			PCB-156	20.6			
PCB-114	1.36				PCB-157	5.02			
PCB-119	12.0				PCB-158/160	34.7			
PCB-120	1.33				PCB-159	ND	0.123		
PCB-121	ND	0.0638			PCB-166	0.918			
PCB-122	0.350			J	PCB-167	11.4			
PCB-123	1.68				PCB-168	1.40			
PCB-124	2.05				PCB-169	0.372			J
PCB-126	1.34				PCB-170	68.1			
PCB-127	ND	0.120			PCB-171	19.6			
PCB-128/162	46.7				PCB-172	13.6			
PCB-129	5.93				PCB-173	ND		0.709	
PCB-130	19.4				PCB-174	50.7			
PCB-131	ND	0.199			PCB-175	4.65			
PCB-132/161	31.2				PCB-176	6.71			
PCB-133/142	9.17				PCB-177	40.7			
PCB-134/143	5.15				PCB-178	29.3			
PCB-135	13.9				PCB-179	19.4			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-05
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00990	QC Batch:	B5A0018
				Date Analyzed:	14-Jan-15 03:31
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	234				Total octaCB	175			
PCB-181	ND	0.0787			Total nonaCB	22.8			
PCB-182/187	213				DecaCB	5.26			
PCB-183	69.1				Total PCB	4850			B
PCB-184	ND		0.177						
PCB-185	6.08								
PCB-186	ND	0.0639							
PCB-188	1.65								
PCB-189	2.28			B					
PCB-190	13.0								
PCB-191	2.81								
PCB-192	ND	0.0631							
PCB-193	11.9								
PCB-194	36.5								
PCB-195	11.8								
PCB-196/203	50.7								
PCB-197	1.84								
PCB-198	1.56								
PCB-199	47.8								
PCB-200	3.00								
PCB-201	7.03								
PCB-202	13.7								
PCB-204	ND	0.0375							
PCB-205	1.53								
PCB-206	15.8								
PCB-207	2.33								
PCB-208	4.68								
PCB-209	5.26								
Total monoCB	ND	0.0501							
Total diCB	2.36								
Total triCB	68.3		69.0	B					
Total tetraCB	536			B					
Total pentaCB	1430			B					
Total hexaCB	1800								
Total heptaCB	807			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-03-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-05	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00990	Date Analyzed :	14-Jan-15 03:31	Column:	ZB-1	Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	60.2	5 -145		13C-PCB-170	81.2	10 -145	
13C-PCB-3	65.1	5 -145		13C-PCB-180	84.6	10 -145	
13C-PCB-4	72.2	5 -145		13C-PCB-188	76.3	10 -145	
13C-PCB-11	76.9	5 -145		13C-PCB-189	84.7	10 -145	
13C-PCB-9	76.6	5 -145		13C-PCB-194	83.7	10 -145	
13C-PCB-19	69.3	5 -145		13C-PCB-202	75.7	10 -145	
13C-PCB-28	77.7	5 -145		13C-PCB-206	80.3	10 -145	
13C-PCB-32	71.2	5 -145		13C-PCB-208	74.0	10 -145	
13C-PCB-37	81.0	5 -145		13C-PCB-209	73.9	10 -145	
13C-PCB-47	78.6	5 -145		CRS 13C-PCB-79	85.9	10 -145	
13C-PCB-52	76.7	5 -145		13C-PCB-178	80.5	10 -145	
13C-PCB-54	70.5	5 -145					
13C-PCB-70	83.8	5 -145					
13C-PCB-77	87.8	10 -145					
13C-PCB-80	83.2	10 -145					
13C-PCB-81	87.2	10 -145					
13C-PCB-95	78.5	10 -145					
13C-PCB-97	86.7	10 -145					
13C-PCB-101	84.4	10 -145					
13C-PCB-104	76.9	10 -145					
13C-PCB-105	95.1	10 -145					
13C-PCB-114	89.2	10 -145					
13C-PCB-118	86.0	10 -145					
13C-PCB-123	86.5	10 -145					
13C-PCB-126	98.5	10 -145					
13C-PCB-127	96.7	10 -145					
13C-PCB-138	87.9	10 -145					
13C-PCB-141	85.2	10 -145					
13C-PCB-153	85.1	10 -145					
13C-PCB-155	84.2	10 -145					
13C-PCB-156	86.8	10 -145					
13C-PCB-157	86.0	10 -145					
13C-PCB-159	86.3	10 -145					
13C-PCB-167	86.6	10 -145					
13C-PCB-169	88.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-06	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.187	Date Analyzed :	14-Jan-15 04:34	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.164		PCB-44	73.9			
PCB-2	ND	0.0451			PCB-45	16.3			
PCB-3	ND	0.0447			PCB-46	ND		1.12	
PCB-4/10	3.43				PCB-47	576			B
PCB-5/8	9.35				PCB-48/75	108			
PCB-6	1.75				PCB-50	2.35			
PCB-7/9	ND	0.115			PCB-51	381			
PCB-11	2.82				PCB-52/69	1840			
PCB-12/13	ND	0.121			PCB-53	251			
PCB-14	ND	0.102			PCB-54	47.4			
PCB-15	ND		0.370		PCB-55	14.5			
PCB-16/32	76.6				PCB-56/60	235			B
PCB-17	29.1				PCB-57	9.39			
PCB-18	76.7				PCB-58	ND	0.246		
PCB-19	6.70				PCB-61/70	218			B
PCB-20/21/33	37.6			B	PCB-62	ND	0.279		
PCB-22	73.7			B	PCB-63	25.4			
PCB-23	ND	0.171			PCB-65	ND	0.286		
PCB-24/27	6.95				PCB-66/76	988			
PCB-25	5.64				PCB-67	9.25			
PCB-26	38.9				PCB-68	6.54			
PCB-28	256			B	PCB-73	ND	0.284		
PCB-29	0.354			J	PCB-74	321			
PCB-30	ND	0.0345			PCB-77	5.62			B
PCB-31	89.6				PCB-78	ND		0.591	
PCB-34	1.62				PCB-79	70.3			
PCB-35	ND	0.189			PCB-80	ND	0.235		
PCB-36	ND	0.178			PCB-81	1.24			
PCB-37	1.11				PCB-82	47.9			
PCB-38	16.6				PCB-83	1.10			
PCB-39	ND	0.173			PCB-84/92	757			
PCB-40	3.37				PCB-85/116	430			
PCB-41/64/71/72	593			B	PCB-86	ND	0.145		
PCB-42/59	120				PCB-87/117/125	788			
PCB-43/49	1270				PCB-88/91	447			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-06	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.187	Date Analyzed :	14-Jan-15 04:34	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.85				PCB-136	227			
PCB-90/101	4240			E	PCB-137	253			
PCB-93	ND	0.138			PCB-138/163/164	5520			E
PCB-94	15.8				PCB-139/149	3790			
PCB-95/98/102	1370				PCB-140	13.4			
PCB-96	14.9				PCB-141	834			
PCB-97	583				PCB-144	237			
PCB-99	2640			E	PCB-145	ND		0.484	
PCB-100	157				PCB-146/165	1240			
PCB-103	174				PCB-147	391			
PCB-104	22.0				PCB-148	ND	0.0633		
PCB-105	1120			B	PCB-150	39.4			
PCB-106/118	3210			B	PCB-151	1390			
PCB-107/109	312				PCB-152	13.0			
PCB-108/112	12.4				PCB-153	8330			E
PCB-110	2590			E	PCB-154	497			
PCB-111/115	61.2				PCB-155	8.11			
PCB-113	ND	0.106			PCB-156	324			
PCB-114	20.0				PCB-157	78.1			
PCB-119	177				PCB-158/160	522			
PCB-120	18.2				PCB-159	ND	0.315		
PCB-121	ND	0.0928			PCB-166	14.4			
PCB-122	2.10				PCB-167	181			
PCB-123	21.0				PCB-168	16.5			
PCB-124	22.5				PCB-169	0.912			
PCB-126	14.2				PCB-170	1020			
PCB-127	ND	0.332			PCB-171	290			
PCB-128/162	712				PCB-172	209			
PCB-129	88.3				PCB-173	9.94			
PCB-130	306				PCB-174	753			
PCB-131	ND	0.498			PCB-175	68.6			
PCB-132/161	469				PCB-176	98.0			
PCB-133/142	148				PCB-177	651			
PCB-134/143	75.6				PCB-178	437			
PCB-135	200				PCB-179	295			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-06	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.187	Date Analyzed :	14-Jan-15 04:34	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	3250			E	Total octaCB	2840			
PCB-181	ND	0.229			Total nonaCB	345			
PCB-182/187	3140				DecaCB	80.8			
PCB-183	995				Total PCB	68200			B
PCB-184	2.68								
PCB-185	95.8								
PCB-186	ND		0.189						
PCB-188	25.2								
PCB-189	29.6			B					
PCB-190	210								
PCB-191	39.5								
PCB-192	ND	0.184							
PCB-193	185								
PCB-194	534								
PCB-195	182								
PCB-196/203	852								
PCB-197	25.7								
PCB-198	27.2								
PCB-199	810								
PCB-200	46.9								
PCB-201	112								
PCB-202	229								
PCB-204	0.711								
PCB-205	20.4								
PCB-206	235								
PCB-207	34.9								
PCB-208	75.2								
PCB-209	80.8								
Total monoCB	ND		0.164						
Total diCB	17.3		17.7						
Total triCB	717			B					
Total tetraCB	7180		7190	B					
Total pentaCB	19300			B					
Total hexaCB	25900								
Total heptaCB	11800			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-06
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.187	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 04:34
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	47.9	5 -145		13C-PCB-170	78.4	10 -145	
13C-PCB-3	52.4	5 -145		13C-PCB-180	82.3	10 -145	
13C-PCB-4	59.1	5 -145		13C-PCB-188	74.6	10 -145	
13C-PCB-11	73.6	5 -145		13C-PCB-189	84.0	10 -145	
13C-PCB-9	66.3	5 -145		13C-PCB-194	81.1	10 -145	
13C-PCB-19	63.2	5 -145		13C-PCB-202	70.9	10 -145	
13C-PCB-28	83.7	5 -145		13C-PCB-206	77.1	10 -145	
13C-PCB-32	69.5	5 -145		13C-PCB-208	69.4	10 -145	
13C-PCB-37	83.1	5 -145		13C-PCB-209	71.1	10 -145	
13C-PCB-47	78.2	5 -145		CRS 13C-PCB-79	82.2	10 -145	
13C-PCB-52	76.8	5 -145		13C-PCB-178	74.9	10 -145	
13C-PCB-54	68.4	5 -145					
13C-PCB-70	79.1	5 -145					
13C-PCB-77	81.8	10 -145					
13C-PCB-80	77.7	10 -145					
13C-PCB-81	81.6	10 -145					
13C-PCB-95	76.9	10 -145					
13C-PCB-97	83.0	10 -145					
13C-PCB-101	81.5	10 -145					
13C-PCB-104	76.0	10 -145					
13C-PCB-105	94.6	10 -145					
13C-PCB-114	86.7	10 -145					
13C-PCB-118	87.0	10 -145					
13C-PCB-123	85.1	10 -145					
13C-PCB-126	92.5	10 -145					
13C-PCB-127	92.8	10 -145					
13C-PCB-138	83.3	10 -145					
13C-PCB-141	79.8	10 -145					
13C-PCB-153	83.1	10 -145					
13C-PCB-155	76.9	10 -145					
13C-PCB-156	81.6	10 -145					
13C-PCB-157	78.9	10 -145					
13C-PCB-159	79.4	10 -145					
13C-PCB-167	79.4	10 -145					
13C-PCB-169	79.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-07	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0291	Date Analyzed :	14-Jan-15 08:53	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0506			PCB-44	19.3			
PCB-2	ND	0.0528			PCB-45	4.13			
PCB-3	ND	0.0523			PCB-46	0.248			J
PCB-4/10	0.996				PCB-47	158			B
PCB-5/8	3.61				PCB-48/75	25.8			
PCB-6	0.537				PCB-50	ND		0.490	
PCB-7/9	ND	0.148			PCB-51	71.5			
PCB-11	1.03				PCB-52/69	520			
PCB-12/13	ND	0.156			PCB-53	38.6			
PCB-14	ND	0.131			PCB-54	5.52			
PCB-15	0.488				PCB-55	3.88			
PCB-16/32	15.0				PCB-56/60	51.8			B
PCB-17	6.80				PCB-57	3.04			
PCB-18	17.9				PCB-58	ND	0.154		
PCB-19	1.43				PCB-61/70	43.3			B
PCB-20/21/33	9.23			B	PCB-62	ND	0.171		
PCB-22	21.8			B	PCB-63	5.01			
PCB-23	ND	0.122			PCB-65	ND	0.175		
PCB-24/27	1.47				PCB-66/76	230			
PCB-25	1.54				PCB-67	3.55			
PCB-26	8.76				PCB-68	1.76			
PCB-28	67.1			B	PCB-73	ND	0.168		
PCB-29	0.141			J	PCB-74	62.0			
PCB-30	ND	0.0388			PCB-77	1.15			B
PCB-31	19.7				PCB-78	ND	0.167		
PCB-34	0.345			J	PCB-79	19.5			
PCB-35	ND	0.118			PCB-80	ND	0.131		
PCB-36	ND	0.111			PCB-81	0.602			
PCB-37	0.301			J	PCB-82	11.3			
PCB-38	4.35				PCB-83	ND	0.135		
PCB-39	ND	0.108			PCB-84/92	213			
PCB-40	1.15				PCB-85/116	119			
PCB-41/64/71/72	156			B	PCB-86	ND	0.207		
PCB-42/59	27.2				PCB-87/117/125	209			
PCB-43/49	344				PCB-88/91	116			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-07	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0291	Date Analyzed:	14-Jan-15 08:53	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.172			PCB-136	54.1			
PCB-90/101	1290				PCB-137	63.3			
PCB-93	ND	0.167			PCB-138/163/164	1660			
PCB-94	3.18				PCB-139/149	1160			
PCB-95/98/102	359				PCB-140	3.79			
PCB-96	3.12				PCB-141	259			
PCB-97	143				PCB-144	65.6			
PCB-99	765				PCB-145	ND		0.168	
PCB-100	63.3				PCB-146/165	376			
PCB-103	60.6				PCB-147	138			
PCB-104	7.25				PCB-148	12.5			
PCB-105	293			B	PCB-150	13.5			
PCB-106/118	850			B	PCB-151	440			
PCB-107/109	79.7				PCB-152	4.36			
PCB-108/112	3.79				PCB-153	2810			E
PCB-110	731				PCB-154	196			
PCB-111/115	16.2				PCB-155	3.20			
PCB-113	ND	0.134			PCB-156	83.2			
PCB-114	3.33				PCB-157	18.5			
PCB-119	61.5				PCB-158/160	142			
PCB-120	4.60				PCB-159	ND	0.229		
PCB-121	ND	0.112			PCB-166	3.43			
PCB-122	2.36				PCB-167	44.7			
PCB-123	4.18				PCB-168	6.50			
PCB-124	5.44				PCB-169	ND	0.275		
PCB-126	3.28				PCB-170	335			
PCB-127	ND	0.295			PCB-171	99.2			
PCB-128/162	181				PCB-172	67.2			
PCB-129	21.2				PCB-173	3.85			
PCB-130	77.6				PCB-174	268			
PCB-131	ND	0.335			PCB-175	22.5			
PCB-132/161	114				PCB-176	31.5			
PCB-133/142	38.0				PCB-177	222			
PCB-134/143	17.3				PCB-178	162			
PCB-135	52.6				PCB-179	94.8			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-07	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0291	Date Analyzed :	14-Jan-15 08:53	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1150				Total octaCB	931			
PCB-181	ND	0.180			Total nonaCB	115			
PCB-182/187	1130				DecaCB	26.9			
PCB-183	344				Total PCB	20700			B
PCB-184	0.848								
PCB-185	40.3								
PCB-186	ND	0.135							
PCB-188	10.7								
PCB-189	9.68			B					
PCB-190	69.4								
PCB-191	13.9								
PCB-192	ND	0.144							
PCB-193	62.3								
PCB-194	196								
PCB-195	66.2								
PCB-196/203	269								
PCB-197	8.11								
PCB-198	9.08								
PCB-199	247								
PCB-200	15.5								
PCB-201	35.3								
PCB-202	76.7								
PCB-204	0.325			J					
PCB-205	7.69								
PCB-206	78.2								
PCB-207	11.7								
PCB-208	24.9								
PCB-209	26.9								
Total monoCB	ND	0.0528							
Total diCB	6.67								
Total triCB	176			B					
Total tetraCB	1800			B					
Total pentaCB	5420			B					
Total hexaCB	8060								
Total heptaCB	4140			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-05-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-07
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0291	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 08:53
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	39.8	5 -145		13C-PCB-170	53.9	10 -145	
13C-PCB-3	41.7	5 -145		13C-PCB-180	57.3	10 -145	
13C-PCB-4	49.4	5 -145		13C-PCB-188	57.3	10 -145	
13C-PCB-11	56.8	5 -145		13C-PCB-189	61.6	10 -145	
13C-PCB-9	52.8	5 -145		13C-PCB-194	64.8	10 -145	
13C-PCB-19	52.1	5 -145		13C-PCB-202	53.8	10 -145	
13C-PCB-28	60.7	5 -145		13C-PCB-206	64.8	10 -145	
13C-PCB-32	56.4	5 -145		13C-PCB-208	55.9	10 -145	
13C-PCB-37	67.7	5 -145		13C-PCB-209	60.1	10 -145	
13C-PCB-47	63.6	5 -145		CRS 13C-PCB-79	62.3	10 -145	
13C-PCB-52	62.9	5 -145		13C-PCB-178	62.9	10 -145	
13C-PCB-54	53.8	5 -145					
13C-PCB-70	67.2	5 -145					
13C-PCB-77	63.3	10 -145					
13C-PCB-80	65.5	10 -145					
13C-PCB-81	63.8	10 -145					
13C-PCB-95	67.6	10 -145					
13C-PCB-97	66.6	10 -145					
13C-PCB-101	68.0	10 -145					
13C-PCB-104	67.6	10 -145					
13C-PCB-105	69.8	10 -145					
13C-PCB-114	64.5	10 -145					
13C-PCB-118	72.6	10 -145					
13C-PCB-123	69.7	10 -145					
13C-PCB-126	73.7	10 -145					
13C-PCB-127	70.9	10 -145					
13C-PCB-138	66.8	10 -145					
13C-PCB-141	65.1	10 -145					
13C-PCB-153	64.5	10 -145					
13C-PCB-155	64.1	10 -145					
13C-PCB-156	62.1	10 -145					
13C-PCB-157	61.4	10 -145					
13C-PCB-159	64.4	10 -145					
13C-PCB-167	63.9	10 -145					
13C-PCB-169	59.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-08	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 09:55	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0752			PCB-44	9.12			
PCB-2	ND	0.0733			PCB-45	2.90			
PCB-3	ND	0.0727			PCB-46	ND	0.195		
PCB-4/10	ND	0.342			PCB-47	138			B
PCB-5/8	3.51				PCB-48/75	24.2			
PCB-6	ND	0.326			PCB-50	ND		0.495	
PCB-7/9	ND	0.329			PCB-51	67.8			
PCB-11	ND		1.16		PCB-52/69	448			
PCB-12/13	ND	0.346			PCB-53	32.7			
PCB-14	ND	0.292			PCB-54	5.25			
PCB-15	ND	0.305			PCB-55	2.39			
PCB-16/32	14.4				PCB-56/60	45.6			B
PCB-17	6.41				PCB-57	1.98			
PCB-18	14.7				PCB-58	ND	0.129		
PCB-19	1.09				PCB-61/70	36.3			B
PCB-20/21/33	7.86			B	PCB-62	ND	0.131		
PCB-22	22.2			B	PCB-63	4.73			
PCB-23	ND	0.106			PCB-65	ND	0.135		
PCB-24/27	1.19				PCB-66/76	214			
PCB-25	1.08				PCB-67	2.06			
PCB-26	8.39				PCB-68	1.41			
PCB-28	63.2			B	PCB-73	ND	0.134		
PCB-29	ND	0.107			PCB-74	57.7			
PCB-30	ND	0.0662			PCB-77	0.728			B
PCB-31	16.9				PCB-78	ND	0.129		
PCB-34	0.360			J	PCB-79	12.2			
PCB-35	ND	0.106			PCB-80	ND	0.106		
PCB-36	ND	0.0994			PCB-81	ND		0.327	
PCB-37	ND		0.126		PCB-82	5.10			
PCB-38	3.03				PCB-83	0.335			J
PCB-39	ND	0.0964			PCB-84/92	151			
PCB-40	0.626				PCB-85/116	96.0			
PCB-41/64/71/72	143			B	PCB-86	ND	0.167		
PCB-42/59	22.3				PCB-87/117/125	162			
PCB-43/49	300				PCB-88/91	82.8			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-FF-CH-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-08	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 09:55	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		0.297		PCB-136	35.2			
PCB-90/101	925				PCB-137	36.6			
PCB-93	ND	0.159			PCB-138/163/164	1010			
PCB-94	1.93				PCB-139/149	735			
PCB-95/98/102	229				PCB-140	3.47			
PCB-96	2.07				PCB-141	157			
PCB-97	104				PCB-144	42.8			
PCB-99	590				PCB-145	ND		0.0930	
PCB-100	43.5				PCB-146/165	218			
PCB-103	38.0				PCB-147	78.9			
PCB-104	5.73				PCB-148	7.18			
PCB-105	212			B	PCB-150	7.84			
PCB-106/118	598			B	PCB-151	285			
PCB-107/109	52.6				PCB-152	3.04			
PCB-108/112	1.96				PCB-153	1610			
PCB-110	574				PCB-154	118			
PCB-111/115	10.3				PCB-155	ND		1.94	
PCB-113	ND	0.118			PCB-156	49.3			
PCB-114	2.63				PCB-157	11.0			
PCB-119	42.5				PCB-158/160	84.1			
PCB-120	3.21				PCB-159	ND	0.137		
PCB-121	ND	0.107			PCB-166	1.95			
PCB-122	1.21				PCB-167	27.5			
PCB-123	3.54				PCB-168	3.50			
PCB-124	3.78				PCB-169	ND	0.164		
PCB-126	2.29				PCB-170	174			
PCB-127	ND	0.164			PCB-171	53.4			
PCB-128/162	116				PCB-172	32.2			
PCB-129	13.2				PCB-173	1.97			
PCB-130	47.5				PCB-174	126			
PCB-131	ND	0.210			PCB-175	10.7			
PCB-132/161	68.2				PCB-176	14.8			
PCB-133/142	21.6				PCB-177	98.4			
PCB-134/143	8.67				PCB-178	75.7			
PCB-135	34.0				PCB-179	44.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-08	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 09:55	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	554				Total octaCB	353			
PCB-181	ND	0.0940			Total nonaCB	45.5			
PCB-182/187	534				DecaCB	11.3			
PCB-183	179				Total PCB	12900			B
PCB-184	0.530								
PCB-185	19.2								
PCB-186	ND	0.0804							
PCB-188	4.58								
PCB-189	4.66			B					
PCB-190	34.6								
PCB-191	6.49								
PCB-192	ND	0.0754							
PCB-193	28.6								
PCB-194	78.5								
PCB-195	26.9								
PCB-196/203	97.4								
PCB-197	3.46								
PCB-198	3.32								
PCB-199	90.5								
PCB-200	5.87								
PCB-201	14.4								
PCB-202	29.9								
PCB-204	ND	0.0377							
PCB-205	2.97								
PCB-206	30.8								
PCB-207	4.81								
PCB-208	9.85								
PCB-209	11.3								
Total monoCB	ND	0.0752							
Total diCB	3.51		4.67						
Total triCB	161			B					
Total tetraCB	1570			B					
Total pentaCB	3950			B					
Total hexaCB	4830								
Total heptaCB	2000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-06-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-08
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 09:55
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.0	5 -145		13C-PCB-170	71.5	10 -145	
13C-PCB-3	68.5	5 -145		13C-PCB-180	78.8	10 -145	
13C-PCB-4	79.7	5 -145		13C-PCB-188	72.5	10 -145	
13C-PCB-11	77.7	5 -145		13C-PCB-189	74.1	10 -145	
13C-PCB-9	83.2	5 -145		13C-PCB-194	84.9	10 -145	
13C-PCB-19	73.3	5 -145		13C-PCB-202	77.3	10 -145	
13C-PCB-28	76.9	5 -145		13C-PCB-206	81.8	10 -145	
13C-PCB-32	73.3	5 -145		13C-PCB-208	71.7	10 -145	
13C-PCB-37	88.0	5 -145		13C-PCB-209	77.2	10 -145	
13C-PCB-47	87.8	5 -145		CRS 13C-PCB-79	88.1	10 -145	
13C-PCB-52	84.9	5 -145		13C-PCB-178	80.3	10 -145	
13C-PCB-54	73.2	5 -145					
13C-PCB-70	86.6	5 -145					
13C-PCB-77	89.5	10 -145					
13C-PCB-80	86.5	10 -145					
13C-PCB-81	87.0	10 -145					
13C-PCB-95	79.1	10 -145					
13C-PCB-97	84.1	10 -145					
13C-PCB-101	80.2	10 -145					
13C-PCB-104	84.1	10 -145					
13C-PCB-105	89.6	10 -145					
13C-PCB-114	82.1	10 -145					
13C-PCB-118	93.7	10 -145					
13C-PCB-123	95.9	10 -145					
13C-PCB-126	92.6	10 -145					
13C-PCB-127	92.2	10 -145					
13C-PCB-138	84.9	10 -145					
13C-PCB-141	81.9	10 -145					
13C-PCB-153	81.1	10 -145					
13C-PCB-155	77.0	10 -145					
13C-PCB-156	84.0	10 -145					
13C-PCB-157	83.6	10 -145					
13C-PCB-159	81.9	10 -145					
13C-PCB-167	84.5	10 -145					
13C-PCB-169	79.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-09	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	14-Jan-15 10:58	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0998			PCB-44	6.73			
PCB-2	ND	0.116			PCB-45	3.83			
PCB-3	ND	0.115			PCB-46	ND	0.298		
PCB-4/10	ND	0.986			PCB-47	167			B
PCB-5/8	3.67				PCB-48/75	23.1			
PCB-6	ND	0.681			PCB-50	0.769			
PCB-7/9	ND	0.686			PCB-51	108			
PCB-11	ND		0.739		PCB-52/69	541			
PCB-12/13	ND	0.721			PCB-53	53.5			
PCB-14	ND	0.609			PCB-54	9.16			
PCB-15	ND	0.637			PCB-55	2.91			
PCB-16/32	19.7				PCB-56/60	50.1			B
PCB-17	7.52				PCB-57	2.37			
PCB-18	18.0				PCB-58	ND	0.166		
PCB-19	1.62				PCB-61/70	39.8			B
PCB-20/21/33	9.84			B	PCB-62	ND	0.206		
PCB-22	21.2			B	PCB-63	4.64			
PCB-23	ND	0.121			PCB-65	ND	0.211		
PCB-24/27	1.54				PCB-66/76	221			
PCB-25	1.64				PCB-67	2.69			
PCB-26	12.3				PCB-68	1.67			
PCB-28	69.7			B	PCB-73	ND	0.204		
PCB-29	ND	0.121			PCB-74	62.1			
PCB-30	ND	0.0700			PCB-77	0.933			B
PCB-31	21.9				PCB-78	ND	0.165		
PCB-34	0.419			J	PCB-79	15.0			
PCB-35	ND	0.157			PCB-80	ND	0.149		
PCB-36	ND	0.148			PCB-81	0.562			
PCB-37	ND	0.143			PCB-82	5.54			
PCB-38	4.00				PCB-83	ND	0.120		
PCB-39	ND	0.144			PCB-84/92	165			
PCB-40	ND	0.315			PCB-85/116	95.5			
PCB-41/64/71/72	148			B	PCB-86	ND	0.185		
PCB-42/59	22.9				PCB-87/117/125	174			
PCB-43/49	350				PCB-88/91	104			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-09
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	Date Received:	13-Nov-2014 12:36
				Date Extracted:	06-Jan-2015 13:14
				Date Analyzed :	14-Jan-15 10:58
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		0.464		PCB-136	46.6			
PCB-90/101	1060				PCB-137	45.0			
PCB-93	ND	0.186			PCB-138/163/164	1190			
PCB-94	2.35				PCB-139/149	847			
PCB-95/98/102	330				PCB-140	2.88			
PCB-96	3.18				PCB-141	181			
PCB-97	112				PCB-144	47.2			
PCB-99	698				PCB-145	ND	0.0673		
PCB-100	69.0				PCB-146/165	279			
PCB-103	57.5				PCB-147	115			
PCB-104	8.03				PCB-148	9.81			
PCB-105	221			B	PCB-150	11.7			
PCB-106/118	662			B	PCB-151	341			
PCB-107/109	57.1				PCB-152	4.44			
PCB-108/112	1.72				PCB-153	2080			E
PCB-110	588				PCB-154	173			
PCB-111/115	11.4				PCB-155	2.85			
PCB-113	ND	0.138			PCB-156	59.4			
PCB-114	3.06				PCB-157	12.7			
PCB-119	54.5				PCB-158/160	101			
PCB-120	4.24				PCB-159	ND	0.213		
PCB-121	ND	0.125			PCB-166	2.24			
PCB-122	1.42				PCB-167	33.6			
PCB-123	3.81				PCB-168	5.18			
PCB-124	4.89				PCB-169	ND	0.231		
PCB-126	2.51				PCB-170	231			
PCB-127	ND		0.202		PCB-171	60.0			
PCB-128/162	130				PCB-172	43.7			
PCB-129	14.7				PCB-173	2.22			
PCB-130	50.9				PCB-174	150			
PCB-131	ND	0.321			PCB-175	14.0			
PCB-132/161	75.8				PCB-176	18.4			
PCB-133/142	27.9				PCB-177	121			
PCB-134/143	10.8				PCB-178	101			
PCB-135	36.1				PCB-179	64.7			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-09
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 10:58
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	772				Total octaCB	668			
PCB-181	ND	0.156			Total nonaCB	73.9			
PCB-182/187	753				DecaCB	16.0			
PCB-183	226				Total PCB	15900			B
PCB-184	0.569								
PCB-185	22.7								
PCB-186	ND	0.142							
PCB-188	7.84								
PCB-189	7.20			B					
PCB-190	50.1								
PCB-191	9.44								
PCB-192	ND	0.125							
PCB-193	42.4								
PCB-194	129								
PCB-195	44.5								
PCB-196/203	208								
PCB-197	5.82								
PCB-198	6.57								
PCB-199	189								
PCB-200	11.3								
PCB-201	23.0								
PCB-202	45.9								
PCB-204	ND	0.0736							
PCB-205	5.13								
PCB-206	51.6								
PCB-207	7.52								
PCB-208	14.8								
PCB-209	16.0								
Total monoCB	ND	0.116							
Total diCB	3.67		4.41						
Total triCB	189			B					
Total tetraCB	1840			B					
Total pentaCB	4500			B					
Total hexaCB	5930								
Total heptaCB	2700			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-07-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-09
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 10:58
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	41.6	5 -145		13C-PCB-170	75.6	10 -145	
13C-PCB-3	40.0	5 -145		13C-PCB-180	75.1	10 -145	
13C-PCB-4	45.3	5 -145		13C-PCB-188	64.7	10 -145	
13C-PCB-11	60.2	5 -145		13C-PCB-189	85.1	10 -145	
13C-PCB-9	50.3	5 -145		13C-PCB-194	74.5	10 -145	
13C-PCB-19	53.7	5 -145		13C-PCB-202	65.7	10 -145	
13C-PCB-28	61.1	5 -145		13C-PCB-206	69.0	10 -145	
13C-PCB-32	60.8	5 -145		13C-PCB-208	66.1	10 -145	
13C-PCB-37	61.6	5 -145		13C-PCB-209	62.4	10 -145	
13C-PCB-47	62.5	5 -145		CRS 13C-PCB-79	76.9	10 -145	
13C-PCB-52	62.7	5 -145		13C-PCB-178	64.3	10 -145	
13C-PCB-54	61.4	5 -145					
13C-PCB-70	69.5	5 -145					
13C-PCB-77	79.5	10 -145					
13C-PCB-80	69.8	10 -145					
13C-PCB-81	77.9	10 -145					
13C-PCB-95	59.6	10 -145					
13C-PCB-97	71.0	10 -145					
13C-PCB-101	69.0	10 -145					
13C-PCB-104	53.8	10 -145					
13C-PCB-105	82.8	10 -145					
13C-PCB-114	76.9	10 -145					
13C-PCB-118	69.5	10 -145					
13C-PCB-123	72.5	10 -145					
13C-PCB-126	80.8	10 -145					
13C-PCB-127	80.9	10 -145					
13C-PCB-138	72.2	10 -145					
13C-PCB-141	69.9	10 -145					
13C-PCB-153	72.4	10 -145					
13C-PCB-155	68.3	10 -145					
13C-PCB-156	73.8	10 -145					
13C-PCB-157	74.1	10 -145					
13C-PCB-159	69.9	10 -145					
13C-PCB-167	72.3	10 -145					
13C-PCB-169	79.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-10	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00980	Date Analyzed :	14-Jan-15 12:01	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0665			PCB-44	7.08			
PCB-2	ND	0.0666			PCB-45	3.06			
PCB-3	ND	0.0660			PCB-46	ND	0.213		
PCB-4/10	ND	0.643			PCB-47	111			B
PCB-5/8	2.78				PCB-48/75	18.9			
PCB-6	ND	0.519			PCB-50	0.432			J
PCB-7/9	ND	0.523			PCB-51	49.5			
PCB-11	ND	0.554			PCB-52/69	369			
PCB-12/13	ND	0.550			PCB-53	28.6			
PCB-14	ND	0.464			PCB-54	5.27			
PCB-15	ND	0.486			PCB-55	1.99			
PCB-16/32	14.3				PCB-56/60	52.6			B
PCB-17	6.87				PCB-57	1.35			
PCB-18	15.7				PCB-58	ND	0.144		
PCB-19	1.15				PCB-61/70	43.8			B
PCB-20/21/33	7.53			B	PCB-62	ND	0.148		
PCB-22	14.3			B	PCB-63	8.13			
PCB-23	ND	0.0984			PCB-65	ND	0.152		
PCB-24/27	1.27				PCB-66/76	226			
PCB-25	1.12				PCB-67	1.74			
PCB-26	7.62				PCB-68	1.63			
PCB-28	61.7			B	PCB-73	ND	0.146		
PCB-29	ND	0.0987			PCB-74	116			
PCB-30	ND	0.0490			PCB-77	0.839			B
PCB-31	23.4				PCB-78	ND	0.160		
PCB-34	0.273			J	PCB-79	12.3			
PCB-35	ND	0.107			PCB-80	ND	0.129		
PCB-36	ND	0.100			PCB-81	0.328			J
PCB-37	0.104			J	PCB-82	4.57			
PCB-38	2.65				PCB-83	0.267			J
PCB-39	ND	0.0974			PCB-84/92	131			
PCB-40	ND		0.272		PCB-85/116	98.3			
PCB-41/64/71/72	122			B	PCB-86	ND	0.118		
PCB-42/59	19.4				PCB-87/117/125	170			
PCB-43/49	245				PCB-88/91	65.5			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-10	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00980	Date Analyzed :	14-Jan-15 12:01	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.659				PCB-136	28.3			
PCB-90/101	878				PCB-137	41.2			
PCB-93	ND	0.102			PCB-138/163/164	1160			
PCB-94	1.60				PCB-139/149	583			
PCB-95/98/102	170				PCB-140	3.62			
PCB-96	1.79				PCB-141	144			
PCB-97	85.4				PCB-144	39.3			
PCB-99	592				PCB-145	ND	0.0590		
PCB-100	27.5				PCB-146/165	209			
PCB-103	24.6				PCB-147	62.6			
PCB-104	3.13				PCB-148	4.43			
PCB-105	261			B	PCB-150	5.50			
PCB-106/118	753			B	PCB-151	246			
PCB-107/109	58.4				PCB-152	1.72			
PCB-108/112	1.48				PCB-153	1670			
PCB-110	545				PCB-154	95.2			
PCB-111/115	15.0				PCB-155	1.65			
PCB-113	ND	0.0800			PCB-156	73.8			
PCB-114	9.83				PCB-157	15.0			
PCB-119	34.4				PCB-158/160	107			
PCB-120	3.21				PCB-159	18.0			
PCB-121	ND	0.0687			PCB-166	2.76			
PCB-122	ND		0.413		PCB-167	34.6			
PCB-123	8.21				PCB-168	3.05			
PCB-124	4.18				PCB-169	ND	0.204		
PCB-126	2.96				PCB-170	200			
PCB-127	ND	0.195			PCB-171	59.0			
PCB-128/162	136				PCB-172	35.8			
PCB-129	11.5				PCB-173	1.74			
PCB-130	50.9				PCB-174	113			
PCB-131	ND	0.258			PCB-175	10.6			
PCB-132/161	57.4				PCB-176	12.4			
PCB-133/142	20.6				PCB-177	100			
PCB-134/143	6.60				PCB-178	72.3			
PCB-135	26.3				PCB-179	41.5			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-10	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00980	Date Analyzed :	14-Jan-15 12:01	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	631				Total octaCB	417			
PCB-181	ND	0.122			Total nonaCB	50.8			
PCB-182/187	544				DecaCB	10.4			
PCB-183	192				Total PCB	13000			B
PCB-184	ND		0.569						
PCB-185	17.1								
PCB-186	ND	0.0919							
PCB-188	4.16								
PCB-189	6.01			B					
PCB-190	39.7								
PCB-191	7.63								
PCB-192	ND	0.0975							
PCB-193	30.4								
PCB-194	91.4								
PCB-195	30.9								
PCB-196/203	124								
PCB-197	4.14								
PCB-198	3.70								
PCB-199	105								
PCB-200	5.18								
PCB-201	16.2								
PCB-202	32.9								
PCB-204	ND	0.0390							
PCB-205	3.53								
PCB-206	35.4								
PCB-207	5.37								
PCB-208	10.1								
PCB-209	10.4								
Total monoCB	ND	0.0666							
Total diCB	2.78								
Total triCB	158			B					
Total tetraCB	1450			B					
Total pentaCB	3950			B					
Total hexaCB	4860								
Total heptaCB	2120			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-09-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-10
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00980	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 12:01
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	54.4	5 -145		13C-PCB-170	66.0	10 -145	
13C-PCB-3	60.1	5 -145		13C-PCB-180	70.2	10 -145	
13C-PCB-4	65.0	5 -145		13C-PCB-188	69.4	10 -145	
13C-PCB-11	68.2	5 -145		13C-PCB-189	72.1	10 -145	
13C-PCB-9	63.7	5 -145		13C-PCB-194	79.9	10 -145	
13C-PCB-19	60.4	5 -145		13C-PCB-202	67.6	10 -145	
13C-PCB-28	75.9	5 -145		13C-PCB-206	79.7	10 -145	
13C-PCB-32	71.5	5 -145		13C-PCB-208	67.5	10 -145	
13C-PCB-37	79.7	5 -145		13C-PCB-209	75.5	10 -145	
13C-PCB-47	87.0	5 -145		CRS 13C-PCB-79	81.8	10 -145	
13C-PCB-52	84.3	5 -145		13C-PCB-178	76.6	10 -145	
13C-PCB-54	71.6	5 -145					
13C-PCB-70	81.2	5 -145					
13C-PCB-77	81.0	10 -145					
13C-PCB-80	79.5	10 -145					
13C-PCB-81	80.4	10 -145					
13C-PCB-95	77.0	10 -145					
13C-PCB-97	77.5	10 -145					
13C-PCB-101	77.0	10 -145					
13C-PCB-104	84.9	10 -145					
13C-PCB-105	83.1	10 -145					
13C-PCB-114	76.7	10 -145					
13C-PCB-118	87.8	10 -145					
13C-PCB-123	87.9	10 -145					
13C-PCB-126	85.0	10 -145					
13C-PCB-127	84.6	10 -145					
13C-PCB-138	79.5	10 -145					
13C-PCB-141	77.5	10 -145					
13C-PCB-153	78.6	10 -145					
13C-PCB-155	74.4	10 -145					
13C-PCB-156	76.5	10 -145					
13C-PCB-157	75.5	10 -145					
13C-PCB-159	77.9	10 -145					
13C-PCB-167	78.7	10 -145					
13C-PCB-169	72.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: CS-FF-CH-09-03-20141010	QC Batch: B5A0018	Lab Sample: B5A0018-DUP1
Source LabNumber: 1400903-10	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 14-Jan-15 13:04 Column: ZB-1 Analyst: WJL
Matrix: Tissue		
Sample Size: 10.3 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0733			PCB-41/64/71/72	250			B
PCB-2	ND	0.0739			PCB-42/59	41.1			
PCB-3	ND	0.0732			PCB-43/49	505			
PCB-4/10	ND		1.50		PCB-44	14.5			
PCB-5/8	4.57				PCB-45	6.63			
PCB-6	ND		1.01		PCB-46	ND	0.279		
PCB-7/9	ND	0.390			PCB-47	239			B
PCB-11	0.940				PCB-48/75	41.6			
PCB-12/13	ND	0.410			PCB-50	0.754			
PCB-14	ND	0.346			PCB-51	106			
PCB-15	ND	0.362			PCB-52/69	768			
PCB-16/32	30.1				PCB-53	61.5			
PCB-17	14.5				PCB-54	11.1			
PCB-18	33.9				PCB-55	4.46			
PCB-19	2.36				PCB-56/60	115			B
PCB-20/21/33	15.2			B	PCB-57	3.01			
PCB-22	29.6			B	PCB-58	ND	0.201		
PCB-23	ND	0.134			PCB-61/70	95.9			B
PCB-24/27	2.51				PCB-62	ND	0.198		
PCB-25	2.12				PCB-63	17.6			
PCB-26	16.4				PCB-65	ND	0.203		
PCB-28	126			B	PCB-66/76	499			
PCB-29	0.161			J	PCB-67	3.45			
PCB-30	ND	0.0475			PCB-68	2.86			
PCB-31	47.6				PCB-73	ND	0.191		
PCB-34	ND		0.532		PCB-74	249			
PCB-35	ND	0.148			PCB-77	1.63			B
PCB-36	ND	0.139			PCB-78	ND	0.194		
PCB-37	0.337			J	PCB-79	29.0			
PCB-38	6.07				PCB-80	ND	0.178		
PCB-39	ND	0.135			PCB-81	0.560			
PCB-40	ND		0.660		PCB-82	9.78			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: CS-FF-CH-09-03-20141010	QC Batch: B5A0018	Lab Sample: B5A0018-DUP1
Source LabNumber: 1400903-10	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 14-Jan-15 13:04 Column: ZB-1 Analyst: WJL
Matrix: Tissue		
Sample Size: 10.3 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	0.552				PCB-127	ND	0.238		
PCB-84/92	280				PCB-128/162	300			
PCB-85/116	215				PCB-129	25.2			
PCB-86	ND	0.152			PCB-130	119			
PCB-87/117/125	369				PCB-131	ND	0.294		
PCB-88/91	146				PCB-132/161	128			
PCB-89	ND		0.666		PCB-133/142	46.3			
PCB-90/101	1840				PCB-134/143	15.6			
PCB-93	ND	0.154			PCB-135	61.5			
PCB-94	3.58				PCB-136	64.4			
PCB-95/98/102	380				PCB-137	93.1			
PCB-96	3.87				PCB-138/163/164	2490			E
PCB-97	185				PCB-139/149	1350			
PCB-99	1240				PCB-140	8.16			
PCB-100	58.1				PCB-141	313			
PCB-103	52.8				PCB-144	93.6			
PCB-104	6.51				PCB-145	0.213			J
PCB-105	539			B	PCB-146/165	472			
PCB-106/118	1540			B	PCB-147	147			
PCB-107/109	129				PCB-148	ND	10.0		
PCB-108/112	2.93				PCB-150	11.9			
PCB-110	1200				PCB-151	583			
PCB-111/115	30.0				PCB-152	3.95			
PCB-113	ND	0.107			PCB-153	3610			E
PCB-114	21.1				PCB-154	230			
PCB-119	71.0				PCB-155	3.82			
PCB-120	7.00				PCB-156	163			
PCB-121	ND	0.103			PCB-157	33.1			
PCB-122	3.09				PCB-158/160	232			
PCB-123	17.3				PCB-159	ND	0.192		
PCB-124	9.21				PCB-166	6.09			
PCB-126	6.19				PCB-167	78.4			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: CS-FF-CH-09-03-20141010	QC Batch: B5A0018	Lab Sample: B5A0018-DUP1
Source LabNumber: 1400903-10	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 14-Jan-15 13:04 Column: ZB-1 Analyst: WJL
Matrix: Tissue		
Sample Size: 10.3 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	6.45				PCB-201	33.8			
PCB-169	0.398			J	PCB-202	71.6			
PCB-170	434				PCB-204	ND		0.175	
PCB-171	137				PCB-205	7.45			
PCB-172	80.8				PCB-206	77.2			
PCB-173	3.75				PCB-207	11.1			
PCB-174	251				PCB-208	21.8			
PCB-175	23.8				PCB-209	21.8			
PCB-176	27.6				Total monoCB	ND	0.0739		
PCB-177	225				Total diCB	5.51		8.03	
PCB-178	164				Total triCB	327			B
PCB-179	95.3				Total tetraCB	3070			B
PCB-180	1370				Total pentaCB	8370			B
PCB-181	ND	0.181			Total hexaCB	10700			
PCB-182/187	1190				Total heptaCB	4650			B
PCB-183	420				Total octaCB	915			
PCB-184	1.45				Total nonaCB	110			
PCB-185	39.3				DecaCB	21.8			
PCB-186	ND	0.133			Total PCB	28200			B
PCB-188	9.39								
PCB-189	12.4			B					
PCB-190	90.0								
PCB-191	15.8								
PCB-192	ND	0.145							
PCB-193	67.5								
PCB-194	198								
PCB-195	67.4								
PCB-196/203	274								
PCB-197	8.40								
PCB-198	8.20								
PCB-199	234								
PCB-200	11.3								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: CS-FF-CH-09-03-20141010	QC Batch: B5A0018	Lab Sample: B5A0018-DUP1
Source LabNumber: 1400903-10	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 14-Jan-15 13:04 Column: ZB-1 Analyst: WJL
Matrix: Tissue		
Sample Size: 10.3 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	50.8	5-145		13C-PCB-156	72.4	10-145	
13C-PCB-3	54.0	5-145		13C-PCB-157	71.3	10-145	
13C-PCB-4	57.1	5-145		13C-PCB-159	74.8	10-145	
13C-PCB-11	67.9	5-145		13C-PCB-167	75.3	10-145	
13C-PCB-9	59.0	5-145		13C-PCB-169	66.3	10-145	
13C-PCB-19	58.5	5-145		13C-PCB-170	62.4	10-145	
13C-PCB-28	75.9	5-145		13C-PCB-180	66.1	10-145	
13C-PCB-32	68.6	5-145		13C-PCB-188	66.9	10-145	
13C-PCB-37	74.1	5-145		13C-PCB-189	67.2	10-145	
13C-PCB-47	82.5	5-145		13C-PCB-194	76.1	10-145	
13C-PCB-52	85.3	5-145		13C-PCB-202	63.2	10-145	
13C-PCB-54	70.4	5-145		13C-PCB-206	76.2	10-145	
13C-PCB-70	73.6	5-145		13C-PCB-208	65.8	10-145	
13C-PCB-77	85.9	10-145		13C-PCB-209	71.4	10-145	
13C-PCB-80	74.8	10-145		CRS 13C-PCB-79	78.4	10-145	
13C-PCB-81	83.0	10-145		13C-PCB-178	72.0	10-145	
13C-PCB-95	65.6	10-145					
13C-PCB-97	74.7	10-145					
13C-PCB-101	74.0	10-145					
13C-PCB-104	73.8	10-145					
13C-PCB-105	81.5	10-145					
13C-PCB-114	72.7	10-145					
13C-PCB-118	87.4	10-145					
13C-PCB-123	85.3	10-145					
13C-PCB-126	84.8	10-145					
13C-PCB-127	82.1	10-145					
13C-PCB-138	78.2	10-145					
13C-PCB-141	75.5	10-145					
13C-PCB-153	74.7	10-145					
13C-PCB-155	67.7	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-FF-CH-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-11	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.5 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0856	Date Analyzed :	14-Jan-15 14:07	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.168		PCB-44	40.6			
PCB-2	ND	0.0480			PCB-45	7.45			
PCB-3	ND	0.0476			PCB-46	0.539			
PCB-4/10	1.34				PCB-47	221			B
PCB-5/8	4.39				PCB-48/75	31.7			
PCB-6	ND		1.02		PCB-50	0.857			
PCB-7/9	ND	0.338			PCB-51	123			
PCB-11	ND		0.547		PCB-52/69	812			
PCB-12/13	ND	0.356			PCB-53	86.9			
PCB-14	ND	0.300			PCB-54	13.8			
PCB-15	ND		0.805		PCB-55	4.86			
PCB-16/32	28.1				PCB-56/60	101			B
PCB-17	11.5				PCB-57	3.81			
PCB-18	32.5				PCB-58	ND	0.124		
PCB-19	2.80				PCB-61/70	119			B
PCB-20/21/33	16.5			B	PCB-62	ND	0.129		
PCB-22	33.5			B	PCB-63	12.0			
PCB-23	ND	0.101			PCB-65	ND	0.133		
PCB-24/27	2.76				PCB-66/76	369			
PCB-25	3.44				PCB-67	1.88			
PCB-26	22.6				PCB-68	2.67			
PCB-28	153			B	PCB-73	ND	0.120		
PCB-29	ND	0.101			PCB-74	174			
PCB-30	ND	0.0386			PCB-77	3.98			B
PCB-31	57.7				PCB-78	0.319			J
PCB-34	0.646				PCB-79	20.9			
PCB-35	ND	0.114			PCB-80	ND	0.120		
PCB-36	ND	0.107			PCB-81	0.557			
PCB-37	0.399			J	PCB-82	17.2			
PCB-38	5.15				PCB-83	ND		0.260	
PCB-39	ND	0.104			PCB-84/92	253			
PCB-40	1.38				PCB-85/116	142			
PCB-41/64/71/72	225			B	PCB-86	ND	0.149		
PCB-42/59	52.1				PCB-87/117/125	273			
PCB-43/49	535				PCB-88/91	150			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-11	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.5 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0856	Date Analyzed :	14-Jan-15 14:07	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.11				PCB-136	95.3			
PCB-90/101	1510				PCB-137	65.9			
PCB-93	ND	0.131			PCB-138/163/164	1740			
PCB-94	5.49				PCB-139/149	1280			
PCB-95/98/102	495				PCB-140	5.90			
PCB-96	5.89				PCB-141	245			
PCB-97	183				PCB-144	76.1			
PCB-99	953				PCB-145	ND		0.142	
PCB-100	62.7				PCB-146/165	361			
PCB-103	64.3				PCB-147	148			
PCB-104	8.48				PCB-148	ND	0.0589		
PCB-105	351			B	PCB-150	15.7			
PCB-106/118	1040			B	PCB-151	497			
PCB-107/109	91.1				PCB-152	5.15			
PCB-108/112	4.22				PCB-153	2720			E
PCB-110	883				PCB-154	196			
PCB-111/115	18.2				PCB-155	3.57			
PCB-113	ND	0.107			PCB-156	102			
PCB-114	10.2				PCB-157	21.2			
PCB-119	61.9				PCB-158/160	153			
PCB-120	5.68				PCB-159	ND	0.167		
PCB-121	ND	0.0882			PCB-166	3.20			
PCB-122	0.940				PCB-167	54.7			
PCB-123	10.1				PCB-168	5.95			
PCB-124	9.61				PCB-169	0.359			J
PCB-126	4.85				PCB-170	317			
PCB-127	ND	0.235			PCB-171	91.3			
PCB-128/162	194				PCB-172	58.0			
PCB-129	23.5				PCB-173	3.02			
PCB-130	81.2				PCB-174	211			
PCB-131	ND	0.267			PCB-175	21.1			
PCB-132/161	133				PCB-176	31.0			
PCB-133/142	38.6				PCB-177	194			
PCB-134/143	23.5				PCB-178	139			
PCB-135	66.7				PCB-179	121			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-11
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0856	QC Batch:	B5A0018
				Date Analyzed:	14-Jan-15 14:07
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1040				Total octaCB	703			
PCB-181	ND	0.114			Total nonaCB	72.7			
PCB-182/187	1030				DecaCB	12.6			
PCB-183	337				Total PCB	22900			B
PCB-184	1.15								
PCB-185	28.7								
PCB-186	ND	0.111							
PCB-188	8.25								
PCB-189	9.66			B					
PCB-190	67.0								
PCB-191	12.3								
PCB-192	ND	0.0911							
PCB-193	51.8								
PCB-194	153								
PCB-195	53.1								
PCB-196/203	206								
PCB-197	7.06								
PCB-198	6.22								
PCB-199	179								
PCB-200	11.0								
PCB-201	26.3								
PCB-202	55.8								
PCB-204	ND	0.0330							
PCB-205	5.97								
PCB-206	51.5								
PCB-207	7.01								
PCB-208	14.2								
PCB-209	12.6								
Total monoCB	ND		0.168						
Total diCB	5.73		8.10						
Total triCB	371			B					
Total tetraCB	2970			B					
Total pentaCB	6610			B					
Total hexaCB	8360								
Total heptaCB	3780			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-10-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-11
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.0856	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 14:07
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.6	5 -145		13C-PCB-170	82.2	10 -145	
13C-PCB-3	61.5	5 -145		13C-PCB-180	86.8	10 -145	
13C-PCB-4	65.3	5 -145		13C-PCB-188	69.6	10 -145	
13C-PCB-11	73.1	5 -145		13C-PCB-189	80.5	10 -145	
13C-PCB-9	64.6	5 -145		13C-PCB-194	83.5	10 -145	
13C-PCB-19	64.3	5 -145		13C-PCB-202	78.2	10 -145	
13C-PCB-28	71.6	5 -145		13C-PCB-206	78.1	10 -145	
13C-PCB-32	76.7	5 -145		13C-PCB-208	72.1	10 -145	
13C-PCB-37	79.4	5 -145		13C-PCB-209	71.9	10 -145	
13C-PCB-47	97.2	5 -145		CRS 13C-PCB-79	83.2	10 -145	
13C-PCB-52	96.7	5 -145		13C-PCB-178	78.0	10 -145	
13C-PCB-54	83.0	5 -145					
13C-PCB-70	84.6	5 -145					
13C-PCB-77	86.5	10 -145					
13C-PCB-80	81.6	10 -145					
13C-PCB-81	83.7	10 -145					
13C-PCB-95	82.2	10 -145					
13C-PCB-97	83.9	10 -145					
13C-PCB-101	81.3	10 -145					
13C-PCB-104	99.3	10 -145					
13C-PCB-105	86.5	10 -145					
13C-PCB-114	78.9	10 -145					
13C-PCB-118	94.4	10 -145					
13C-PCB-123	91.9	10 -145					
13C-PCB-126	90.5	10 -145					
13C-PCB-127	86.8	10 -145					
13C-PCB-138	81.9	10 -145					
13C-PCB-141	78.7	10 -145					
13C-PCB-153	80.4	10 -145					
13C-PCB-155	78.7	10 -145					
13C-PCB-156	85.6	10 -145					
13C-PCB-157	85.3	10 -145					
13C-PCB-159	81.0	10 -145					
13C-PCB-167	82.3	10 -145					
13C-PCB-169	86.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-LF-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-12	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed :	14-Jan-15 15:10	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.200		PCB-44	450			
PCB-2	ND	0.0516			PCB-45	27.5			
PCB-3	ND		0.0840		PCB-46	17.6			
PCB-4/10	3.18				PCB-47	394			B
PCB-5/8	12.7				PCB-48/75	74.6			
PCB-6	2.15				PCB-50	2.14			
PCB-7/9	ND	0.242			PCB-51	264			
PCB-11	ND		1.75		PCB-52/69	1210			
PCB-12/13	ND	0.254			PCB-53	215			
PCB-14	ND	0.215			PCB-54	43.0			
PCB-15	0.437			J	PCB-55	11.7			
PCB-16/32	72.4				PCB-56/60	185			B
PCB-17	22.8				PCB-57	5.98			
PCB-18	54.1				PCB-58	4.22			
PCB-19	8.17				PCB-61/70	249			B
PCB-20/21/33	40.6			B	PCB-62	ND	0.240		
PCB-22	49.5			B	PCB-63	17.9			
PCB-23	ND	0.141			PCB-65	ND	0.246		
PCB-24/27	7.95				PCB-66/76	746			
PCB-25	9.61				PCB-67	3.14			
PCB-26	40.1				PCB-68	5.78			
PCB-28	242			B	PCB-73	ND	0.245		
PCB-29	ND		0.246		PCB-74	218			
PCB-30	ND	0.0502			PCB-77	12.5			B
PCB-31	64.2				PCB-78	5.86			
PCB-34	1.73				PCB-79	39.2			
PCB-35	ND	0.153			PCB-80	ND	0.182		
PCB-36	ND	0.144			PCB-81	0.438			J
PCB-37	3.11				PCB-82	197			
PCB-38	10.3				PCB-83	0.731			
PCB-39	ND	0.140			PCB-84/92	813			
PCB-40	63.7				PCB-85/116	330			
PCB-41/64/71/72	445			B	PCB-86	ND	0.188		
PCB-42/59	168				PCB-87/117/125	656			
PCB-43/49	865				PCB-88/91	374			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-LF-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-12	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed:	14-Jan-15 15:10	Column:	ZB-1
				Analyst:	WJL		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.53				PCB-136	228			
PCB-90/101	3090				PCB-137	135			
PCB-93	ND	0.155			PCB-138/163/164	3360			E
PCB-94	24.9				PCB-139/149	2200			
PCB-95/98/102	1570				PCB-140	8.57			
PCB-96	21.8				PCB-141	489			
PCB-97	684				PCB-144	108			
PCB-99	1700				PCB-145	ND		0.444	
PCB-100	71.3				PCB-146/165	673			
PCB-103	88.9				PCB-147	130			
PCB-104	11.1				PCB-148	10.6			
PCB-105	809			B	PCB-150	18.1			
PCB-106/118	2280			B	PCB-151	665			
PCB-107/109	226				PCB-152	6.05			
PCB-108/112	103				PCB-153	4510			E
PCB-110	2110			E	PCB-154	146			
PCB-111/115	37.8				PCB-155	3.07			
PCB-113	ND	0.122			PCB-156	176			
PCB-114	15.3				PCB-157	43.8			
PCB-119	105				PCB-158/160	282			
PCB-120	12.2				PCB-159	ND	0.221		
PCB-121	ND	0.104			PCB-166	6.91			
PCB-122	2.75				PCB-167	99.9			
PCB-123	16.0				PCB-168	6.59			
PCB-124	29.8				PCB-169	0.287			J
PCB-126	9.90				PCB-170	455			
PCB-127	ND	0.311			PCB-171	136			
PCB-128/162	450				PCB-172	86.4			
PCB-129	88.8				PCB-173	6.60			
PCB-130	215				PCB-174	518			
PCB-131	ND	0.360			PCB-175	34.1			
PCB-132/161	610				PCB-176	73.8			
PCB-133/142	96.4				PCB-177	386			
PCB-134/143	140				PCB-178	219			
PCB-135	263				PCB-179	250			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-LF-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-12	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.127	Date Analyzed :	14-Jan-15 15:10	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1330				Total octaCB	918			
PCB-181	ND	0.147			Total nonaCB	113			
PCB-182/187	1490				DecaCB	35.3			
PCB-183	488				Total PCB	43700			B
PCB-184	1.30								
PCB-185	43.1								
PCB-186	ND	0.143							
PCB-188	7.42								
PCB-189	11.2			B					
PCB-190	82.0								
PCB-191	16.3								
PCB-192	ND	0.118							
PCB-193	72.1								
PCB-194	155								
PCB-195	55.8								
PCB-196/203	262								
PCB-197	8.31								
PCB-198	9.25								
PCB-199	284								
PCB-200	19.6								
PCB-201	34.9								
PCB-202	82.6								
PCB-204	ND	0.0492							
PCB-205	6.05								
PCB-206	73.1								
PCB-207	9.84								
PCB-208	29.9								
PCB-209	35.3								
Total monoCB	ND		0.284						
Total diCB	18.5		20.2						
Total triCB	627			B					
Total tetraCB	5750			B					
Total pentaCB	15400			B					
Total hexaCB	15200								
Total heptaCB	5710			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-LF-02-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-12
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.127	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 15:10
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.0	5 -145		13C-PCB-170	86.1	10 -145	
13C-PCB-3	65.9	5 -145		13C-PCB-180	86.8	10 -145	
13C-PCB-4	70.0	5 -145		13C-PCB-188	67.2	10 -145	
13C-PCB-11	73.1	5 -145		13C-PCB-189	90.1	10 -145	
13C-PCB-9	72.2	5 -145		13C-PCB-194	85.9	10 -145	
13C-PCB-19	61.7	5 -145		13C-PCB-202	78.0	10 -145	
13C-PCB-28	73.6	5 -145		13C-PCB-206	77.4	10 -145	
13C-PCB-32	72.3	5 -145		13C-PCB-208	74.9	10 -145	
13C-PCB-37	84.2	5 -145		13C-PCB-209	69.4	10 -145	
13C-PCB-47	77.9	5 -145		CRS 13C-PCB-79	81.4	10 -145	
13C-PCB-52	75.9	5 -145		13C-PCB-178	76.8	10 -145	
13C-PCB-54	61.1	5 -145					
13C-PCB-70	83.0	5 -145					
13C-PCB-77	74.6	10 -145					
13C-PCB-80	81.5	10 -145					
13C-PCB-81	74.7	10 -145					
13C-PCB-95	92.3	10 -145					
13C-PCB-97	89.7	10 -145					
13C-PCB-101	94.7	10 -145					
13C-PCB-104	89.5	10 -145					
13C-PCB-105	88.8	10 -145					
13C-PCB-114	81.6	10 -145					
13C-PCB-118	81.0	10 -145					
13C-PCB-123	81.3	10 -145					
13C-PCB-126	94.1	10 -145					
13C-PCB-127	91.1	10 -145					
13C-PCB-138	82.2	10 -145					
13C-PCB-141	78.6	10 -145					
13C-PCB-153	77.7	10 -145					
13C-PCB-155	95.5	10 -145					
13C-PCB-156	86.4	10 -145					
13C-PCB-157	85.5	10 -145					
13C-PCB-159	82.8	10 -145					
13C-PCB-167	83.9	10 -145					
13C-PCB-169	91.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-13	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	1.07 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	05-Jan-2015 0:00	%Lipids:	10.2	Date Analyzed :	14-Jan-15 16:13	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.628			PCB-44	3710			
PCB-2	ND	0.615			PCB-45	101			
PCB-3	ND	0.609			PCB-46	ND		46.0	
PCB-4/10	9.20			J	PCB-47	2030			B
PCB-5/8	9.43				PCB-48/75	309			
PCB-6	ND	1.74			PCB-50	2.65			J
PCB-7/9	ND	1.75			PCB-51	23.1			
PCB-11	22.0				PCB-52/69	6190			
PCB-12/13	ND	1.84			PCB-53	193			
PCB-14	ND	1.55			PCB-54	ND	2.98		
PCB-15	ND	1.63			PCB-55	93.3			
PCB-16/32	38.0				PCB-56/60	2370			B
PCB-17	75.3				PCB-57	62.9			
PCB-18	315				PCB-58	35.2			
PCB-19	12.3				PCB-61/70	12400			B
PCB-20/21/33	52.7			B	PCB-62	ND	2.46		
PCB-22	206			B	PCB-63	519			
PCB-23	ND		1.67		PCB-65	4.09			J
PCB-24/27	14.0				PCB-66/76	8590			
PCB-25	56.6				PCB-67	194			
PCB-26	123				PCB-68	298			
PCB-28	1430			B	PCB-73	ND	2.44		
PCB-29	ND	1.98			PCB-74	4350			
PCB-30	ND	0.485			PCB-77	246			B
PCB-31	1000				PCB-78	55.2			
PCB-34	ND		2.45		PCB-79	718			
PCB-35	ND	2.16			PCB-80	ND		16.1	
PCB-36	ND	2.03			PCB-81	353			
PCB-37	9.32				PCB-82	131			
PCB-38	53.1				PCB-83	12.2			
PCB-39	11.2				PCB-84/92	9680			
PCB-40	148				PCB-85/116	12100			
PCB-41/64/71/72	3040			B	PCB-86	ND	1.44		
PCB-42/59	464				PCB-87/117/125	9060			
PCB-43/49	2950				PCB-88/91	2020			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-13
Project:		Sample Size:	1.07 g	QC Batch:	B5A0018
Date Collected:	05-Jan-2015 0:00	%Lipids:	10.2	Date Received:	13-Nov-2014 12:36
				Date Extracted:	06-Jan-2015 13:14
				Date Analyzed:	14-Jan-15 16:13
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	49.4				PCB-136	1740			
PCB-90/101	38200			E	PCB-137	5140			
PCB-93	ND	1.35			PCB-138/163/164	151000			E
PCB-94	65.7				PCB-139/149	28500			
PCB-95/98/102	12500				PCB-140	712			
PCB-96	14.1				PCB-141	12800			
PCB-97	4840				PCB-144	1940			
PCB-99	28800			E	PCB-145	ND		1.82	
PCB-100	122				PCB-146/165	31800			
PCB-103	145				PCB-147	2170			
PCB-104	ND	0.948			PCB-148	200			
PCB-105	20300			B, E	PCB-150	46.2			
PCB-106/118	55400			B, E	PCB-151	9580			
PCB-107/109	7490				PCB-152	27.6			
PCB-108/112	1070				PCB-153	196000			E
PCB-110	25900			E	PCB-154	1470			
PCB-111/115	844				PCB-155	104			
PCB-113	ND	0.998			PCB-156	9470			
PCB-114	1440				PCB-157	2540			
PCB-119	1010				PCB-158/160	7560			
PCB-120	651				PCB-159	ND	5.66		
PCB-121	ND	0.904			PCB-166	562			
PCB-122	123				PCB-167	5830			
PCB-123	1130				PCB-168	211			
PCB-124	2430				PCB-169	87.7			
PCB-126	399				PCB-170	26500			E
PCB-127	55.7				PCB-171	7440			
PCB-128/162	22600				PCB-172	7900			
PCB-129	526				PCB-173	ND		10.5	
PCB-130	8140				PCB-174	10400			
PCB-131	14.9				PCB-175	1660			
PCB-132/161	5110				PCB-176	541			
PCB-133/142	4320				PCB-177	16600			
PCB-134/143	1500				PCB-178	11100			
PCB-135	8740				PCB-179	5620			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-13	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	1.07 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	05-Jan-2015 0:00	%Lipids:	10.2	Date Analyzed :	14-Jan-15 16:13	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	89200			E	Total octaCB	85800			
PCB-181	ND	4.36			Total nonaCB	9370			
PCB-182/187	66000			E	DecaCB	1000			
PCB-183	23100			E	Total PCB	1190000			B
PCB-184	412								
PCB-185	1920								
PCB-186	5.91								
PCB-188	349								
PCB-189	1520			B					
PCB-190	6800								
PCB-191	905								
PCB-192	ND		12.2						
PCB-193	5670								
PCB-194	15700								
PCB-195	5220								
PCB-196/203	28500								
PCB-197	1340								
PCB-198	1190								
PCB-199	23900			E					
PCB-200	203								
PCB-201	3170								
PCB-202	5600								
PCB-204	131								
PCB-205	915								
PCB-206	6170								
PCB-207	1370								
PCB-208	1830								
PCB-209	1000								
Total monoCB	ND	0.628							
Total diCB	40.6								
Total triCB	3400		3410	B					
Total tetraCB	49500			B					
Total pentaCB	236000			B					
Total hexaCB	521000								
Total heptaCB	284000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400903-13
Project:		Sample Size:	1.07 g	Date Received:	13-Nov-2014 12:36
Date Collected:	05-Jan-2015 0:00	%Lipids:	10.2	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 16:13
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	37.5	5 -145		13C-PCB-170	71.3	10 -145	
13C-PCB-3	44.0	5 -145		13C-PCB-180	66.5	10 -145	
13C-PCB-4	51.7	5 -145		13C-PCB-188	60.1	10 -145	
13C-PCB-11	60.2	5 -145		13C-PCB-189	73.8	10 -145	
13C-PCB-9	56.4	5 -145		13C-PCB-194	66.1	10 -145	
13C-PCB-19	52.2	5 -145		13C-PCB-202	59.0	10 -145	
13C-PCB-28	67.4	5 -145		13C-PCB-206	65.3	10 -145	
13C-PCB-32	52.3	5 -145		13C-PCB-208	56.7	10 -145	
13C-PCB-37	69.2	5 -145		13C-PCB-209	58.7	10 -145	
13C-PCB-47	58.7	5 -145		CRS 13C-PCB-79	70.8	10 -145	
13C-PCB-52	56.6	5 -145		13C-PCB-178	60.6	10 -145	
13C-PCB-54	48.0	5 -145					
13C-PCB-70	65.9	5 -145					
13C-PCB-77	73.6	10 -145					
13C-PCB-80	65.1	10 -145					
13C-PCB-81	69.4	10 -145					
13C-PCB-95	60.8	10 -145					
13C-PCB-97	68.0	10 -145					
13C-PCB-101	64.5	10 -145					
13C-PCB-104	56.0	10 -145					
13C-PCB-105	79.4	10 -145					
13C-PCB-114	74.6	10 -145					
13C-PCB-118	64.2	10 -145					
13C-PCB-123	64.9	10 -145					
13C-PCB-126	73.4	10 -145					
13C-PCB-127	78.6	10 -145					
13C-PCB-138	65.3	10 -145					
13C-PCB-141	65.4	10 -145					
13C-PCB-153	67.2	10 -145					
13C-PCB-155	63.9	10 -145					
13C-PCB-156	69.2	10 -145					
13C-PCB-157	68.0	10 -145					
13C-PCB-159	65.0	10 -145					
13C-PCB-167	67.1	10 -145					
13C-PCB-169	71.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400903-01	IA-FF-WC-08-07-20141011	22.3	08-Jan-2015	B5A0016
1400903-02	IA-FF-WC-10-07-20141011	23.8	08-Jan-2015	B5A0016
1400903-03	CS-FF-CH-01-03-20141010	22.6	08-Jan-2015	B5A0016
1400903-04	CS-FF-CH-02-03-20141010	20.7	08-Jan-2015	B5A0016
1400903-05	CS-FF-CH-03-03-20141010	23.5	08-Jan-2015	B5A0016
1400903-06	CS-FF-CH-04-03-20141010	22.4	08-Jan-2015	B5A0016
1400903-07	CS-FF-CH-05-03-20141010	22.9	08-Jan-2015	B5A0016
1400903-08	CS-FF-CH-06-03-20141010	22.5	08-Jan-2015	B5A0016
1400903-09	CS-FF-CH-07-03-20141010	22.9	08-Jan-2015	B5A0016
1400903-10	CS-FF-CH-09-03-20141010	23.2	08-Jan-2015	B5A0016
1400903-11	CS-FF-CH-10-03-20141010	24.5	08-Jan-2015	B5A0016
1400903-12	CS-FF-LF-02-03-20141010	22.6	08-Jan-2015	B5A0016

Sample ID	Lab ID	Total Length (cm)	Standard Length (cm)	Mass (g)
IA-FF-WC-08-07-20141011	1400903-1	16.9	13.3	61.53
CS-FF-CH-01-03-20141010	1400903-3	19.5	16.3	73.01
CS-FF-CH-02-03-20141010	1400903-4	21.0	17.0	79.87
CS-FF-CH-03-03-20141010	1400903-5	23.2	19.2	122.91
CS-FF-CH-04-03-20141010	1400903-6	23.9	20.4	145.84
CS-FF-CH-05-03-20141010	1400903-7	27.4	22.4	188.31
CS-FF-CH-06-03-20141010	1400903-8	30.4	25.4	269.41
CS-FF-CH-07-03-20141010	1400903-9	32.0	27.1	307.28
CS-FF-CH-09-03-20141010	1400903-10	50.5	42.3	1135.0
CS-FF-CH-10-03-20141010	1400903-11	43.0	36.0	554.2
CS-FF-LF-02-03-20141010	1400903-12	26.4	22.3	98.16

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Compensers - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
	Date: 11/20/2014																	
	Project Name: Harbor TMDL Food Web Sampling																	
	Project Number: 120711-01.07 Task 1																	
	Project Manager: Chris Stransky																	
	Phone Number: (858) 300 4350																	
	Shipment Method:																	
																		ANCHOR OEA 1400903 0.1°C, 0.3°C, 0.3°C
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
111	IA-FF-OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4													x	
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Benedict Vista Company: 12/04/14 1100
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

- ≠ 1400902
- Ⓟ 1400903
- Ⓢ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whoe Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	ANCHOR QEA 1400903
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01.07 Task 1																		
Project Manager: Chris Stransky																		
Phone Number: (858) 300 4350																		
Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish															Comments/Preservation
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13														
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
128	CS-FF/OF-WS-04-03-201410101010	10/10/14	White Surfprch.	1	x	x												Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1														
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3														
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1														L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1														Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <i>YSLB 12/02/14</i>	Company: Anchor QEA	Received By: <i>Kellie Brunet</i>	Company: Vista
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time
Relinquished By:	Company:	Received By:	Company:
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time

> 1400893
 ⓑ 1400903
 ∞ 1400905
 Ⓞ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1505</u>	Initials: <u>BBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.1</u> (uncorrected)	Time: <u>0900</u>		Thermometer ID: IR-1
Temp °C: <u>0.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>299</u> Trk # <u>7718 4040 1830</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:
 Sample ID:
CS-FF-CH-10-03-20141010
-09-03-
-02-03-
-01-03-
-03-03-
-04-03-
-07-03-
-06-03-
-05-03-

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1505</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>-0.3</u> (uncorrected)	Time: <u>0903</u>	Thermometer ID: IR-1	
Temp °C: <u>-0.3</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="radio"/> COC	<input type="radio"/> Sample Container	<input type="radio"/> None
Shipping Container	<input type="radio"/> Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
		<input checked="" type="radio"/> Return	<input type="radio"/> Dispose

Comments:

Sample ID: 1A-FF-WC-08-07-2014/011
 ↓ 10-07 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time	Initials:	Location:
	11/13/14 0849	BBB	WF2
Logged In:	Date/Time	Initials:	Location:
	12/10/14 1505	BBB	WF-2
Delivered By:	(FedEx)	UPS	On Trac
			DHL
Preservation:	(Ice)	Blue Ice	Dry Ice
			None
Temp °C:	0.3 (uncorrected)	Time: 0909	Thermometer ID: IR-1
Temp °C:	0.3 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	<u>NA</u>	COC	Sample Container
Shipping Container	Vista	(Client)	Retain
			(Return)
			Dispose

Comments:

CS-FF-LF-02-03-2014/010

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400903
 Date Received: 13-Nov-14 12:36
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: YES NO	Signature and Date <u>MM 2/3/15</u>
Client Comments/Instructions <u>COC rec'd by email</u>	



March 17, 2015

Vista Project I.D.: 1400904

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400904

Case Narrative

Sample Condition on Receipt:

Ten tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report was amended to include the detection limit for PCB-169 in sample "IB-OF-WC-10-05-20141012", which was omitted from the original report:

As requested, scales were removed from samples "FH-FF/OF-WS-01-08-20141013" and "IB-FF/OF-WS-10-05-20141012". The physical measurements of each scaled fish are included in the report.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. All remaining offal was ground and homogenized. The fillet and offal portions were extracted and analyzed separately; the fillet portions include "FF" in the sample ID, and the offal portions include "OF" in the sample ID. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

The recovery of the internal standard 13C-PCB-209 was 161% in sample "OA-FF-CH-06-06-20141011", which is above the method limit. The recoveries of all other labeled standards were within method acceptance criteria for the QC and field samples.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "IB-FF-CH-01-05-20141012" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400904-01	FH-FF-CH-07-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-02	FH-OF-CH-07-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-03	FH-FF-WS-01-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-04	FH-OF-WS-01-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-05	FH-FF-WC-10-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-06	FH-OF-WC-10-08-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-07	OA-FF-CH-06-06-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-08	OA-OF-CH-06-06-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-09	OA-FF-WS-07-06-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-10	OA-OF-WS-07-06-20141013	13-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-11	OA-FF-WC-02-06-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-12	OA-OF-WC-02-06-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-13	IB-FF-CH-01-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-14	IB-OF-CH-01-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-15	IB-FF-WS-10-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-16	IB-OF-WS-10-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-17	IB-FF-WC-10-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-18	IB-OF-WC-10-05-20141012	12-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-19	IA-FF-WC-09-07-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-20	IA-OF-WC-09-07-20141011	11-Oct-14 00:00	13-Nov-14 12:36	Tissue in Foil
1400904-21	SRM 1946	10-Dec-14 00:00	13-Nov-14 12:36	Glass Jar, 120mL

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0031	Lab Sample: B5A0031-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 15-Jan-15 06:12 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0417			PCB-43/49	ND	0.0961		
PCB-2	ND	0.0445			PCB-44	ND	0.109		
PCB-3	ND	0.0440			PCB-45	ND	0.108		
PCB-4/10	ND	0.172			PCB-46	ND	0.115		
PCB-5/8	ND	0.155			PCB-47	ND	0.0855		
PCB-6	ND	0.150			PCB-48/75	ND	0.0734		
PCB-7/9	ND	0.151			PCB-50	ND	0.0969		
PCB-11	1.05				PCB-51	ND	0.0952		
PCB-12/13	ND	0.159			PCB-52/69	ND	0.0843		
PCB-14	ND	0.134			PCB-53	ND	0.0981		
PCB-15	ND	0.140			PCB-54	ND	0.0777		
PCB-16/32	ND	0.0501			PCB-55	ND	0.0567		
PCB-17	ND	0.0550			PCB-56/60	ND	0.0605		
PCB-18	ND	0.0598			PCB-57	ND	0.0656		
PCB-19	ND	0.0556			PCB-58	ND	0.0630		
PCB-20/21/33	ND		0.107		PCB-61/70	ND		0.195	
PCB-22	ND	0.0469			PCB-62	ND	0.0759		
PCB-23	ND	0.0454			PCB-63	ND	0.0624		
PCB-24/27	ND	0.0406			PCB-65	ND	0.0778		
PCB-25	ND	0.0509			PCB-66/76	0.325			J
PCB-26	ND	0.0462			PCB-67	ND	0.0673		
PCB-28	0.266			J	PCB-68	ND	0.0660		
PCB-29	ND	0.0455			PCB-73	ND	0.0788		
PCB-30	ND	0.0352			PCB-74	ND		0.145	
PCB-31	ND		0.141		PCB-77	ND	0.0629		
PCB-34	ND	0.0465			PCB-78	ND	0.0643		
PCB-35	ND	0.0488			PCB-79	ND	0.0594		
PCB-36	ND	0.0459			PCB-80	ND	0.0517		
PCB-37	0.0953			J	PCB-81	ND	0.0600		
PCB-38	ND	0.0472			PCB-82	ND	0.137		
PCB-39	ND	0.0445			PCB-83	ND	0.0852		
PCB-40	ND	0.116			PCB-84/92	ND	0.108		
PCB-41/64/71/72	ND	0.0714			PCB-85/116	ND	0.102		
PCB-42/59	ND	0.0771			PCB-86	ND	0.131		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0031	Lab Sample: B5A0031-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 15-Jan-15 06:12 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.0907			PCB-133/142	ND	0.116		
PCB-88/91	ND	0.122			PCB-134/143	ND	0.113		
PCB-89	ND	0.113			PCB-135	ND	0.0996		
PCB-90/101	ND	0.0975			PCB-136	ND	0.0731		
PCB-93	ND	0.120			PCB-137	ND	0.111		
PCB-94	ND	0.124			PCB-138/163/164	0.451			J
PCB-95/98/102	ND	0.110			PCB-139/149	ND	0.0907		
PCB-96	ND	0.101			PCB-140	ND	0.0994		
PCB-97	ND	0.107			PCB-141	ND	0.112		
PCB-99	ND		0.258		PCB-144	ND	0.0944		
PCB-100	ND	0.113			PCB-145	ND	0.0763		
PCB-103	ND	0.111			PCB-146/165	ND	0.0965		
PCB-104	ND	0.0883			PCB-147	ND	0.105		
PCB-105	0.377			J	PCB-148	ND	0.101		
PCB-106/118	0.638			J	PCB-150	ND	0.0728		
PCB-107/109	ND	0.0791			PCB-151	ND	0.0993		
PCB-108/112	ND	0.0994			PCB-152	ND	0.0731		
PCB-110	ND		0.155		PCB-153	0.575			
PCB-111/115	ND	0.0780			PCB-154	ND	0.0929		
PCB-113	ND	0.0875			PCB-155	ND	0.0698		
PCB-114	ND	0.0729			PCB-156	ND	0.0754		
PCB-119	ND	0.0759			PCB-157	ND	0.0755		
PCB-120	ND	0.0742			PCB-158/160	ND		0.0730	
PCB-121	ND	0.0806			PCB-159	ND	0.0771		
PCB-122	ND	0.0844			PCB-166	ND	0.0827		
PCB-123	ND	0.0799			PCB-167	ND	0.0777		
PCB-124	ND	0.0789			PCB-168	ND	0.0806		
PCB-126	ND	0.0702			PCB-169	ND	0.0841		
PCB-127	ND	0.0715			PCB-170	ND	0.0606		
PCB-128/162	ND	0.0913			PCB-171	ND	0.0616		
PCB-129	ND	0.126			PCB-172	ND	0.0616		
PCB-130	ND	0.129			PCB-173	ND	0.0747		
PCB-131	ND	0.124			PCB-174	ND	0.0695		
PCB-132/161	ND	0.0985			PCB-175	ND	0.0748		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0031	Lab Sample: B5A0031-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 15-Jan-15 06:12 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.0546			Total triCB	0.362		0.610	
PCB-177	ND	0.0704			Total tetraCB	0.325		0.665	
PCB-178	ND	0.0727			Total pentaCB	1.02		1.43	
PCB-179	ND	0.0579			Total hexaCB	1.03		1.10	
PCB-180	0.287			J	Total heptaCB	0.287		0.476	
PCB-181	ND	0.0634			Total octaCB	ND	0.120		
PCB-182/187	ND		0.189		Total nonaCB	ND	0.0597		
PCB-183	ND	0.0649			DecaCB	ND	0.00457		
PCB-184	ND	0.0587			Total PCB	4.07			
PCB-185	ND	0.0627							
PCB-186	ND	0.0550							
PCB-188	ND	0.0530							
PCB-189	ND	0.0360							
PCB-190	ND	0.0456							
PCB-191	ND	0.0478							
PCB-192	ND	0.0509							
PCB-193	ND	0.0488							
PCB-194	ND	0.0416							
PCB-195	ND	0.0447							
PCB-196/203	ND	0.0449							
PCB-197	ND	0.0320							
PCB-198	ND	0.0463							
PCB-199	ND	0.0480							
PCB-200	ND	0.0361							
PCB-201	ND	0.0340							
PCB-202	ND	0.0370							
PCB-204	ND	0.0363							
PCB-205	ND	0.0339							
PCB-206	ND	0.0251							
PCB-207	ND	0.0176							
PCB-208	ND	0.0171							
PCB-209	ND	0.00457							
Total monoCB	ND	0.130							
Total diCB	1.05								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0031	Lab Sample: B5A0031-BLK1
Sample Size: 10.0 g	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 15-Jan-15 06:12 Column: ZB-1 Analyst: WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	65.7	5 - 145		13C-PCB-157	94.4	10 - 145	
13C-PCB-3	68.5	5 - 145		13C-PCB-159	89.6	10 - 145	
13C-PCB-4	79.4	5 - 145		13C-PCB-167	92.8	10 - 145	
13C-PCB-11	82.9	5 - 145		13C-PCB-169	98.2	10 - 145	
13C-PCB-9	79.0	5 - 145		13C-PCB-170	87.1	10 - 145	
13C-PCB-19	79.0	5 - 145		13C-PCB-180	86.3	10 - 145	
13C-PCB-28	90.4	5 - 145		13C-PCB-188	74.5	10 - 145	
13C-PCB-32	74.8	5 - 145		13C-PCB-189	91.4	10 - 145	
13C-PCB-37	96.1	5 - 145		13C-PCB-194	88.7	10 - 145	
13C-PCB-47	73.9	5 - 145		13C-PCB-202	80.4	10 - 145	
13C-PCB-52	73.6	5 - 145		13C-PCB-206	90.3	10 - 145	
13C-PCB-54	69.2	5 - 145		13C-PCB-208	78.2	10 - 145	
13C-PCB-70	85.6	5 - 145		13C-PCB-209	83.8	10 - 145	
13C-PCB-77	88.6	10 - 145		CRS 13C-PCB-79	86.3	10 - 145	
13C-PCB-80	87.2	10 - 145		13C-PCB-178	79.5	10 - 145	
13C-PCB-81	90.3	10 - 145					
13C-PCB-95	86.0	10 - 145					
13C-PCB-97	91.5	10 - 145					
13C-PCB-101	92.3	10 - 145					
13C-PCB-104	78.2	10 - 145					
13C-PCB-105	99.3	10 - 145					
13C-PCB-114	89.8	10 - 145					
13C-PCB-118	85.3	10 - 145					
13C-PCB-123	88.1	10 - 145					
13C-PCB-126	104	10 - 145					
13C-PCB-127	101	10 - 145					
13C-PCB-138	86.7	10 - 145					
13C-PCB-141	87.6	10 - 145					
13C-PCB-153	86.9	10 - 145					
13C-PCB-155	89.3	10 - 145					
13C-PCB-156	96.2	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0031
Date Extracted: 08-Jan-2015 11:08

Lab Sample: B5A0031-BS1
Date Analyzed: 15-Jan-15 04:07 Column: ZB-1 Analyst: WJL

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	107	100	107	60 - 135	IS 13C-PCB-1	62.0	15 - 145
PCB-3	107	100	107	60 - 135	IS 13C-PCB-3	66.3	15 - 145
PCB-4/10	252	200	126	60 - 135	IS 13C-PCB-4	77.7	15 - 145
PCB-15	122	100	122	60 - 135	IS 13C-PCB-9	78.7	15 - 145
PCB-19	104	100	104	60 - 135	IS 13C-PCB-11	86.7	15 - 145
PCB-37	118	100	118	60 - 135	IS 13C-PCB-19	79.0	15 - 145
PCB-54	106	100	106	60 - 135	IS 13C-PCB-28	84.3	15 - 145
PCB-77	104	100	104	60 - 135	IS 13C-PCB-32	80.6	15 - 145
PCB-81	104	100	104	60 - 135	IS 13C-PCB-37	93.5	15 - 145
PCB-104	95.7	100	95.7	60 - 135	IS 13C-PCB-47	86.0	15 - 145
PCB-105	113	100	113	60 - 135	IS 13C-PCB-52	85.5	15 - 145
PCB-106/118	202	200	101	60 - 135	IS 13C-PCB-54	78.1	15 - 145
PCB-114	112	100	112	60 - 135	IS 13C-PCB-70	93.7	15 - 145
PCB-123	92.5	100	92.5	60 - 135	IS 13C-PCB-77	96.6	40 - 145
PCB-126	110	100	110	60 - 135	IS 13C-PCB-80	96.8	40 - 145
PCB-155	97.8	100	97.8	60 - 135	IS 13C-PCB-81	99.3	40 - 145
PCB-156	103	100	103	60 - 135	IS 13C-PCB-95	93.1	40 - 145
PCB-157	102	100	102	60 - 135	IS 13C-PCB-97	97.9	40 - 145
PCB-167	101	100	101	60 - 135	IS 13C-PCB-101	96.1	40 - 145
PCB-169	102	100	102	60 - 135	IS 13C-PCB-104	87.2	40 - 145
PCB-188	103	100	103	60 - 135	IS 13C-PCB-105	109	40 - 145
PCB-189	104	100	104	60 - 135	IS 13C-PCB-114	101	40 - 145
PCB-202	101	100	101	60 - 135	IS 13C-PCB-118	91.7	40 - 145
PCB-205	111	100	111	60 - 135	IS 13C-PCB-123	94.8	40 - 145
PCB-206	101	100	101	60 - 135	IS 13C-PCB-126	114	40 - 145
PCB-208	104	100	104	60 - 135	IS 13C-PCB-127	111	40 - 145
PCB-209	103	100	103	60 - 135	IS 13C-PCB-138	97.8	40 - 145
					IS 13C-PCB-141	96.8	40 - 145
					IS 13C-PCB-153	94.2	40 - 145
					IS 13C-PCB-155	93.5	40 - 145
					IS 13C-PCB-156	100	40 - 145
					IS 13C-PCB-157	101	40 - 145
					IS 13C-PCB-159	96.8	40 - 145
					IS 13C-PCB-167	97.5	40 - 145
					IS 13C-PCB-169	104	40 - 145
					IS 13C-PCB-170	92.4	40 - 145
					IS 13C-PCB-180	93.1	40 - 145
					IS 13C-PCB-188	81.9	40 - 145
					IS 13C-PCB-189	98.4	40 - 145
					IS 13C-PCB-194	92.3	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0031
Date Extracted: 08-Jan-2015 11:08

Lab Sample: B5A0031-BS1
Date Analyzed: 15-Jan-15 04:07 Column: ZB-1 Analyst: WJL

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	83.4	40 - 145
					IS 13C-PCB-206	95.4	40 - 145
					IS 13C-PCB-208	81.1	40 - 145
					IS 13C-PCB-209	87.4	40 - 145
					CRS 13C-PCB-79	95.4	40 - 145
					CRS 13C-PCB-178	83.5	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: FH-FF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-01	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	Date Analyzed:	17-Jan-15 10:28	Column:	ZB-1
				Analyst:	WJL		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.0970		PCB-44	7.03			
PCB-2	ND	0.0384			PCB-45	3.92			
PCB-3	ND	0.0380			PCB-46	ND	0.197		
PCB-4/10	0.960			J	PCB-47	116			
PCB-5/8	3.09				PCB-48/75	27.4			
PCB-6	0.850				PCB-50	ND		0.310	
PCB-7/9	ND	0.194			PCB-51	6.78			
PCB-11	0.821			B	PCB-52/69	287			
PCB-12/13	ND	0.204			PCB-53	13.1			
PCB-14	ND	0.172			PCB-54	0.755			
PCB-15	ND	0.180			PCB-55	1.73			
PCB-16/32	13.3				PCB-56/60	49.2			
PCB-17	8.48				PCB-57	0.554			
PCB-18	17.4				PCB-58	ND		0.299	
PCB-19	1.68				PCB-61/70	53.1			
PCB-20/21/33	6.21				PCB-62	ND	0.148		
PCB-22	7.56				PCB-63	10.1			
PCB-23	ND	0.103			PCB-65	ND	0.151		
PCB-24/27	1.36				PCB-66/76	279			B
PCB-25	1.32				PCB-67	ND		0.596	
PCB-26	5.19				PCB-68	2.34			
PCB-28	44.2			B	PCB-73	ND	0.135		
PCB-29	ND		0.0680		PCB-74	130			
PCB-30	ND	0.0318			PCB-77	ND		0.584	
PCB-31	16.1				PCB-78	ND	0.143		
PCB-34	0.315			J	PCB-79	15.5			
PCB-35	ND	0.120			PCB-80	ND	0.114		
PCB-36	ND	0.113			PCB-81	ND		0.342	
PCB-37	0.180			J, B	PCB-82	3.31			
PCB-38	2.37				PCB-83	0.375			J
PCB-39	ND	0.110			PCB-84/92	135			
PCB-40	ND		0.576		PCB-85/116	143			
PCB-41/64/71/72	133				PCB-86	ND	0.113		
PCB-42/59	19.2				PCB-87/117/125	200			
PCB-43/49	223				PCB-88/91	53.9			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: FH-FF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-01	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	Date Analyzed :	17-Jan-15 10:28	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	0.375			J	PCB-136	10.2			
PCB-90/101	1080				PCB-137	53.0			
PCB-93	ND	0.107			PCB-138/163/164	1280			B
PCB-94	0.366			J	PCB-139/149	315			
PCB-95/98/102	96.7				PCB-140	3.85			
PCB-96	0.558				PCB-141	121			
PCB-97	85.7				PCB-144	27.9			
PCB-99	781				PCB-145	ND	0.0526		
PCB-100	8.06				PCB-146/165	232			
PCB-103	8.47				PCB-147	21.4			
PCB-104	0.229			J	PCB-148	1.82			
PCB-105	341			B	PCB-150	1.08			
PCB-106/118	1090			B	PCB-151	115			
PCB-107/109	86.5				PCB-152	0.265			J
PCB-108/112	1.86				PCB-153	1670			B
PCB-110	592				PCB-154	39.0			
PCB-111/115	18.8				PCB-155	ND		0.689	
PCB-113	ND	0.0802			PCB-156	100			
PCB-114	10.4				PCB-157	23.3			
PCB-119	27.8				PCB-158/160	116			
PCB-120	4.31				PCB-159	ND	0.161		
PCB-121	ND	0.0715			PCB-166	4.19			
PCB-122	1.12				PCB-167	41.2			
PCB-123	9.17				PCB-168	1.94			
PCB-124	4.32				PCB-169	ND	0.190		
PCB-126	2.61				PCB-170	171			
PCB-127	ND	0.215			PCB-171	48.7			
PCB-128/162	186				PCB-172	29.1			
PCB-129	7.58				PCB-173	0.878			
PCB-130	54.5				PCB-174	47.9			
PCB-131	ND	0.214			PCB-175	6.64			
PCB-132/161	42.2				PCB-176	4.46			
PCB-133/142	16.8				PCB-177	40.4			
PCB-134/143	2.66				PCB-178	36.9			
PCB-135	13.8				PCB-179	11.9			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-01	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	Date Analyzed :	17-Jan-15 10:28	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	511			B	Total octaCB	315			
PCB-181	ND	0.149			Total nonaCB	51.7			
PCB-182/187	286				DecaCB	13.8			
PCB-183	136				Total PCB	12600			B
PCB-184	0.505								
PCB-185	11.3								
PCB-186	ND	0.0982							
PCB-188	2.33								
PCB-189	5.88								
PCB-190	31.0								
PCB-191	6.14								
PCB-192	ND	0.120							
PCB-193	23.0								
PCB-194	64.4								
PCB-195	20.2								
PCB-196/203	104								
PCB-197	3.13								
PCB-198	3.05								
PCB-199	78.2								
PCB-200	2.82								
PCB-201	12.1								
PCB-202	24.5								
PCB-204	ND		0.148						
PCB-205	2.40								
PCB-206	36.3								
PCB-207	4.59								
PCB-208	10.8								
PCB-209	13.8								
Total monoCB	ND		0.0970						
Total diCB	5.72			B					
Total triCB	126			B					
Total tetraCB	1380			B					
Total pentaCB	4790			B					
Total hexaCB	4500			B					
Total heptaCB	1410			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-01
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0196	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 10:28
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	60.9	5 -145		13C-PCB-170	72.3	10 -145	
13C-PCB-3	68.8	5 -145		13C-PCB-180	72.1	10 -145	
13C-PCB-4	49.5	5 -145		13C-PCB-188	75.8	10 -145	
13C-PCB-11	58.4	5 -145		13C-PCB-189	74.3	10 -145	
13C-PCB-9	51.2	5 -145		13C-PCB-194	66.6	10 -145	
13C-PCB-19	75.4	5 -145		13C-PCB-202	75.8	10 -145	
13C-PCB-28	67.3	5 -145		13C-PCB-206	85.6	10 -145	
13C-PCB-32	82.9	5 -145		13C-PCB-208	75.6	10 -145	
13C-PCB-37	65.7	5 -145		13C-PCB-209	96.5	10 -145	
13C-PCB-47	65.0	5 -145		CRS 13C-PCB-79	67.9	10 -145	
13C-PCB-52	66.5	5 -145		13C-PCB-178	74.2	10 -145	
13C-PCB-54	63.1	5 -145					
13C-PCB-70	67.5	5 -145					
13C-PCB-77	69.5	10 -145					
13C-PCB-80	67.2	10 -145					
13C-PCB-81	68.2	10 -145					
13C-PCB-95	65.6	10 -145					
13C-PCB-97	68.5	10 -145					
13C-PCB-101	67.1	10 -145					
13C-PCB-104	65.2	10 -145					
13C-PCB-105	61.7	10 -145					
13C-PCB-114	54.7	10 -145					
13C-PCB-118	73.2	10 -145					
13C-PCB-123	71.5	10 -145					
13C-PCB-126	57.7	10 -145					
13C-PCB-127	60.2	10 -145					
13C-PCB-138	70.9	10 -145					
13C-PCB-141	70.1	10 -145					
13C-PCB-153	72.7	10 -145					
13C-PCB-155	69.5	10 -145					
13C-PCB-156	66.2	10 -145					
13C-PCB-157	66.2	10 -145					
13C-PCB-159	65.4	10 -145					
13C-PCB-167	65.3	10 -145					
13C-PCB-169	64.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-02
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.20	QC Batch:	B5A0031
				Date Analyzed :	06-Feb-15 21:38
				Column:	ZB-1
				Analyst:	DMS
				17-Jan-15 11:31	Column: ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.59				PCB-44	246			
PCB-2	0.113			J	PCB-45	154			
PCB-3	ND		0.130		PCB-46	4.57			
PCB-4/10	23.4				PCB-47	4220			E
PCB-5/8	66.9				PCB-48/75	1030			
PCB-6	19.0				PCB-50	13.2			
PCB-7/9	4.42				PCB-51	266			
PCB-11	1.96			B	PCB-52/69	10100			E
PCB-12/13	ND	0.174			PCB-53	507			
PCB-14	ND	0.147			PCB-54	26.9			
PCB-15	3.19				PCB-55	76.1			
PCB-16/32	395				PCB-56/60	1650			
PCB-17	264				PCB-57	22.5			
PCB-18	555				PCB-58	16.7			
PCB-19	51.0				PCB-61/70	1980			
PCB-20/21/33	195				PCB-62	ND	0.323		
PCB-22	166				PCB-63	392			
PCB-23	0.978				PCB-65	ND	0.331		
PCB-24/27	39.0				PCB-66/76	9890			B, E
PCB-25	44.0				PCB-67	24.5			
PCB-26	181				PCB-68	86.1			
PCB-28	1480			B	PCB-73	12.6			
PCB-29	1.76				PCB-74	4650			E
PCB-30	0.362			J	PCB-77	26.7			
PCB-31	559				PCB-78	ND	0.326		
PCB-34	8.07				PCB-79	650			
PCB-35	ND	0.456			PCB-80	ND	0.257		
PCB-36	ND	0.429			PCB-81	63.8			
PCB-37	2.59			B	PCB-82	129			
PCB-38	103				PCB-83	10.3			
PCB-39	ND	0.416			PCB-84/92	5800			E
PCB-40	13.0				PCB-85/116	4370			E
PCB-41/64/71/72	4320				PCB-86	49.9			
PCB-42/59	679				PCB-87/117/125	8690			E
PCB-43/49	8600			E	PCB-88/91	2430			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-02	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.20	Date Analyzed :	06-Feb-15 21:38	Column:	ZB-1 Analyst: DMS
					17-Jan-15 11:31	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	23.0				PCB-136	562			
PCB-90/101	43100			E, D	PCB-137	2930			E
PCB-93	ND	0.219			PCB-138/163/164	52300			B, E, D
PCB-94	12.3				PCB-139/149	15100			E
PCB-95/98/102	3970				PCB-140	213			
PCB-96	22.3				PCB-141	5980			E
PCB-97	3530			E	PCB-144	1510			
PCB-99	30500			E, D	PCB-145	3.02			
PCB-100	401				PCB-146/165	12200			E
PCB-103	417				PCB-147	1270			
PCB-104	8.04				PCB-148	84.6			
PCB-105	12600			B, E	PCB-150	53.2			
PCB-106/118	42800			B, E, D	PCB-151	6080			E
PCB-107/109	3920			E	PCB-152	11.9			
PCB-108/112	72.7				PCB-153	70300			B, E, D
PCB-110	21200			E	PCB-154	2150			E
PCB-111/115	690				PCB-155	39.6			
PCB-113	ND	0.180			PCB-156	5060			E
PCB-114	476				PCB-157	1190			
PCB-119	1240				PCB-158/160	5640			E
PCB-120	239				PCB-159	ND	0.715		
PCB-121	ND	0.147			PCB-166	217			
PCB-122	7.56				PCB-167	2320			E
PCB-123	429				PCB-168	103			
PCB-124	208				PCB-169	8.09			
PCB-126	121				PCB-170	9130			E
PCB-127	ND	0.783			PCB-171	2630			E
PCB-128/162	8480			E	PCB-172	1690			
PCB-129	401				PCB-173	41.5			
PCB-130	2900			E	PCB-174	2560			E
PCB-131	ND	1.30			PCB-175	451			
PCB-132/161	2490				PCB-176	280			
PCB-133/142	1060				PCB-177	2420			E
PCB-134/143	154				PCB-178	2210			E
PCB-135	742				PCB-179	740			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-02 Date Received: 13-Nov-2014 12:36
Project:		Sample Size:	10.3 g	QC Batch:	B5A0031 Date Extracted: 08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.20	Date Analyzed :	06-Feb-15 21:38 Column: ZB-1 Analyst: DMS
					17-Jan-15 11:31 Column: ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	26900			B, E	Total octaCB	18000			
PCB-181	68.9				Total nonaCB	2540			
PCB-182/187	16300			E	DecaCB	463			
PCB-183	7510			E	Total PCB	541000			B
PCB-184	28.9								
PCB-185	633								
PCB-186	1.17								
PCB-188	134								
PCB-189	372								
PCB-190	1760								
PCB-191	356								
PCB-192	ND	0.416							
PCB-193	1350								
PCB-194	3680			E					
PCB-195	1140								
PCB-196/203	5840			E					
PCB-197	176								
PCB-198	187								
PCB-199	4530			E					
PCB-200	162								
PCB-201	687								
PCB-202	1450								
PCB-204	6.66								
PCB-205	139								
PCB-206	1780								
PCB-207	217								
PCB-208	538								
PCB-209	463								
Total monoCB	1.70		1.83						
Total diCB	119			B					
Total triCB	4050			B					
Total tetraCB	49700			B					
Total pentaCB	187000			B					
Total hexaCB	202000			B					
Total heptaCB	77500			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-CH-07-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-02
Project:		Sample Size:	10.3 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	1.20	QC Batch:	B5A0031
				Date Analyzed:	06-Feb-15 21:38
				Column:	ZB-1
				Analyst:	DMS
				17-Jan-15 11:31	Column: ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	68.4	5 -145		13C-PCB-170	72.4	10 -145	
13C-PCB-3	74.4	5 -145		13C-PCB-180	73.3	10 -145	
13C-PCB-4	54.9	5 -145		13C-PCB-188	72.4	10 -145	
13C-PCB-11	64.8	5 -145		13C-PCB-189	71.1	10 -145	
13C-PCB-9	60.4	5 -145		13C-PCB-194	70.2	10 -145	
13C-PCB-19	82.9	5 -145		13C-PCB-202	71.3	10 -145	
13C-PCB-28	60.8	5 -145		13C-PCB-206	86.2	10 -145	
13C-PCB-32	92.1	5 -145		13C-PCB-208	71.6	10 -145	
13C-PCB-37	62.9	5 -145		13C-PCB-209	92.6	10 -145	
13C-PCB-47	66.4	5 -145		CRS 13C-PCB-79	68.5	10 -145	
13C-PCB-52	66.4	5 -145		13C-PCB-178	73.3	10 -145	
13C-PCB-54	64.0	5 -145					
13C-PCB-70	68.0	5 -145					
13C-PCB-77	69.9	10 -145					
13C-PCB-80	66.5	10 -145					
13C-PCB-81	69.7	10 -145					
13C-PCB-95	67.2	10 -145					
13C-PCB-97	72.7	10 -145					
13C-PCB-101	71.6	10 -145					
13C-PCB-104	63.5	10 -145					
13C-PCB-105	61.9	10 -145					
13C-PCB-114	54.2	10 -145					
13C-PCB-118	73.7	10 -145					
13C-PCB-123	73.1	10 -145					
13C-PCB-126	59.7	10 -145					
13C-PCB-127	58.5	10 -145					
13C-PCB-138	70.2	10 -145					
13C-PCB-141	68.6	10 -145					
13C-PCB-153	68.1	10 -145					
13C-PCB-155	67.7	10 -145					
13C-PCB-156	67.3	10 -145					
13C-PCB-157	65.6	10 -145					
13C-PCB-159	65.2	10 -145					
13C-PCB-167	66.5	10 -145					
13C-PCB-169	61.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-03	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	8.23 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.207	Date Analyzed :	17-Jan-15 12:33	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.199		PCB-44	256			
PCB-2	ND	0.0518			PCB-45	8.67			
PCB-3	ND		0.117		PCB-46	3.07			
PCB-4/10	0.959			J	PCB-47	298			
PCB-5/8	1.66				PCB-48/75	69.3			
PCB-6	0.851				PCB-50	0.556			J
PCB-7/9	0.524			J	PCB-51	15.4			
PCB-11	4.30			B	PCB-52/69	1270			
PCB-12/13	ND	0.212			PCB-53	29.9			
PCB-14	ND	0.179			PCB-54	1.66			
PCB-15	6.00				PCB-55	9.30			
PCB-16/32	33.3				PCB-56/60	267			
PCB-17	4.48				PCB-57	6.74			
PCB-18	36.1				PCB-58	5.01			
PCB-19	1.74				PCB-61/70	981			
PCB-20/21/33	8.79				PCB-62	ND	0.212		
PCB-22	14.9				PCB-63	63.8			
PCB-23	ND	0.209			PCB-65	ND	0.217		
PCB-24/27	2.42				PCB-66/76	1390			B
PCB-25	22.5				PCB-67	27.9			
PCB-26	45.3				PCB-68	16.2			
PCB-28	463			B	PCB-73	ND	0.200		
PCB-29	0.384			J	PCB-74	830			
PCB-30	ND	0.0606			PCB-77	91.5			
PCB-31	158				PCB-78	1.88			
PCB-34	1.22				PCB-79	58.7			
PCB-35	ND	0.247			PCB-80	ND	0.160		
PCB-36	ND	0.233			PCB-81	3.28			
PCB-37	25.6			B	PCB-82	27.3			
PCB-38	6.85				PCB-83	0.901			
PCB-39	0.312			J	PCB-84/92	479			
PCB-40	10.1				PCB-85/116	181			
PCB-41/64/71/72	429				PCB-86	ND	0.214		
PCB-42/59	71.8				PCB-87/117/125	738			
PCB-43/49	942				PCB-88/91	234			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-03
Project:		Sample Size:	8.23 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.207	QC Batch:	B5A0031
				Date Analyzed:	17-Jan-15 12:33
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.11				PCB-136	101			
PCB-90/101	3520				PCB-137	176			
PCB-93	ND	0.211			PCB-138/163/164	3850			B, E
PCB-94	ND		0.608		PCB-139/149	802			
PCB-95/98/102	526				PCB-140	15.0			
PCB-96	6.33				PCB-141	279			
PCB-97	586				PCB-144	105			
PCB-99	2550			E	PCB-145	0.418			J
PCB-100	39.9				PCB-146/165	647			
PCB-103	43.1				PCB-147	131			
PCB-104	1.09				PCB-148	9.58			
PCB-105	1130			B	PCB-150	7.25			
PCB-106/118	3620			B	PCB-151	543			
PCB-107/109	306				PCB-152	1.61			
PCB-108/112	34.4				PCB-153	4680			B, E
PCB-110	1480				PCB-154	160			
PCB-111/115	67.9				PCB-155	2.89			
PCB-113	ND	0.152			PCB-156	328			
PCB-114	58.8				PCB-157	72.3			
PCB-119	97.7				PCB-158/160	374			
PCB-120	15.2				PCB-159	ND	0.250		
PCB-121	ND	0.142			PCB-166	12.9			
PCB-122	12.0				PCB-167	173			
PCB-123	64.6				PCB-168	6.70			
PCB-124	87.4				PCB-169	0.587			J
PCB-126	11.4				PCB-170	546			
PCB-127	ND	0.319			PCB-171	159			
PCB-128/162	535				PCB-172	79.2			
PCB-129	21.8				PCB-173	0.976			
PCB-130	208				PCB-174	66.9			
PCB-131	ND	0.345			PCB-175	26.2			
PCB-132/161	125				PCB-176	12.9			
PCB-133/142	65.5				PCB-177	232			
PCB-134/143	50.8				PCB-178	136			
PCB-135	81.4				PCB-179	105			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-03	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	8.23 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.207	Date Analyzed :	17-Jan-15 12:33	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1580			B	Total octaCB	1020			
PCB-181	ND	0.207			Total nonaCB	162			
PCB-182/187	1040				DecaCB	33.9			
PCB-183	422				Total PCB	43300			B
PCB-184	1.66								
PCB-185	21.6								
PCB-186	ND	0.149							
PCB-188	9.45								
PCB-189	19.1								
PCB-190	103								
PCB-191	18.9								
PCB-192	ND	0.166							
PCB-193	65.2								
PCB-194	228								
PCB-195	67.1								
PCB-196/203	347								
PCB-197	10.0								
PCB-198	6.81								
PCB-199	243								
PCB-200	3.09								
PCB-201	35.4								
PCB-202	71.9								
PCB-204	ND		0.423						
PCB-205	8.25								
PCB-206	125								
PCB-207	13.1								
PCB-208	23.0								
PCB-209	33.9								
Total monoCB	ND		0.316						
Total diCB	14.3			B					
Total triCB	825			B					
Total tetraCB	7160			B					
Total pentaCB	15900			B					
Total hexaCB	13600			B					
Total heptaCB	4650			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-03
Project:		Sample Size:	8.23 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.207	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 12:33
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.3	5 -145		13C-PCB-170	69.3	10 -145	
13C-PCB-3	64.4	5 -145		13C-PCB-180	70.6	10 -145	
13C-PCB-4	46.3	5 -145		13C-PCB-188	73.4	10 -145	
13C-PCB-11	56.8	5 -145		13C-PCB-189	70.4	10 -145	
13C-PCB-9	51.1	5 -145		13C-PCB-194	67.5	10 -145	
13C-PCB-19	72.5	5 -145		13C-PCB-202	73.3	10 -145	
13C-PCB-28	56.8	5 -145		13C-PCB-206	83.4	10 -145	
13C-PCB-32	81.5	5 -145		13C-PCB-208	73.3	10 -145	
13C-PCB-37	59.3	5 -145		13C-PCB-209	94.9	10 -145	
13C-PCB-47	63.8	5 -145		CRS 13C-PCB-79	70.9	10 -145	
13C-PCB-52	65.4	5 -145		13C-PCB-178	76.6	10 -145	
13C-PCB-54	59.3	5 -145					
13C-PCB-70	67.1	5 -145					
13C-PCB-77	71.3	10 -145					
13C-PCB-80	67.3	10 -145					
13C-PCB-81	69.3	10 -145					
13C-PCB-95	61.5	10 -145					
13C-PCB-97	68.0	10 -145					
13C-PCB-101	66.5	10 -145					
13C-PCB-104	59.6	10 -145					
13C-PCB-105	60.4	10 -145					
13C-PCB-114	53.7	10 -145					
13C-PCB-118	70.3	10 -145					
13C-PCB-123	67.9	10 -145					
13C-PCB-126	60.2	10 -145					
13C-PCB-127	58.7	10 -145					
13C-PCB-138	70.2	10 -145					
13C-PCB-141	67.7	10 -145					
13C-PCB-153	71.7	10 -145					
13C-PCB-155	65.2	10 -145					
13C-PCB-156	63.7	10 -145					
13C-PCB-157	64.7	10 -145					
13C-PCB-159	66.1	10 -145					
13C-PCB-167	65.5	10 -145					
13C-PCB-169	63.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-04	Date Received:	13-Nov-2014 12:36				
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08				
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.31	Date Analyzed :	06-Feb-15 22:42	Column:	ZB-1	Analyst:	DMS		
				17-Jan-15 13:36				Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.51				PCB-44	3290			E
PCB-2	0.569				PCB-45	135			
PCB-3	0.342			J	PCB-46	47.3			
PCB-4/10	12.6				PCB-47	3910			E
PCB-5/8	20.9				PCB-48/75	917			
PCB-6	11.5				PCB-50	7.67			
PCB-7/9	7.78				PCB-51	228			
PCB-11	46.9			B	PCB-52/69	15300			E
PCB-12/13	1.36				PCB-53	458			
PCB-14	ND	0.153			PCB-54	24.7			
PCB-15	78.5				PCB-55	153			
PCB-16/32	448				PCB-56/60	3510			
PCB-17	65.5				PCB-57	105			
PCB-18	524				PCB-58	77.9			
PCB-19	22.6				PCB-61/70	11900			E
PCB-20/21/33	129				PCB-62	ND	0.491		
PCB-22	210				PCB-63	880			
PCB-23	ND	0.556			PCB-65	ND	0.504		
PCB-24/27	34.2				PCB-66/76	16900			B, E
PCB-25	317				PCB-67	405			
PCB-26	592				PCB-68	247			
PCB-28	5770			B, E	PCB-73	ND	0.519		
PCB-29	4.97				PCB-74	10400			E
PCB-30	0.560				PCB-77	1360			
PCB-31	2020			E	PCB-78	29.6			
PCB-34	15.3				PCB-79	738			
PCB-35	1.18				PCB-80	ND	0.378		
PCB-36	2.06				PCB-81	119			
PCB-37	385			B	PCB-82	431			
PCB-38	109				PCB-83	7.59			
PCB-39	4.31				PCB-84/92	7000			E
PCB-40	149				PCB-85/116	1920			
PCB-41/64/71/72	5460				PCB-86	ND	0.179		
PCB-42/59	975				PCB-87/117/125	9560			E
PCB-43/49	12300			E	PCB-88/91	3070			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-04	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.31	Date Analyzed :	06-Feb-15 22:42	Column:	ZB-1	Analyst:	DMS
					17-Jan-15 13:36	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	22.1				PCB-136	1470			
PCB-90/101	44400			E, D	PCB-137	2790			E
PCB-93	ND	0.142			PCB-138/163/164	49100			B, E, D
PCB-94	7.84				PCB-139/149	11000			E
PCB-95/98/102	6840			E	PCB-140	224			
PCB-96	95.2				PCB-141	4180			E
PCB-97	7750			E	PCB-144	1570			
PCB-99	31700			E, D	PCB-145	4.06			
PCB-100	585				PCB-146/165	10400			E
PCB-103	631				PCB-147	1950			E
PCB-104	13.8				PCB-148	160			
PCB-105	15000			B, E	PCB-150	115			
PCB-106/118	51200			B, E, D	PCB-151	7500			E
PCB-107/109	4380			E	PCB-152	20.9			
PCB-108/112	522				PCB-153	57700			B, E, D
PCB-110	18800			E	PCB-154	2290			E
PCB-111/115	796				PCB-155	45.8			
PCB-113	ND	0.141			PCB-156	4660			E
PCB-114	869				PCB-157	1120			
PCB-119	1400				PCB-158/160	5690			E
PCB-120	203				PCB-159	ND	0.703		
PCB-121	ND	0.0954			PCB-166	207			
PCB-122	183				PCB-167	2620			E
PCB-123	956				PCB-168	111			
PCB-124	1290				PCB-169	6.88			
PCB-126	195				PCB-170	8120			E
PCB-127	ND	0.606			PCB-171	2580			E
PCB-128/162	7620			E	PCB-172	1400			
PCB-129	374				PCB-173	17.4			
PCB-130	3010			E	PCB-174	1280			
PCB-131	ND	1.41			PCB-175	471			
PCB-132/161	2180				PCB-176	260			
PCB-133/142	1180				PCB-177	3920			E
PCB-134/143	918				PCB-178	2390			E
PCB-135	1220				PCB-179	1870			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-04	Date Received:	13-Nov-2014 12:36				
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08				
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.31	Date Analyzed :	06-Feb-15 22:42	Column:	ZB-1	Analyst:	DMS		
				17-Jan-15 13:36				Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	24100			B, E	Total octaCB	16900			
PCB-181	89.8				Total nonaCB	2700			
PCB-182/187	17100			E	DecaCB	468			
PCB-183	6970			E	Total PCB	587000			B
PCB-184	26.7								
PCB-185	400								
PCB-186	0.397			J					
PCB-188	165								
PCB-189	343								
PCB-190	1620								
PCB-191	343								
PCB-192	ND	0.351							
PCB-193	1100								
PCB-194	3780			E					
PCB-195	1190								
PCB-196/203	5210			E					
PCB-197	179								
PCB-198	131								
PCB-199	4010			E					
PCB-200	54.1								
PCB-201	626								
PCB-202	1550								
PCB-204	6.18								
PCB-205	146								
PCB-206	2020			E					
PCB-207	225								
PCB-208	450								
PCB-209	468								
Total monoCB	2.42								
Total diCB	180			B					
Total triCB	10700			B					
Total tetraCB	90000			B					
Total pentaCB	210000			B					
Total hexaCB	181000			B					
Total heptaCB	74600			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WS-01-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-04	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	6.31	Date Analyzed :	06-Feb-15 22:42	Column:	ZB-1	Analyst:	DMS
					17-Jan-15 13:36	Column:	ZB-1	Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	108	5 -145		13C-PCB-170	86.1	10 -145	
13C-PCB-3	111	5 -145		13C-PCB-180	85.8	10 -145	
13C-PCB-4	79.8	5 -145		13C-PCB-188	85.2	10 -145	
13C-PCB-11	84.7	5 -145		13C-PCB-189	79.4	10 -145	
13C-PCB-9	85.0	5 -145		13C-PCB-194	90.6	10 -145	
13C-PCB-19	113	5 -145		13C-PCB-202	88.8	10 -145	
13C-PCB-28	78.0	5 -145		13C-PCB-206	103	10 -145	
13C-PCB-32	113	5 -145		13C-PCB-208	95.9	10 -145	
13C-PCB-37	84.7	5 -145		13C-PCB-209	112	10 -145	
13C-PCB-47	85.6	5 -145		CRS 13C-PCB-79	83.0	10 -145	
13C-PCB-52	82.6	5 -145		13C-PCB-178	86.8	10 -145	
13C-PCB-54	74.9	5 -145					
13C-PCB-70	91.8	5 -145					
13C-PCB-77	91.5	10 -145					
13C-PCB-80	87.2	10 -145					
13C-PCB-81	87.8	10 -145					
13C-PCB-95	98.2	10 -145					
13C-PCB-97	98.1	10 -145					
13C-PCB-101	92.0	10 -145					
13C-PCB-104	95.0	10 -145					
13C-PCB-105	76.2	10 -145					
13C-PCB-114	71.0	10 -145					
13C-PCB-118	93.5	10 -145					
13C-PCB-123	95.8	10 -145					
13C-PCB-126	76.0	10 -145					
13C-PCB-127	77.9	10 -145					
13C-PCB-138	84.3	10 -145					
13C-PCB-141	84.5	10 -145					
13C-PCB-153	79.6	10 -145					
13C-PCB-155	96.0	10 -145					
13C-PCB-156	87.2	10 -145					
13C-PCB-157	84.9	10 -145					
13C-PCB-159	83.8	10 -145					
13C-PCB-167	86.2	10 -145					
13C-PCB-169	76.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-05	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	8.02 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.19	Date Analyzed :	17-Jan-15 14:39	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.35				PCB-44	2110			
PCB-2	0.807				PCB-45	162			
PCB-3	0.698				PCB-46	30.2			
PCB-4/10	17.9				PCB-47	1390			
PCB-5/8	82.6				PCB-48/75	269			
PCB-6	13.1				PCB-50	6.68			
PCB-7/9	5.56				PCB-51	52.8			
PCB-11	26.7			B	PCB-52/69	3550			
PCB-12/13	ND	0.276			PCB-53	86.3			
PCB-14	ND	0.233			PCB-54	6.94			
PCB-15	12.8				PCB-55	46.7			
PCB-16/32	311				PCB-56/60	1250			
PCB-17	156				PCB-57	18.6			
PCB-18	392				PCB-58	12.1			
PCB-19	25.8				PCB-61/70	3220			
PCB-20/21/33	235				PCB-62	ND	0.359		
PCB-22	360				PCB-63	152			
PCB-23	ND		0.397		PCB-65	ND		0.849	
PCB-24/27	31.8				PCB-66/76	3410			B
PCB-25	144				PCB-67	74.4			
PCB-26	274				PCB-68	34.7			
PCB-28	2190			B	PCB-73	ND	0.346		
PCB-29	1.93				PCB-74	1790			
PCB-30	ND		0.327		PCB-77	133			
PCB-31	1140				PCB-78	14.1			
PCB-34	8.60				PCB-79	122			
PCB-35	ND		0.450		PCB-80	ND	0.267		
PCB-36	ND		0.971		PCB-81	8.11			
PCB-37	46.8			B	PCB-82	574			
PCB-38	35.9				PCB-83	1.96			
PCB-39	0.993				PCB-84/92	2240			
PCB-40	303				PCB-85/116	1080			
PCB-41/64/71/72	1660				PCB-86	ND	0.508		
PCB-42/59	764				PCB-87/117/125	1990			
PCB-43/49	3070				PCB-88/91	995			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-05	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	8.02 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.19	Date Analyzed :	17-Jan-15 14:39	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	17.1				PCB-136	646			
PCB-90/101	8420			E	PCB-137	366			
PCB-93	ND	0.409			PCB-138/163/164	9180			B, E
PCB-94	10.7				PCB-139/149	5740			E
PCB-95/98/102	3480				PCB-140	38.7			
PCB-96	19.7				PCB-141	1190			
PCB-97	2030				PCB-144	298			
PCB-99	5310			E	PCB-145	ND		0.756	
PCB-100	83.0				PCB-146/165	1710			
PCB-103	121				PCB-147	265			
PCB-104	2.18				PCB-148	ND	0.377		
PCB-105	2130			B	PCB-150	27.1			
PCB-106/118	7220			B, E	PCB-151	1800			
PCB-107/109	634				PCB-152	4.39			
PCB-108/112	266				PCB-153	12700			B, E
PCB-110	6030			E	PCB-154	330			
PCB-111/115	113				PCB-155	8.27			
PCB-113	ND	0.330			PCB-156	720			
PCB-114	140				PCB-157	159			
PCB-119	259				PCB-158/160	825			
PCB-120	35.7				PCB-159	ND	0.625		
PCB-121	ND	0.275			PCB-166	27.4			
PCB-122	27.9				PCB-167	406			
PCB-123	130				PCB-168	14.9			
PCB-124	260				PCB-169	ND	0.726		
PCB-126	26.3				PCB-170	1660			
PCB-127	ND	0.803			PCB-171	482			
PCB-128/162	1100				PCB-172	314			
PCB-129	213				PCB-173	21.7			
PCB-130	516				PCB-174	1630			
PCB-131	ND		0.562		PCB-175	94.5			
PCB-132/161	1330				PCB-176	202			
PCB-133/142	221				PCB-177	1340			
PCB-134/143	286				PCB-178	585			
PCB-135	811				PCB-179	917			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-05	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	8.02 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.19	Date Analyzed :	17-Jan-15 14:39	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	5450			B, E	Total octaCB	5360			
PCB-181	ND	0.505			Total nonaCB	1040			
PCB-182/187	4560				DecaCB	268			
PCB-183	1510				Total PCB	140000			B
PCB-184	5.35								
PCB-185	184								
PCB-186	ND	0.417							
PCB-188	22.3								
PCB-189	42.9								
PCB-190	377								
PCB-191	69.3								
PCB-192	ND	0.405							
PCB-193	268								
PCB-194	997								
PCB-195	345								
PCB-196/203	1630								
PCB-197	42.5								
PCB-198	42.8								
PCB-199	1540								
PCB-200	106								
PCB-201	181								
PCB-202	438								
PCB-204	0.987								
PCB-205	38.0								
PCB-206	751								
PCB-207	69.7								
PCB-208	223								
PCB-209	268								
Total monoCB	4.86								
Total diCB	159			B					
Total triCB	5360			B					
Total tetraCB	23800			B					
Total pentaCB	43600			B					
Total hexaCB	40900			B					
Total heptaCB	19700			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-FF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-05
Project:		Sample Size:	8.02 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	2.19	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 14:39
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	57.5	5 -145		13C-PCB-170	64.8	10 -145	
13C-PCB-3	61.5	5 -145		13C-PCB-180	64.3	10 -145	
13C-PCB-4	47.0	5 -145		13C-PCB-188	60.9	10 -145	
13C-PCB-11	56.3	5 -145		13C-PCB-189	62.5	10 -145	
13C-PCB-9	53.5	5 -145		13C-PCB-194	60.6	10 -145	
13C-PCB-19	71.6	5 -145		13C-PCB-202	64.8	10 -145	
13C-PCB-28	52.4	5 -145		13C-PCB-206	74.4	10 -145	
13C-PCB-32	73.0	5 -145		13C-PCB-208	66.2	10 -145	
13C-PCB-37	59.0	5 -145		13C-PCB-209	81.2	10 -145	
13C-PCB-47	57.9	5 -145		CRS 13C-PCB-79	61.1	10 -145	
13C-PCB-52	56.6	5 -145		13C-PCB-178	65.5	10 -145	
13C-PCB-54	49.6	5 -145					
13C-PCB-70	62.2	5 -145					
13C-PCB-77	60.6	10 -145					
13C-PCB-80	61.1	10 -145					
13C-PCB-81	59.5	10 -145					
13C-PCB-95	64.2	10 -145					
13C-PCB-97	62.8	10 -145					
13C-PCB-101	64.0	10 -145					
13C-PCB-104	59.9	10 -145					
13C-PCB-105	51.8	10 -145					
13C-PCB-114	47.8	10 -145					
13C-PCB-118	62.1	10 -145					
13C-PCB-123	60.4	10 -145					
13C-PCB-126	51.7	10 -145					
13C-PCB-127	51.7	10 -145					
13C-PCB-138	60.6	10 -145					
13C-PCB-141	59.5	10 -145					
13C-PCB-153	60.7	10 -145					
13C-PCB-155	62.9	10 -145					
13C-PCB-156	60.2	10 -145					
13C-PCB-157	60.3	10 -145					
13C-PCB-159	59.4	10 -145					
13C-PCB-167	60.0	10 -145					
13C-PCB-169	57.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-06	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	10.3	Date Analyzed :	17-Jan-15 15:42	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	13.4				PCB-44	7360			E
PCB-2	2.83				PCB-45	621			
PCB-3	2.52				PCB-46	124			
PCB-4/10	ND	0.270			PCB-47	5090			E
PCB-5/8	323				PCB-48/75	980			
PCB-6	52.7				PCB-50	25.7			
PCB-7/9	19.2				PCB-51	209			
PCB-11	103			B	PCB-52/69	12700			E
PCB-12/13	2.59				PCB-53	329			
PCB-14	ND	0.227			PCB-54	26.2			
PCB-15	54.4				PCB-55	203			
PCB-16/32	1180				PCB-56/60	4690			E
PCB-17	585				PCB-57	78.8			
PCB-18	1450				PCB-58	44.6			
PCB-19	107				PCB-61/70	11600			E
PCB-20/21/33	898				PCB-62	ND	0.515		
PCB-22	1400				PCB-63	576			
PCB-23	1.96				PCB-65	5.30			
PCB-24/27	125				PCB-66/76	12400			B, E
PCB-25	557				PCB-67	296			
PCB-26	1010				PCB-68	128			
PCB-28	7930			B, E	PCB-73	ND	0.469		
PCB-29	6.76				PCB-74	6550			E
PCB-30	1.22				PCB-77	544			
PCB-31	4190			E	PCB-78	58.9			
PCB-34	31.2				PCB-79	499			
PCB-35	1.98				PCB-80	ND	0.499		
PCB-36	3.99				PCB-81	29.0			
PCB-37	199			B	PCB-82	2180			E
PCB-38	154				PCB-83	ND	0.230		
PCB-39	4.10				PCB-84/92	8640			E
PCB-40	1070				PCB-85/116	ND	0.275		
PCB-41/64/71/72	5790				PCB-86	ND	0.353		
PCB-42/59	2760				PCB-87/117/125	7630			E
PCB-43/49	10800			E	PCB-88/91	3750			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-06	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	10.3	Date Analyzed :	17-Jan-15 15:42	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	63.1				PCB-136	2920			E
PCB-90/101	31700			E	PCB-137	1520			
PCB-93	ND	0.301			PCB-138/163/164	35100			B, E
PCB-94	41.1				PCB-139/149	24900			E
PCB-95/98/102	12800			E	PCB-140	181			
PCB-96	72.7				PCB-141	4820			E
PCB-97	7450			E	PCB-144	1360			
PCB-99	20600			E	PCB-145	ND		2.70	
PCB-100	297				PCB-146/165	6950			E
PCB-103	432				PCB-147	1260			
PCB-104	8.34				PCB-148	ND	0.318		
PCB-105	8100			B, E	PCB-150	122			
PCB-106/118	28000			B, E	PCB-151	8190			E
PCB-107/109	2440				PCB-152	17.9			
PCB-108/112	1000				PCB-153	47900			B, E
PCB-110	23100			E	PCB-154	1530			
PCB-111/115	3220				PCB-155	34.3			
PCB-113	ND	0.264			PCB-156	2830			E
PCB-114	553				PCB-157	655			
PCB-119	961				PCB-158/160	3210			
PCB-120	ND	0.200			PCB-159	ND	1.05		
PCB-121	ND	0.202			PCB-166	106			
PCB-122	106				PCB-167	1630			
PCB-123	488				PCB-168	57.9			
PCB-124	1050				PCB-169	2.45			
PCB-126	112				PCB-170	6760			E
PCB-127	ND	1.12			PCB-171	2010			E
PCB-128/162	4270			E	PCB-172	1360			
PCB-129	849				PCB-173	92.7			
PCB-130	1980			E	PCB-174	6750			E
PCB-131	ND	1.50			PCB-175	328			
PCB-132/161	5830			E	PCB-176	797			
PCB-133/142	915				PCB-177	5490			E
PCB-134/143	1190				PCB-178	2160			E
PCB-135	3680			E	PCB-179	3580			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-06
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	10.3	QC Batch:	B5A0031
				Date Analyzed:	17-Jan-15 15:42
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	22800			B, E	Total octaCB	18100			
PCB-181	ND	0.752			Total nonaCB	5210			
PCB-182/187	16500			E	DecaCB	1380			
PCB-183	5480			E	Total PCB	538000			B
PCB-184	21.3								
PCB-185	796								
PCB-186	ND		0.579						
PCB-188	99.6								
PCB-189	179								
PCB-190	1530								
PCB-191	306								
PCB-192	ND	0.603							
PCB-193	1100								
PCB-194	4810			E					
PCB-195	2320			E					
PCB-196/203	6630			E					
PCB-197	204								
PCB-198	ND	0.249							
PCB-199	658								
PCB-200	508								
PCB-201	840								
PCB-202	1980			E					
PCB-204	4.25								
PCB-205	151								
PCB-206	3780			E					
PCB-207	308								
PCB-208	1120								
PCB-209	1380								
Total monoCB	18.7								
Total diCB	555			B					
Total triCB	19800			B					
Total tetraCB	85600			B					
Total pentaCB	165000			B					
Total hexaCB	164000			B					
Total heptaCB	78200			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: FH-OF-WC-10-08-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-06
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	10.3	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 15:42
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	95.9	5 -145		13C-PCB-170	77.6	10 -145	
13C-PCB-3	95.7	5 -145		13C-PCB-180	79.4	10 -145	
13C-PCB-4	74.3	5 -145		13C-PCB-188	86.8	10 -145	
13C-PCB-11	78.2	5 -145		13C-PCB-189	54.0	10 -145	
13C-PCB-9	74.7	5 -145		13C-PCB-194	89.3	10 -145	
13C-PCB-19	98.1	5 -145		13C-PCB-202	75.6	10 -145	
13C-PCB-28	67.4	5 -145		13C-PCB-206	131	10 -145	
13C-PCB-32	104	5 -145		13C-PCB-208	140	10 -145	
13C-PCB-37	74.9	5 -145		13C-PCB-209	161	10 -145	H
13C-PCB-47	88.3	5 -145		CRS 13C-PCB-79	82.2	10 -145	
13C-PCB-52	89.2	5 -145		13C-PCB-178	84.1	10 -145	
13C-PCB-54	75.7	5 -145					
13C-PCB-70	84.1	5 -145					
13C-PCB-77	82.4	10 -145					
13C-PCB-80	80.1	10 -145					
13C-PCB-81	79.9	10 -145					
13C-PCB-95	84.5	10 -145					
13C-PCB-97	84.6	10 -145					
13C-PCB-101	81.7	10 -145					
13C-PCB-104	89.1	10 -145					
13C-PCB-105	74.3	10 -145					
13C-PCB-114	70.5	10 -145					
13C-PCB-118	83.2	10 -145					
13C-PCB-123	84.4	10 -145					
13C-PCB-126	69.5	10 -145					
13C-PCB-127	72.4	10 -145					
13C-PCB-138	81.3	10 -145					
13C-PCB-141	81.4	10 -145					
13C-PCB-153	82.7	10 -145					
13C-PCB-155	78.8	10 -145					
13C-PCB-156	76.9	10 -145					
13C-PCB-157	76.7	10 -145					
13C-PCB-159	76.2	10 -145					
13C-PCB-167	75.6	10 -145					
13C-PCB-169	63.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-07	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0687	Date Analyzed:	16-Feb-15 11:31	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.222			J	PCB-44	30.4			
PCB-2	ND	0.386			PCB-45	7.94			
PCB-3	ND	0.385			PCB-46	0.284			J
PCB-4/10	1.54				PCB-47	121			
PCB-5/8	11.8				PCB-48/75	38.2			
PCB-6	1.56				PCB-50	0.700			
PCB-7/9	ND	0.675			PCB-51	13.7			
PCB-11	1.77			B	PCB-52/69	332			
PCB-12/13	ND	0.667			PCB-53	24.2			
PCB-14	ND	0.575			PCB-54	1.22			
PCB-15	ND	0.587			PCB-55	3.65			
PCB-16/32	22.4				PCB-56/60	68.2			
PCB-17	15.3				PCB-57	1.94			
PCB-18	27.7				PCB-58	0.920			
PCB-19	1.97				PCB-61/70	133			
PCB-20/21/33	19.4				PCB-62	ND	0.479		
PCB-22	20.0				PCB-63	10.2			
PCB-23	ND	0.229			PCB-65	ND	0.493		
PCB-24/27	2.11				PCB-66/76	276			B
PCB-25	4.63				PCB-67	3.38			
PCB-26	9.22				PCB-68	2.58			
PCB-28	95.4			B	PCB-73	1.07			
PCB-29	0.305			J	PCB-74	99.7			
PCB-30	ND	0.108			PCB-77	3.36			
PCB-31	34.1				PCB-78	ND	0.425		
PCB-34	0.545				PCB-79	14.9			
PCB-35	ND	0.232			PCB-80	ND	0.353		
PCB-36	ND	0.224			PCB-81	1.27			
PCB-37	0.321			J, B	PCB-82	13.7			
PCB-38	2.92				PCB-83	ND	0.348		
PCB-39	ND	0.231			PCB-84/92	159			
PCB-40	1.22				PCB-85/116	122			
PCB-41/64/71/72	157				PCB-86	ND	0.560		
PCB-42/59	48.3				PCB-87/117/125	187			
PCB-43/49	277				PCB-88/91	88.4			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-07	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0687	Date Analyzed:	16-Feb-15 11:31	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.510			PCB-136	36.9			
PCB-90/101	896				PCB-137	37.9			
PCB-93	ND	0.524			PCB-138/163/164	992			B
PCB-94	1.43				PCB-139/149	620			
PCB-95/98/102	276				PCB-140	4.35			
PCB-96	1.52				PCB-141	130			
PCB-97	158				PCB-144	39.9			
PCB-99	535				PCB-145	ND	0.323		
PCB-100	10.0				PCB-146/165	230			
PCB-103	15.8				PCB-147	35.7			
PCB-104	0.900				PCB-148	2.19			
PCB-105	189			B	PCB-150	2.78			
PCB-106/118	709			B	PCB-151	195			
PCB-107/109	74.9				PCB-152	ND		0.591	
PCB-108/112	3.71				PCB-153	1350			B
PCB-110	555				PCB-154	37.2			
PCB-111/115	13.3				PCB-155	0.850			
PCB-113	ND	0.379			PCB-156	59.2			
PCB-114	4.85				PCB-157	16.0			
PCB-119	26.7				PCB-158/160	85.9			
PCB-120	4.20				PCB-159	ND	0.704		
PCB-121	ND	0.316			PCB-166	3.39			
PCB-122	0.925				PCB-167	32.6			
PCB-123	6.05				PCB-168	2.08			
PCB-124	8.59				PCB-169	ND	0.674		
PCB-126	1.96				PCB-170	140			
PCB-127	ND	0.442			PCB-171	42.6			
PCB-128/162	137				PCB-172	33.1			
PCB-129	19.1				PCB-173	2.06			
PCB-130	74.7				PCB-174	111			
PCB-131	ND	1.03			PCB-175	9.10			
PCB-132/161	61.1				PCB-176	14.2			
PCB-133/142	27.7				PCB-177	107			
PCB-134/143	15.3				PCB-178	59.1			
PCB-135	39.2				PCB-179	34.3			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-07
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0687	QC Batch:	B5A0031
				Date Analyzed :	16-Feb-15 11:31
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	399			B	Total octaCB	331			
PCB-181	ND		0.793		Total nonaCB	45.5			
PCB-182/187	386				DecaCB	11.9			
PCB-183	127				Total PCB	12200			B
PCB-184	ND		0.568						
PCB-185	15.9								
PCB-186	ND	0.241							
PCB-188	2.20								
PCB-189	4.81								
PCB-190	28.4								
PCB-191	6.09								
PCB-192	ND	0.253							
PCB-193	25.1								
PCB-194	51.7								
PCB-195	19.4								
PCB-196/203	92.2								
PCB-197	3.44								
PCB-198	3.68								
PCB-199	105								
PCB-200	7.43								
PCB-201	13.0								
PCB-202	31.9								
PCB-204	ND	0.236							
PCB-205	2.33								
PCB-206	29.5								
PCB-207	4.20								
PCB-208	11.8								
PCB-209	11.9								
Total monoCB	0.222								
Total diCB	16.6			B					
Total triCB	256			B					
Total tetraCB	1670			B					
Total pentaCB	4060			B					
Total hexaCB	4290			B					
Total heptaCB	1550			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-07
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	0.0687	QC Batch:	B5A0031
				Date Analyzed :	16-Feb-15 11:31
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	71.9	5 -145		13C-PCB-170	64.8	10 -145	
13C-PCB-3	70.9	5 -145		13C-PCB-180	63.8	10 -145	
13C-PCB-4	63.1	5 -145		13C-PCB-188	62.6	10 -145	
13C-PCB-11	65.1	5 -145		13C-PCB-189	66.4	10 -145	
13C-PCB-9	61.6	5 -145		13C-PCB-194	71.8	10 -145	
13C-PCB-19	73.2	5 -145		13C-PCB-202	63.6	10 -145	
13C-PCB-28	66.3	5 -145		13C-PCB-206	77.5	10 -145	
13C-PCB-32	70.9	5 -145		13C-PCB-208	70.3	10 -145	
13C-PCB-37	70.3	5 -145		13C-PCB-209	74.3	10 -145	
13C-PCB-47	69.6	5 -145		CRS 13C-PCB-79	75.3	10 -145	
13C-PCB-52	73.5	5 -145		13C-PCB-178	66.3	10 -145	
13C-PCB-54	69.5	5 -145					
13C-PCB-70	74.3	5 -145					
13C-PCB-77	76.2	10 -145					
13C-PCB-80	75.0	10 -145					
13C-PCB-81	71.9	10 -145					
13C-PCB-95	72.3	10 -145					
13C-PCB-97	75.0	10 -145					
13C-PCB-101	73.6	10 -145					
13C-PCB-104	68.2	10 -145					
13C-PCB-105	77.2	10 -145					
13C-PCB-114	74.2	10 -145					
13C-PCB-118	78.0	10 -145					
13C-PCB-123	79.1	10 -145					
13C-PCB-126	78.6	10 -145					
13C-PCB-127	76.8	10 -145					
13C-PCB-138	70.3	10 -145					
13C-PCB-141	69.9	10 -145					
13C-PCB-153	71.1	10 -145					
13C-PCB-155	61.7	10 -145					
13C-PCB-156	71.7	10 -145					
13C-PCB-157	72.2	10 -145					
13C-PCB-159	69.3	10 -145					
13C-PCB-167	68.4	10 -145					
13C-PCB-169	73.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-08	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.70	Date Analyzed :	17-Jan-15 17:48	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.27				PCB-44	445			
PCB-2	0.564				PCB-45	113			
PCB-3	0.179			J	PCB-46	2.33			
PCB-4/10	18.7				PCB-47	2000			E
PCB-5/8	122				PCB-48/75	572			
PCB-6	16.1				PCB-50	11.1			
PCB-7/9	6.07				PCB-51	199			
PCB-11	11.7			B	PCB-52/69	4950			E
PCB-12/13	ND	0.110			PCB-53	355			
PCB-14	ND	0.0926			PCB-54	15.6			
PCB-15	2.13				PCB-55	63.2			
PCB-16/32	336				PCB-56/60	1020			
PCB-17	240				PCB-57	29.7			
PCB-18	430				PCB-58	13.7			
PCB-19	27.9				PCB-61/70	2140			
PCB-20/21/33	238				PCB-62	0.226			J
PCB-22	162				PCB-63	160			
PCB-23	ND		0.436		PCB-65	1.28			
PCB-24/27	31.3				PCB-66/76	4180			B, E
PCB-25	59.4				PCB-67	53.2			
PCB-26	127				PCB-68	42.1			
PCB-28	1230			B	PCB-73	ND	0.293		
PCB-29	2.80				PCB-74	1670			
PCB-30	0.359			J	PCB-77	52.1			
PCB-31	512				PCB-78	2.94			
PCB-34	8.08				PCB-79	246			
PCB-35	ND	0.287			PCB-80	ND	0.246		
PCB-36	ND		0.216		PCB-81	7.76			
PCB-37	ND		2.65		PCB-82	279			
PCB-38	56.5				PCB-83	4.32			
PCB-39	0.237			J	PCB-84/92	3430			
PCB-40	15.3				PCB-85/116	ND	0.150		
PCB-41/64/71/72	2300				PCB-86	ND	0.193		
PCB-42/59	673				PCB-87/117/125	3820			
PCB-43/49	4370			E	PCB-88/91	1640			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-OF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-08	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.70	Date Analyzed :	17-Jan-15 17:48	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	15.4				PCB-136	810			
PCB-90/101	18100			E	PCB-137	908			
PCB-93	ND	0.160			PCB-138/163/164	20500			B, E
PCB-94	25.2				PCB-139/149	12300			E
PCB-95/98/102	5320				PCB-140	68.1			
PCB-96	26.0				PCB-141	2660			E
PCB-97	3050			E	PCB-144	789			
PCB-99	11300			E	PCB-145	2.35			
PCB-100	193				PCB-146/165	4780			E
PCB-103	300				PCB-147	747			
PCB-104	12.1				PCB-148	ND	0.117		
PCB-105	4010			B, E	PCB-150	60.5			
PCB-106/118	14400			B, E	PCB-151	4090			E
PCB-107/109	1600				PCB-152	11.9			
PCB-108/112	75.1				PCB-153	28300			B, E
PCB-110	10500			E	PCB-154	791			
PCB-111/115	1450				PCB-155	18.5			
PCB-113	ND	0.126			PCB-156	1250			
PCB-114	119				PCB-157	336			
PCB-119	531				PCB-158/160	1840			
PCB-120	82.7				PCB-159	265			
PCB-121	ND	0.108			PCB-166	65.5			
PCB-122	17.1				PCB-167	686			
PCB-123	131				PCB-168	40.3			
PCB-124	179				PCB-169	2.19			
PCB-126	46.7				PCB-170	2970			E
PCB-127	ND	0.569			PCB-171	873			
PCB-128/162	2760				PCB-172	678			
PCB-129	365				PCB-173	30.7			
PCB-130	1350				PCB-174	2290			E
PCB-131	0.966				PCB-175	209			
PCB-132/161	1620				PCB-176	304			
PCB-133/142	590				PCB-177	2260			E
PCB-134/143	345				PCB-178	1300			
PCB-135	769				PCB-179	778			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-08
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.70	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 17:48
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	9000			B, E	Total octaCB	6750			
PCB-181	ND	0.258			Total nonaCB	794			
PCB-182/187	8460			E	DecaCB	178			
PCB-183	2820			E	Total PCB	240000			B
PCB-184	10.8								
PCB-185	315								
PCB-186	0.639								
PCB-188	38.6								
PCB-189	100								
PCB-190	589								
PCB-191	121								
PCB-192	ND	0.207							
PCB-193	536								
PCB-194	1150								
PCB-195	383								
PCB-196/203	1920								
PCB-197	58.4								
PCB-198	71.9								
PCB-199	2120			E					
PCB-200	133								
PCB-201	254								
PCB-202	618								
PCB-204	1.71								
PCB-205	45.6								
PCB-206	534								
PCB-207	65.7								
PCB-208	195								
PCB-209	178								
Total monoCB	2.02								
Total diCB	177			B					
Total triCB	3460		3470	B					
Total tetraCB	25700			B					
Total pentaCB	80500			B					
Total hexaCB	89100			B					
Total heptaCB	33700			B					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-OF-CH-06-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-08
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	2.70	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 17:48
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	88.6	5 -145		13C-PCB-170	86.4	10 -145	
13C-PCB-3	91.7	5 -145		13C-PCB-180	85.1	10 -145	
13C-PCB-4	71.4	5 -145		13C-PCB-188	78.5	10 -145	
13C-PCB-11	76.7	5 -145		13C-PCB-189	82.8	10 -145	
13C-PCB-9	73.5	5 -145		13C-PCB-194	80.0	10 -145	
13C-PCB-19	90.8	5 -145		13C-PCB-202	78.6	10 -145	
13C-PCB-28	83.1	5 -145		13C-PCB-206	96.0	10 -145	
13C-PCB-32	97.6	5 -145		13C-PCB-208	86.7	10 -145	
13C-PCB-37	84.1	5 -145		13C-PCB-209	104	10 -145	
13C-PCB-47	78.5	5 -145		CRS 13C-PCB-79	80.7	10 -145	
13C-PCB-52	78.2	5 -145		13C-PCB-178	85.8	10 -145	
13C-PCB-54	68.9	5 -145					
13C-PCB-70	80.4	5 -145					
13C-PCB-77	78.3	10 -145					
13C-PCB-80	78.6	10 -145					
13C-PCB-81	76.6	10 -145					
13C-PCB-95	85.1	10 -145					
13C-PCB-97	83.9	10 -145					
13C-PCB-101	83.1	10 -145					
13C-PCB-104	84.6	10 -145					
13C-PCB-105	66.0	10 -145					
13C-PCB-114	62.2	10 -145					
13C-PCB-118	79.7	10 -145					
13C-PCB-123	81.1	10 -145					
13C-PCB-126	66.8	10 -145					
13C-PCB-127	65.5	10 -145					
13C-PCB-138	75.5	10 -145					
13C-PCB-141	76.6	10 -145					
13C-PCB-153	73.2	10 -145					
13C-PCB-155	80.3	10 -145					
13C-PCB-156	79.6	10 -145					
13C-PCB-157	79.0	10 -145					
13C-PCB-159	76.8	10 -145					
13C-PCB-167	78.4	10 -145					
13C-PCB-169	78.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-09	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	5.70 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0702	Date Analyzed:	17-Jan-15 18:51	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0538			PCB-44	29.5			
PCB-2	ND	0.0603			PCB-45	1.93			
PCB-3	ND	0.0597			PCB-46	ND		0.779	
PCB-4/10	ND	0.208			PCB-47	36.0			
PCB-5/8	0.604			J	PCB-48/75	7.11			
PCB-6	ND	0.165			PCB-50	ND	0.244		
PCB-7/9	ND	0.167			PCB-51	3.57			
PCB-11	5.83			B	PCB-52/69	171			
PCB-12/13	ND	0.175			PCB-53	5.59			
PCB-14	ND	0.148			PCB-54	0.523			J
PCB-15	2.43				PCB-55	1.34			
PCB-16/32	7.61				PCB-56/60	31.3			
PCB-17	1.20				PCB-57	0.849			J
PCB-18	9.02				PCB-58	ND		0.591	
PCB-19	0.563			J	PCB-61/70	141			
PCB-20/21/33	2.08			J	PCB-62	ND	0.200		
PCB-22	3.33				PCB-63	7.17			
PCB-23	ND	0.166			PCB-65	ND	0.205		
PCB-24/27	0.615			J	PCB-66/76	159			B
PCB-25	3.46				PCB-67	3.32			
PCB-26	4.94				PCB-68	1.91			
PCB-28	70.4			B	PCB-73	ND	0.189		
PCB-29	ND		0.131		PCB-74	94.3			
PCB-30	ND	0.0491			PCB-77	9.93			
PCB-31	29.9				PCB-78	ND		0.273	
PCB-34	ND		0.146		PCB-79	6.38			
PCB-35	ND	0.178			PCB-80	ND	0.139		
PCB-36	ND	0.168			PCB-81	ND		0.337	
PCB-37	6.11			B	PCB-82	2.84			
PCB-38	0.935				PCB-83	ND	0.162		
PCB-39	ND	0.163			PCB-84/92	57.1			
PCB-40	1.91				PCB-85/116	17.3			
PCB-41/64/71/72	48.7				PCB-86	ND	0.248		
PCB-42/59	8.94				PCB-87/117/125	84.7			
PCB-43/49	113				PCB-88/91	24.5			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-09	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.70 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0702	Date Analyzed :	17-Jan-15 18:51	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.243			PCB-136	13.9			
PCB-90/101	412				PCB-137	21.0			
PCB-93	ND	0.246			PCB-138/163/164	488			B
PCB-94	ND	0.253			PCB-139/149	94.6			
PCB-95/98/102	76.0				PCB-140	2.15			
PCB-96	ND		0.825		PCB-141	32.9			
PCB-97	56.2				PCB-144	13.5			
PCB-99	291				PCB-145	ND	0.178		
PCB-100	4.62				PCB-146/165	85.5			
PCB-103	5.24				PCB-147	13.6			
PCB-104	ND	0.183			PCB-148	ND	0.235		
PCB-105	123			B	PCB-150	0.687			J
PCB-106/118	430			B	PCB-151	75.4			
PCB-107/109	36.2				PCB-152	ND		0.268	
PCB-108/112	4.48				PCB-153	624			B
PCB-110	139				PCB-154	15.9			
PCB-111/115	7.04				PCB-155	ND		0.402	
PCB-113	ND	0.189			PCB-156	40.2			
PCB-114	7.02				PCB-157	8.47			
PCB-119	10.6				PCB-158/160	44.2			
PCB-120	1.82				PCB-159	ND	0.220		
PCB-121	ND	0.165			PCB-166	1.67			
PCB-122	1.57				PCB-167	19.7			
PCB-123	6.92				PCB-168	1.01			
PCB-124	11.7				PCB-169	ND	0.244		
PCB-126	1.57				PCB-170	64.3			
PCB-127	0.206			J	PCB-171	19.8			
PCB-128/162	60.5				PCB-172	10.4			
PCB-129	2.72				PCB-173	ND	0.183		
PCB-130	22.9				PCB-174	7.76			
PCB-131	ND	0.337			PCB-175	3.81			
PCB-132/161	12.6				PCB-176	1.94			
PCB-133/142	8.51				PCB-177	30.6			
PCB-134/143	6.66				PCB-178	17.4			
PCB-135	9.14				PCB-179	13.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-09
Project:		Sample Size:	5.70 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0702	QC Batch:	B5A0031
				Date Analyzed:	17-Jan-15 18:51
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	201			B	Total octaCB	114			
PCB-181	0.845			J	Total nonaCB	13.4			
PCB-182/187	139				DecaCB	3.57			
PCB-183	58.8				Total PCB	5300			B
PCB-184	0.281			J					
PCB-185	3.17								
PCB-186	ND	0.127							
PCB-188	0.747			J					
PCB-189	2.52								
PCB-190	13.4								
PCB-191	2.64								
PCB-192	ND	0.125							
PCB-193	9.04								
PCB-194	22.4								
PCB-195	8.34								
PCB-196/203	39.6								
PCB-197	1.39								
PCB-198	1.04								
PCB-199	26.9								
PCB-200	0.413			J					
PCB-201	4.42								
PCB-202	8.99								
PCB-204	ND	0.0815							
PCB-205	0.953								
PCB-206	9.65								
PCB-207	1.30								
PCB-208	2.40								
PCB-209	3.57								
Total monoCB	ND	0.174							
Total diCB	8.86			B					
Total triCB	140			B					
Total tetraCB	883		885	B					
Total pentaCB	1810			B					
Total hexaCB	1720			B					
Total heptaCB	601			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-09
Project:		Sample Size:	5.70 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	0.0702	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 18:51
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	74.3	5 -145		13C-PCB-170	98.2	10 -145	
13C-PCB-3	77.1	5 -145		13C-PCB-180	94.9	10 -145	
13C-PCB-4	65.1	5 -145		13C-PCB-188	89.7	10 -145	
13C-PCB-11	73.5	5 -145		13C-PCB-189	97.0	10 -145	
13C-PCB-9	66.1	5 -145		13C-PCB-194	84.4	10 -145	
13C-PCB-19	94.5	5 -145		13C-PCB-202	90.6	10 -145	
13C-PCB-28	72.8	5 -145		13C-PCB-206	107	10 -145	
13C-PCB-32	98.9	5 -145		13C-PCB-208	92.0	10 -145	
13C-PCB-37	82.3	5 -145		13C-PCB-209	116	10 -145	
13C-PCB-47	73.9	5 -145		CRS 13C-PCB-79	86.3	10 -145	
13C-PCB-52	73.3	5 -145		13C-PCB-178	87.1	10 -145	
13C-PCB-54	67.0	5 -145					
13C-PCB-70	83.7	5 -145					
13C-PCB-77	90.9	10 -145					
13C-PCB-80	82.7	10 -145					
13C-PCB-81	90.3	10 -145					
13C-PCB-95	77.4	10 -145					
13C-PCB-97	87.8	10 -145					
13C-PCB-101	83.0	10 -145					
13C-PCB-104	71.0	10 -145					
13C-PCB-105	73.0	10 -145					
13C-PCB-114	68.5	10 -145					
13C-PCB-118	81.5	10 -145					
13C-PCB-123	83.6	10 -145					
13C-PCB-126	74.6	10 -145					
13C-PCB-127	73.9	10 -145					
13C-PCB-138	86.7	10 -145					
13C-PCB-141	85.4	10 -145					
13C-PCB-153	86.2	10 -145					
13C-PCB-155	79.7	10 -145					
13C-PCB-156	87.3	10 -145					
13C-PCB-157	87.8	10 -145					
13C-PCB-159	84.5	10 -145					
13C-PCB-167	86.1	10 -145					
13C-PCB-169	89.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-10	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.39	Date Analyzed :	17-Jan-15 23:11	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.02				PCB-44	1010			
PCB-2	1.84				PCB-45	68.7			
PCB-3	0.329			J	PCB-46	22.1			
PCB-4/10	12.4				PCB-47	1220			
PCB-5/8	12.7				PCB-48/75	282			
PCB-6	5.93				PCB-50	2.94			
PCB-7/9	5.00				PCB-51	124			
PCB-11	176			B	PCB-52/69	5350			E
PCB-12/13	2.42				PCB-53	221			
PCB-14	0.179			J	PCB-54	14.6			
PCB-15	89.8				PCB-55	48.8			
PCB-16/32	255				PCB-56/60	1030			
PCB-17	37.6				PCB-57	29.6			
PCB-18	317				PCB-58	16.8			
PCB-19	17.6				PCB-61/70	4490			E
PCB-20/21/33	51.4				PCB-62	ND		0.190	
PCB-22	93.3				PCB-63	255			
PCB-23	ND		0.133		PCB-65	1.34			
PCB-24/27	19.1				PCB-66/76	5040			B, E
PCB-25	117				PCB-67	119			
PCB-26	155				PCB-68	58.8			
PCB-28	2140			B, E	PCB-73	ND	0.250		
PCB-29	3.10				PCB-74	3110			E
PCB-30	0.418			J	PCB-77	389			
PCB-31	1050				PCB-78	9.32			
PCB-34	5.52				PCB-79	255			
PCB-35	1.95				PCB-80	ND	0.182		
PCB-36	7.22				PCB-81	10.2			
PCB-37	220			B	PCB-82	ND	0.138		
PCB-38	34.1				PCB-83	3.52			
PCB-39	3.02				PCB-84/92	2090			
PCB-40	53.8				PCB-85/116	518			
PCB-41/64/71/72	1580				PCB-86	ND	0.128		
PCB-42/59	309				PCB-87/117/125	2890			
PCB-43/49	3870			E	PCB-88/91	886			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-10	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.39	Date Analyzed :	17-Jan-15 23:11	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.36				PCB-136	543			
PCB-90/101	13600			E	PCB-137	911			
PCB-93	ND	0.109			PCB-138/163/164	17100			B, E
PCB-94	3.62				PCB-139/149	3600			
PCB-95/98/102	2660				PCB-140	72.6			
PCB-96	33.7				PCB-141	1360			
PCB-97	2020			E	PCB-144	507			
PCB-99	9860			E	PCB-145	1.23			
PCB-100	160				PCB-146/165	3380			
PCB-103	182				PCB-147	538			
PCB-104	5.63				PCB-148	ND	0.0817		
PCB-105	4170			B, E	PCB-150	27.4			
PCB-106/118	13900			B, E	PCB-151	2800			E
PCB-107/109	1320				PCB-152	7.96			
PCB-108/112	172				PCB-153	22800			B, E
PCB-110	4580			E	PCB-154	631			
PCB-111/115	263				PCB-155	14.1			
PCB-113	ND	0.0902			PCB-156	1600			
PCB-114	278				PCB-157	349			
PCB-119	406				PCB-158/160	1770			
PCB-120	77.0				PCB-159	ND	0.455		
PCB-121	ND	0.0735			PCB-166	65.8			
PCB-122	56.1				PCB-167	841			
PCB-123	269				PCB-168	30.0			
PCB-124	447				PCB-169	1.74			
PCB-126	55.4				PCB-170	2730			E
PCB-127	3.63				PCB-171	830			
PCB-128/162	2300				PCB-172	456			
PCB-129	106				PCB-173	4.86			
PCB-130	978				PCB-174	365			
PCB-131	ND	0.768			PCB-175	176			
PCB-132/161	540				PCB-176	82.8			
PCB-133/142	375				PCB-177	1280			
PCB-134/143	280				PCB-178	809			
PCB-135	364				PCB-179	604			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-10	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.39	Date Analyzed :	17-Jan-15 23:11	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8010			B, E	Total octaCB	5730			
PCB-181	ND	0.315			Total nonaCB	743			
PCB-182/187	6090			E	DecaCB	173			
PCB-183	2630			E	Total PCB	191000			B
PCB-184	12.6								
PCB-185	132								
PCB-186	ND	0.283							
PCB-188	28.7								
PCB-189	116								
PCB-190	590								
PCB-191	114								
PCB-192	ND	0.253							
PCB-193	401								
PCB-194	1100								
PCB-195	393								
PCB-196/203	1990								
PCB-197	64.7								
PCB-198	41.2								
PCB-199	1360								
PCB-200	16.9								
PCB-201	218								
PCB-202	494								
PCB-204	1.68								
PCB-205	48.6								
PCB-206	550								
PCB-207	65.0								
PCB-208	128								
PCB-209	173								
Total monoCB	3.19								
Total diCB	304			B					
Total triCB	4530			B					
Total tetraCB	29000			B					
Total pentaCB	60900			B					
Total hexaCB	63900			B					
Total heptaCB	25500			B					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-OF-WS-07-06-20141013

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-10
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	13-Oct-2014 0:00	%Lipids:	9.39	QC Batch:	B5A0031
				Date Analyzed :	17-Jan-15 23:11
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	72.6	5 -145		13C-PCB-170	89.9	10 -145	
13C-PCB-3	80.2	5 -145		13C-PCB-180	90.5	10 -145	
13C-PCB-4	64.5	5 -145		13C-PCB-188	78.2	10 -145	
13C-PCB-11	78.4	5 -145		13C-PCB-189	85.7	10 -145	
13C-PCB-9	72.1	5 -145		13C-PCB-194	78.5	10 -145	
13C-PCB-19	97.3	5 -145		13C-PCB-202	84.5	10 -145	
13C-PCB-28	82.0	5 -145		13C-PCB-206	96.5	10 -145	
13C-PCB-32	104	5 -145		13C-PCB-208	88.5	10 -145	
13C-PCB-37	83.3	5 -145		13C-PCB-209	103	10 -145	
13C-PCB-47	78.4	5 -145		CRS 13C-PCB-79	81.1	10 -145	
13C-PCB-52	77.2	5 -145		13C-PCB-178	78.8	10 -145	
13C-PCB-54	74.6	5 -145					
13C-PCB-70	83.9	5 -145					
13C-PCB-77	81.8	10 -145					
13C-PCB-80	81.2	10 -145					
13C-PCB-81	81.4	10 -145					
13C-PCB-95	83.2	10 -145					
13C-PCB-97	85.5	10 -145					
13C-PCB-101	85.7	10 -145					
13C-PCB-104	80.0	10 -145					
13C-PCB-105	69.8	10 -145					
13C-PCB-114	66.7	10 -145					
13C-PCB-118	84.8	10 -145					
13C-PCB-123	84.5	10 -145					
13C-PCB-126	68.8	10 -145					
13C-PCB-127	69.4	10 -145					
13C-PCB-138	78.9	10 -145					
13C-PCB-141	76.7	10 -145					
13C-PCB-153	76.3	10 -145					
13C-PCB-155	82.1	10 -145					
13C-PCB-156	83.4	10 -145					
13C-PCB-157	81.7	10 -145					
13C-PCB-159	78.5	10 -145					
13C-PCB-167	79.6	10 -145					
13C-PCB-169	80.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-11	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.1 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.60	Date Analyzed:	18-Jan-15 00:14	Column:	ZB-1 Analyst: WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.42				PCB-44	1000			
PCB-2	0.878				PCB-45	97.6			
PCB-3	0.256			J	PCB-46	18.9			
PCB-4/10	17.9				PCB-47	669			
PCB-5/8	34.4				PCB-48/75	93.7			
PCB-6	6.31				PCB-50	3.72			
PCB-7/9	2.42				PCB-51	29.7			
PCB-11	17.4			B	PCB-52/69	1760			
PCB-12/13	0.328			J	PCB-53	47.9			
PCB-14	ND	0.146			PCB-54	7.66			
PCB-15	9.77				PCB-55	24.1			
PCB-16/32	125				PCB-56/60	574			
PCB-17	54.2				PCB-57	8.13			
PCB-18	177				PCB-58	4.47			
PCB-19	21.1				PCB-61/70	1390			
PCB-20/21/33	58.6				PCB-62	ND	0.341		
PCB-22	94.5				PCB-63	65.3			
PCB-23	ND		0.363		PCB-65	ND	0.350		
PCB-24/27	15.6				PCB-66/76	1620			B
PCB-25	37.6				PCB-67	31.7			
PCB-26	66.9				PCB-68	12.4			
PCB-28	729			B	PCB-73	ND	0.328		
PCB-29	0.484			J	PCB-74	869			
PCB-30	0.188			J	PCB-77	73.7			
PCB-31	314				PCB-78	8.46			
PCB-34	1.90				PCB-79	71.9			
PCB-35	ND	0.299			PCB-80	ND	0.262		
PCB-36	0.582				PCB-81	3.02			
PCB-37	22.6			B	PCB-82	292			
PCB-38	18.8				PCB-83	0.947			
PCB-39	0.630				PCB-84/92	1200			
PCB-40	143				PCB-85/116	562			
PCB-41/64/71/72	710				PCB-86	ND	0.190		
PCB-42/59	335				PCB-87/117/125	1090			
PCB-43/49	1320				PCB-88/91	496			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-FF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-11	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.1 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.60	Date Analyzed :	18-Jan-15 00:14	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	5.77				PCB-136	411			
PCB-90/101	4400			E	PCB-137	227			
PCB-93	ND	0.175			PCB-138/163/164	5450			B, E
PCB-94	4.98				PCB-139/149	3430			
PCB-95/98/102	2060				PCB-140	22.7			
PCB-96	11.1				PCB-141	658			
PCB-97	999				PCB-144	195			
PCB-99	2790			E	PCB-145	ND		0.336	
PCB-100	41.7				PCB-146/165	991			
PCB-103	60.3				PCB-147	173			
PCB-104	2.00				PCB-148	ND	0.173		
PCB-105	1240			B	PCB-150	14.0			
PCB-106/118	4010			B, E	PCB-151	1030			
PCB-107/109	358				PCB-152	1.93			
PCB-108/112	147				PCB-153	6590			B, E
PCB-110	3150			E	PCB-154	167			
PCB-111/115	68.5				PCB-155	3.34			
PCB-113	ND	0.138			PCB-156	434			
PCB-114	71.8				PCB-157	112			
PCB-119	118				PCB-158/160	523			
PCB-120	19.1				PCB-159	ND	0.346		
PCB-121	ND	0.118			PCB-166	15.6			
PCB-122	11.8				PCB-167	219			
PCB-123	61.9				PCB-168	8.61			
PCB-124	129				PCB-169	ND	0.392		
PCB-126	17.3				PCB-170	886			
PCB-127	ND	0.401			PCB-171	260			
PCB-128/162	692				PCB-172	177			
PCB-129	136				PCB-173	11.8			
PCB-130	341				PCB-174	817			
PCB-131	ND	0.548			PCB-175	48.6			
PCB-132/161	829				PCB-176	106			
PCB-133/142	140				PCB-177	657			
PCB-134/143	176				PCB-178	293			
PCB-135	508				PCB-179	420			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-11
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.60	QC Batch:	B5A0031
				Date Analyzed:	18-Jan-15 00:14
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2700			B, E	Total octaCB	2510			
PCB-181	ND	0.259			Total nonaCB	417			
PCB-182/187	2030				DecaCB	109			
PCB-183	730				Total PCB	72400			B
PCB-184	3.24								
PCB-185	85.0								
PCB-186	ND	0.188							
PCB-188	7.60								
PCB-189	24.3								
PCB-190	171								
PCB-191	35.5								
PCB-192	ND	0.207							
PCB-193	136								
PCB-194	454								
PCB-195	147								
PCB-196/203	752								
PCB-197	21.4								
PCB-198	20.7								
PCB-199	744								
PCB-200	48.8								
PCB-201	86.0								
PCB-202	220								
PCB-204	0.636								
PCB-205	15.7								
PCB-206	284								
PCB-207	33.0								
PCB-208	99.8								
PCB-209	109								
Total monoCB	2.56								
Total diCB	88.5			B					
Total triCB	1740			B					
Total tetraCB	11000			B					
Total pentaCB	23400			B					
Total hexaCB	23500			B					
Total heptaCB	9600			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-FF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-11
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	3.60	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 00:14
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	65.7	5 -145		13C-PCB-170	80.5	10 -145	
13C-PCB-3	70.1	5 -145		13C-PCB-180	80.2	10 -145	
13C-PCB-4	55.3	5 -145		13C-PCB-188	76.9	10 -145	
13C-PCB-11	65.4	5 -145		13C-PCB-189	79.4	10 -145	
13C-PCB-9	60.5	5 -145		13C-PCB-194	66.8	10 -145	
13C-PCB-19	77.2	5 -145		13C-PCB-202	75.8	10 -145	
13C-PCB-28	68.9	5 -145		13C-PCB-206	87.1	10 -145	
13C-PCB-32	82.1	5 -145		13C-PCB-208	73.1	10 -145	
13C-PCB-37	73.2	5 -145		13C-PCB-209	98.2	10 -145	
13C-PCB-47	68.1	5 -145		CRS 13C-PCB-79	70.7	10 -145	
13C-PCB-52	66.8	5 -145		13C-PCB-178	74.3	10 -145	
13C-PCB-54	57.6	5 -145					
13C-PCB-70	70.0	5 -145					
13C-PCB-77	72.9	10 -145					
13C-PCB-80	69.7	10 -145					
13C-PCB-81	71.4	10 -145					
13C-PCB-95	68.7	10 -145					
13C-PCB-97	72.0	10 -145					
13C-PCB-101	70.4	10 -145					
13C-PCB-104	64.0	10 -145					
13C-PCB-105	63.1	10 -145					
13C-PCB-114	59.6	10 -145					
13C-PCB-118	72.6	10 -145					
13C-PCB-123	70.7	10 -145					
13C-PCB-126	63.4	10 -145					
13C-PCB-127	64.1	10 -145					
13C-PCB-138	74.1	10 -145					
13C-PCB-141	72.6	10 -145					
13C-PCB-153	74.3	10 -145					
13C-PCB-155	66.6	10 -145					
13C-PCB-156	72.7	10 -145					
13C-PCB-157	73.7	10 -145					
13C-PCB-159	70.8	10 -145					
13C-PCB-167	69.9	10 -145					
13C-PCB-169	72.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-12	Date Received:	13-Nov-2014 12:36				
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08				
Date Collected:	11-Oct-2014 0:00	%Lipids:	11.6	Date Analyzed :	18-Jan-15 01:17	Column:	ZB-1	Analyst:	WJL		
				20-Feb-15 07:47				Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.59				PCB-44	3190			E
PCB-2	2.88				PCB-45	335			
PCB-3	0.797				PCB-46	67.1			
PCB-4/10	62.2				PCB-47	2200			E
PCB-5/8	117				PCB-48/75	273			
PCB-6	21.1				PCB-50	12.2			
PCB-7/9	8.55				PCB-51	107			
PCB-11	57.3			B	PCB-52/69	5320			E
PCB-12/13	1.09				PCB-53	174			
PCB-14	ND	0.196			PCB-54	25.4			
PCB-15	32.3				PCB-55	83.1			
PCB-16/32	412				PCB-56/60	1850			
PCB-17	183				PCB-57	27.5			
PCB-18	579				PCB-58	14.5			
PCB-19	71.6				PCB-61/70	4190			E
PCB-20/21/33	192				PCB-62	ND	0.361		
PCB-22	316				PCB-63	212			
PCB-23	0.436			J	PCB-65	1.54			
PCB-24/27	53.6				PCB-66/76	5010			B, E
PCB-25	126				PCB-67	104			
PCB-26	208				PCB-68	43.5			
PCB-28	2330			B, E	PCB-73	ND	0.356		
PCB-29	1.64				PCB-74	2700			E
PCB-30	0.512				PCB-77	266			
PCB-31	991				PCB-78	29.4			
PCB-34	6.53				PCB-79	236			
PCB-35	ND		0.577		PCB-80	ND	0.287		
PCB-36	ND		1.49		PCB-81	18.7			
PCB-37	91.4			B	PCB-82	971			
PCB-38	68.6				PCB-83	ND		1.96	
PCB-39	1.76				PCB-84/92	3940			E
PCB-40	476				PCB-85/116	ND	0.162		
PCB-41/64/71/72	2260				PCB-86	ND	0.208		
PCB-42/59	1110				PCB-87/117/125	3410			
PCB-43/49	4070			E	PCB-88/91	1600			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-OF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-12	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.4 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	11.6	Date Analyzed :	18-Jan-15 01:17	Column:	ZB-1 Analyst: WJL
				20-Feb-15 07:47 Column: ZB-1 Analyst: DMS			

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	16.9				PCB-136	1380			
PCB-90/101	14000			E	PCB-137	858			
PCB-93	ND	0.180			PCB-138/163/164	17400			B, E
PCB-94	16.8				PCB-139/149	10600			E
PCB-95/98/102	6500			E	PCB-140	75.9			
PCB-96	36.4				PCB-141	2220			E
PCB-97	3190			E	PCB-144	633			
PCB-99	8980			E	PCB-145	1.19			
PCB-100	137				PCB-146/165	3390			
PCB-103	201				PCB-147	547			
PCB-104	6.37				PCB-148	ND	0.148		
PCB-105	3980			B, E	PCB-150	50.0			
PCB-106/118	12400			B, E	PCB-151	3330			E
PCB-107/109	1130				PCB-152	6.23			
PCB-108/112	474				PCB-153	21600			B, E
PCB-110	9440			E	PCB-154	556			
PCB-111/115	1390				PCB-155	11.3			
PCB-113	ND	0.148			PCB-156	1430			
PCB-114	251				PCB-157	379			
PCB-119	381				PCB-158/160	1730			
PCB-120	ND	0.118			PCB-159	273			
PCB-121	ND	0.121			PCB-166	57.0			
PCB-122	35.3				PCB-167	746			
PCB-123	189				PCB-168	27.8			
PCB-124	439				PCB-169	ND		1.33	
PCB-126	64.8				PCB-170	2980			E
PCB-127	ND	0.582			PCB-171	916			
PCB-128/162	2310				PCB-172	632			
PCB-129	483				PCB-173	43.6			
PCB-130	1060				PCB-174	2870			E
PCB-131	0.791				PCB-175	177			
PCB-132/161	2870				PCB-176	373			
PCB-133/142	497				PCB-177	2350			E
PCB-134/143	614				PCB-178	1020			
PCB-135	1670				PCB-179	1490			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-12
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	11.6	QC Batch:	B5A0031
				Date Analyzed:	18-Jan-15 01:17
				Column:	ZB-1
				Analyst:	WJL
				Date Analyzed:	20-Feb-15 07:47
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	9280			B, E	Total octaCB	6580			
PCB-181	ND	0.394			Total nonaCB	1480			
PCB-182/187	6940			E	DecaCB	363			
PCB-183	2530			E	Total PCB	232000			B
PCB-184	11.2								
PCB-185	310								
PCB-186	0.266			J					
PCB-188	26.7								
PCB-189	90.1								
PCB-190	584								
PCB-191	130								
PCB-192	ND	0.316							
PCB-193	490								
PCB-194	1700								
PCB-195	848								
PCB-196/203	2350								
PCB-197	84.4								
PCB-198	ND	0.122							
PCB-199	196								
PCB-200	199								
PCB-201	348								
PCB-202	804								
PCB-204	1.98								
PCB-205	46.7								
PCB-206	1020			D					
PCB-207	112			D					
PCB-208	349			D					
PCB-209	363			D					
Total monoCB	8.26								
Total diCB	299			B					
Total triCB	5630			B					
Total tetraCB	34400			B					
Total pentaCB	73100			B					
Total hexaCB	76800			B					
Total heptaCB	33300			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-OF-WC-02-06-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-12
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	11.6	QC Batch:	B5A0031
				Date Analyzed:	18-Jan-15 01:17 Column: ZB-1 Analyst: WJL
					20-Feb-15 07:47 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	87.7	5 -145		13C-PCB-170	85.6	10 -145	
13C-PCB-3	87.1	5 -145		13C-PCB-180	86.3	10 -145	
13C-PCB-4	73.1	5 -145		13C-PCB-188	82.7	10 -145	
13C-PCB-11	78.6	5 -145		13C-PCB-189	56.4	10 -145	
13C-PCB-9	76.9	5 -145		13C-PCB-194	97.5	10 -145	
13C-PCB-19	99.4	5 -145		13C-PCB-202	81.0	10 -145	
13C-PCB-28	73.9	5 -145		13C-PCB-206	88.7	10 -145	D
13C-PCB-32	102	5 -145		13C-PCB-208	91.8	10 -145	D
13C-PCB-37	76.2	5 -145		13C-PCB-209	78.7	10 -145	D
13C-PCB-47	72.1	5 -145		CRS 13C-PCB-79	84.3	10 -145	
13C-PCB-52	71.1	5 -145		13C-PCB-178	85.9	10 -145	
13C-PCB-54	67.4	5 -145					
13C-PCB-70	79.2	5 -145					
13C-PCB-77	79.7	10 -145					
13C-PCB-80	77.0	10 -145					
13C-PCB-81	79.7	10 -145					
13C-PCB-95	82.4	10 -145					
13C-PCB-97	85.9	10 -145					
13C-PCB-101	81.2	10 -145					
13C-PCB-104	77.3	10 -145					
13C-PCB-105	73.6	10 -145					
13C-PCB-114	67.6	10 -145					
13C-PCB-118	80.0	10 -145					
13C-PCB-123	80.0	10 -145					
13C-PCB-126	69.9	10 -145					
13C-PCB-127	71.3	10 -145					
13C-PCB-138	80.2	10 -145					
13C-PCB-141	79.1	10 -145					
13C-PCB-153	79.4	10 -145					
13C-PCB-155	79.2	10 -145					
13C-PCB-156	79.1	10 -145					
13C-PCB-157	79.5	10 -145					
13C-PCB-159	76.3	10 -145					
13C-PCB-167	74.3	10 -145					
13C-PCB-169	72.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-13	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.0191	Date Analyzed :	18-Jan-15 02:19	Column:	ZB-1	Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.266			J	PCB-44	8.86			
PCB-2	ND	0.0307			PCB-45	3.09			
PCB-3	ND		0.0550		PCB-46	ND	0.190		
PCB-4/10	1.30				PCB-47	51.4			
PCB-5/8	8.56				PCB-48/75	13.4			
PCB-6	1.41				PCB-50	ND		0.247	
PCB-7/9	ND	0.0946			PCB-51	4.20			
PCB-11	0.594			B	PCB-52/69	127			
PCB-12/13	ND	0.0994			PCB-53	8.33			
PCB-14	ND	0.0839			PCB-54	0.423			J
PCB-15	ND	0.0878			PCB-55	1.05			
PCB-16/32	17.1				PCB-56/60	28.7			
PCB-17	9.88				PCB-57	0.413			J
PCB-18	17.9				PCB-58	ND		0.236	
PCB-19	1.49				PCB-61/70	43.2			
PCB-20/21/33	10.2				PCB-62	ND	0.129		
PCB-22	15.0				PCB-63	4.19			
PCB-23	ND		0.0830		PCB-65	ND	0.132		
PCB-24/27	1.68				PCB-66/76	133			B
PCB-25	1.92				PCB-67	0.713			
PCB-26	5.53				PCB-68	1.12			
PCB-28	51.7			B	PCB-73	ND	0.130		
PCB-29	ND	0.0999			PCB-74	51.1			
PCB-30	ND	0.0345			PCB-77	0.718			
PCB-31	18.6				PCB-78	ND	0.117		
PCB-34	0.291			J	PCB-79	5.98			
PCB-35	ND	0.117			PCB-80	ND	0.101		
PCB-36	ND	0.110			PCB-81	ND		0.152	
PCB-37	ND		0.143		PCB-82	4.25			
PCB-38	1.44				PCB-83	ND	0.105		
PCB-39	ND	0.107			PCB-84/92	57.8			
PCB-40	ND		0.677		PCB-85/116	43.7			
PCB-41/64/71/72	67.4				PCB-86	ND	0.161		
PCB-42/59	14.9				PCB-87/117/125	80.4			
PCB-43/49	110				PCB-88/91	29.9			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-13
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.0191	Date Received:	13-Nov-2014 12:36
				Date Extracted:	08-Jan-2015 11:08
				Date Analyzed:	18-Jan-15 02:19
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND		0.381		PCB-136	13.2			
PCB-90/101	362				PCB-137	13.1			
PCB-93	ND	0.155			PCB-138/163/164	420			B
PCB-94	0.348			J	PCB-139/149	217			
PCB-95/98/102	83.2				PCB-140	1.86			
PCB-96	ND		0.480		PCB-141	46.1			
PCB-97	51.7				PCB-144	13.8			
PCB-99	245				PCB-145	ND	0.106		
PCB-100	2.94				PCB-146/165	77.2			
PCB-103	4.93				PCB-147	11.2			
PCB-104	ND	0.104			PCB-148	ND	0.140		
PCB-105	99.9			B	PCB-150	0.859			
PCB-106/118	332			B	PCB-151	84.1			
PCB-107/109	28.5				PCB-152	0.232			J
PCB-108/112	1.17				PCB-153	547			B
PCB-110	249				PCB-154	12.6			
PCB-111/115	4.45				PCB-155	0.280			J
PCB-113	ND	0.106			PCB-156	25.0			
PCB-114	3.26				PCB-157	5.49			
PCB-119	10.8				PCB-158/160	31.3			
PCB-120	1.49				PCB-159	5.03			
PCB-121	ND	0.104			PCB-166	ND	0.173		
PCB-122	0.401			J	PCB-167	11.9			
PCB-123	3.01				PCB-168	0.655			
PCB-124	3.26				PCB-169	ND	0.164		
PCB-126	1.07				PCB-170	58.5			
PCB-127	ND	0.181			PCB-171	15.7			
PCB-128/162	40.8				PCB-172	10.9			
PCB-129	4.72				PCB-173	0.705			
PCB-130	21.5				PCB-174	35.4			
PCB-131	ND	0.232			PCB-175	3.14			
PCB-132/161	27.6				PCB-176	4.35			
PCB-133/142	7.56				PCB-177	41.8			
PCB-134/143	3.61				PCB-178	20.3			
PCB-135	12.7				PCB-179	13.5			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-13
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.0191	QC Batch:	B5A0031
				Date Analyzed:	18-Jan-15 02:19
				Column:	ZB-1
				Analyst:	WJL

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	174			B	Total octaCB	121			
PCB-181	ND	0.107			Total nonaCB	16.2			
PCB-182/187	155				DecaCB	6.09			
PCB-183	48.9				Total PCB	4960			B
PCB-184	ND	0.0929							
PCB-185	5.51								
PCB-186	ND	0.0869							
PCB-188	0.635								
PCB-189	1.80								
PCB-190	11.2								
PCB-191	2.30								
PCB-192	ND	0.0854							
PCB-193	9.12								
PCB-194	21.1								
PCB-195	7.90								
PCB-196/203	35.7								
PCB-197	1.02								
PCB-198	1.22								
PCB-199	37.1								
PCB-200	2.27								
PCB-201	4.27								
PCB-202	9.76								
PCB-204	ND	0.0764							
PCB-205	0.911								
PCB-206	10.8								
PCB-207	1.23								
PCB-208	4.16								
PCB-209	6.09								
Total monoCB	0.266		0.321						
Total diCB	11.9			B					
Total triCB	153			B					
Total tetraCB	680		681	B					
Total pentaCB	1700			B					
Total hexaCB	1660			B					
Total heptaCB	612			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-13
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.0191	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 02:19
				Column:	ZB-1
				Analyst:	WJL

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.6	5 -145		13C-PCB-170	83.5	10 -145	
13C-PCB-3	66.5	5 -145		13C-PCB-180	82.3	10 -145	
13C-PCB-4	56.2	5 -145		13C-PCB-188	76.0	10 -145	
13C-PCB-11	63.1	5 -145		13C-PCB-189	81.8	10 -145	
13C-PCB-9	58.3	5 -145		13C-PCB-194	71.7	10 -145	
13C-PCB-19	76.3	5 -145		13C-PCB-202	76.6	10 -145	
13C-PCB-28	73.7	5 -145		13C-PCB-206	86.5	10 -145	
13C-PCB-32	77.8	5 -145		13C-PCB-208	80.3	10 -145	
13C-PCB-37	78.2	5 -145		13C-PCB-209	91.4	10 -145	
13C-PCB-47	65.0	5 -145		CRS 13C-PCB-79	73.7	10 -145	
13C-PCB-52	61.3	5 -145		13C-PCB-178	77.0	10 -145	
13C-PCB-54	56.8	5 -145					
13C-PCB-70	69.4	5 -145					
13C-PCB-77	76.3	10 -145					
13C-PCB-80	68.1	10 -145					
13C-PCB-81	72.9	10 -145					
13C-PCB-95	64.5	10 -145					
13C-PCB-97	71.9	10 -145					
13C-PCB-101	69.2	10 -145					
13C-PCB-104	61.4	10 -145					
13C-PCB-105	60.7	10 -145					
13C-PCB-114	59.8	10 -145					
13C-PCB-118	70.5	10 -145					
13C-PCB-123	72.2	10 -145					
13C-PCB-126	61.8	10 -145					
13C-PCB-127	61.9	10 -145					
13C-PCB-138	72.3	10 -145					
13C-PCB-141	73.3	10 -145					
13C-PCB-153	72.6	10 -145					
13C-PCB-155	63.6	10 -145					
13C-PCB-156	72.6	10 -145					
13C-PCB-157	73.3	10 -145					
13C-PCB-159	71.0	10 -145					
13C-PCB-167	72.2	10 -145					
13C-PCB-169	75.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-CH-01-05-20141012	QC Batch: B5A0031	Lab Sample: B5A0031-DUP1
Source LabNumber: 1400904-13	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 18-Jan-15 03:22 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.267			J	PCB-41/64/71/72	68.4			
PCB-2	ND	0.0278			PCB-42/59	15.1			
PCB-3	ND	0.0276			PCB-43/49	109			
PCB-4/10	1.29				PCB-44	8.56			
PCB-5/8	8.31				PCB-45	2.97			
PCB-6	1.50				PCB-46	ND	0.173		
PCB-7/9	0.376			J	PCB-47	51.8			
PCB-11	0.721			B	PCB-48/75	13.2			
PCB-12/13	ND	0.105			PCB-50	0.290			J
PCB-14	ND	0.0888			PCB-51	4.30			
PCB-15	ND	0.0929			PCB-52/69	129			
PCB-16/32	16.9				PCB-53	7.93			
PCB-17	9.82				PCB-54	0.489			J
PCB-18	18.1				PCB-55	1.04			
PCB-19	1.58				PCB-56/60	27.7			
PCB-20/21/33	10.1				PCB-57	0.483			J
PCB-22	14.7				PCB-58	0.317			J
PCB-23	ND	0.0855			PCB-61/70	43.6			
PCB-24/27	1.77				PCB-62	ND	0.118		
PCB-25	2.04				PCB-63	4.27			
PCB-26	5.39				PCB-65	ND	0.121		
PCB-28	53.6			B	PCB-66/76	131			B
PCB-29	ND		0.102		PCB-67	0.692			
PCB-30	ND	0.0279			PCB-68	1.15			
PCB-31	19.5				PCB-73	0.394			J
PCB-34	0.277			J	PCB-74	51.4			
PCB-35	ND	0.0997			PCB-77	0.753			
PCB-36	ND	0.0939			PCB-78	ND	0.110		
PCB-37	0.171			J, B	PCB-79	5.33			
PCB-38	1.31				PCB-80	ND	0.0864		
PCB-39	ND	0.0911			PCB-81	0.290			J
PCB-40	0.595				PCB-82	4.26			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-CH-01-05-20141012	QC Batch: B5A0031	Lab Sample: B5A0031-DUP1
Source LabNumber: 1400904-13	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 18-Jan-15 03:22 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	ND	0.0910			PCB-127	ND	0.170		
PCB-84/92	59.4				PCB-128/162	40.1			
PCB-85/116	44.8				PCB-129	4.62			
PCB-86	ND	0.139			PCB-130	21.3			
PCB-87/117/125	80.5				PCB-131	ND	0.208		
PCB-88/91	29.2				PCB-132/161	28.3			
PCB-89	0.573				PCB-133/142	7.27			
PCB-90/101	371				PCB-134/143	3.48			
PCB-93	ND	0.129			PCB-135	10.9			
PCB-94	ND		0.283		PCB-136	12.6			
PCB-95/98/102	82.0				PCB-137	13.4			
PCB-96	0.520				PCB-138/163/164	417			B
PCB-97	53.0				PCB-139/149	198			
PCB-99	248				PCB-140	1.55			
PCB-100	2.95				PCB-141	45.3			
PCB-103	4.83				PCB-144	12.2			
PCB-104	ND	0.0954			PCB-145	ND	0.0692		
PCB-105	98.3			B	PCB-146/165	76.4			
PCB-106/118	330			B	PCB-147	9.61			
PCB-107/109	28.9				PCB-148	ND	0.0913		
PCB-108/112	1.10				PCB-150	0.751			
PCB-110	242				PCB-151	74.5			
PCB-111/115	4.70				PCB-152	ND		0.122	
PCB-113	ND	0.0960			PCB-153	548			B
PCB-114	2.93				PCB-154	11.3			
PCB-119	11.1				PCB-155	0.240			J
PCB-120	1.44				PCB-156	24.2			
PCB-121	ND	0.0869			PCB-157	5.45			
PCB-122	ND	0.180			PCB-158/160	31.1			
PCB-123	3.14				PCB-159	ND	0.139		
PCB-124	3.13				PCB-166	1.04			
PCB-126	0.805				PCB-167	11.8			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-CH-01-05-20141012	QC Batch: B5A0031	Lab Sample: B5A0031-DUP1
Source LabNumber: 1400904-13	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 18-Jan-15 03:22 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	0.846				PCB-201	4.45			
PCB-169	ND	0.148			PCB-202	9.62			
PCB-170	57.5				PCB-204	ND	0.0409		
PCB-171	15.7				PCB-205	0.868			
PCB-172	10.7				PCB-206	10.4			
PCB-173	0.626				PCB-207	1.34			
PCB-174	35.6				PCB-208	4.13			
PCB-175	3.65				PCB-209	5.95			
PCB-176	4.66				Total monoCB	0.267			
PCB-177	41.9				Total diCB	12.2			B
PCB-178	22.9				Total triCB	155			B
PCB-179	13.7				Total tetraCB	680			B
PCB-180	173			B	Total pentaCB	1710			B
PCB-181	0.296			J	Total hexaCB	1610			B
PCB-182/187	166				Total heptaCB	630			B
PCB-183	53.0				Total octaCB	122			
PCB-184	0.167			J	Total nonaCB	15.9			
PCB-185	5.52				DecaCB	5.95			
PCB-186	ND	0.0707			Total PCB	4940			B
PCB-188	0.533								
PCB-189	1.69								
PCB-190	11.1								
PCB-191	2.18								
PCB-192	ND	0.0658							
PCB-193	9.42								
PCB-194	19.4								
PCB-195	7.09								
PCB-196/203	37.3								
PCB-197	0.972								
PCB-198	1.18								
PCB-199	39.1								
PCB-200	2.23								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: IB-FF-CH-01-05-20141012	QC Batch: B5A0031	Lab Sample: B5A0031-DUP1
Source LabNumber: 1400904-13	Date Extracted: 08-Jan-2015 11:08	Date Analyzed: 18-Jan-15 03:22 Column: ZB-1 Analyst: ANP
Matrix: Tissue		
Sample Size: 10.2 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	55.0	5-145		13C-PCB-156	65.1	10-145	
13C-PCB-3	58.6	5-145		13C-PCB-157	65.0	10-145	
13C-PCB-4	48.6	5-145		13C-PCB-159	64.2	10-145	
13C-PCB-11	53.4	5-145		13C-PCB-167	64.5	10-145	
13C-PCB-9	49.1	5-145		13C-PCB-169	68.0	10-145	
13C-PCB-19	68.6	5-145		13C-PCB-170	76.2	10-145	
13C-PCB-28	59.9	5-145		13C-PCB-180	73.2	10-145	
13C-PCB-32	69.6	5-145		13C-PCB-188	63.2	10-145	
13C-PCB-37	64.9	5-145		13C-PCB-189	75.2	10-145	
13C-PCB-47	56.5	5-145		13C-PCB-194	67.4	10-145	
13C-PCB-52	54.1	5-145		13C-PCB-202	68.1	10-145	
13C-PCB-54	47.7	5-145		13C-PCB-206	82.8	10-145	
13C-PCB-70	62.2	5-145		13C-PCB-208	72.3	10-145	
13C-PCB-77	64.0	10-145		13C-PCB-209	91.1	10-145	
13C-PCB-80	63.1	10-145		CRS 13C-PCB-79	68.6	10-145	
13C-PCB-81	65.2	10-145		13C-PCB-178	72.2	10-145	
13C-PCB-95	62.3	10-145					
13C-PCB-97	65.6	10-145					
13C-PCB-101	64.3	10-145					
13C-PCB-104	55.6	10-145					
13C-PCB-105	53.5	10-145					
13C-PCB-114	50.0	10-145					
13C-PCB-118	61.3	10-145					
13C-PCB-123	62.9	10-145					
13C-PCB-126	56.0	10-145					
13C-PCB-127	56.0	10-145					
13C-PCB-138	63.9	10-145					
13C-PCB-141	63.5	10-145					
13C-PCB-153	61.7	10-145					
13C-PCB-155	61.6	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-OF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-14
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.851	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 04:25
				Column:	ZB-1
				Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.86				PCB-44	216			
PCB-2	ND		0.142		PCB-45	69.4			
PCB-3	ND		0.112		PCB-46	2.28			
PCB-4/10	14.8				PCB-47	1370			
PCB-5/8	88.8				PCB-48/75	393			
PCB-6	16.3				PCB-50	6.65			
PCB-7/9	4.47				PCB-51	104			
PCB-11	1.63			B	PCB-52/69	3300			
PCB-12/13	ND	0.137			PCB-53	210			
PCB-14	ND	0.115			PCB-54	8.99			
PCB-15	1.12				PCB-55	33.3			
PCB-16/32	292				PCB-56/60	599			
PCB-17	189				PCB-57	13.4			
PCB-18	350				PCB-58	6.82			
PCB-19	26.2				PCB-61/70	1100			
PCB-20/21/33	180				PCB-62	ND	0.303		
PCB-22	168				PCB-63	118			
PCB-23	ND		0.290		PCB-65	ND	0.311		
PCB-24/27	29.7				PCB-66/76	3150			B
PCB-25	38.4				PCB-67	19.1			
PCB-26	106				PCB-68	32.2			
PCB-28	977			B	PCB-73	6.13			
PCB-29	2.21				PCB-74	1350			
PCB-30	ND		0.279		PCB-77	17.5			
PCB-31	358				PCB-78	1.65			
PCB-34	5.63				PCB-79	203			
PCB-35	ND	0.316			PCB-80	ND	0.231		
PCB-36	ND	0.298			PCB-81	28.1			
PCB-37	15.0			B	PCB-82	122			
PCB-38	36.5				PCB-83	2.98			
PCB-39	ND	0.289			PCB-84/92	2070			
PCB-40	10.5				PCB-85/116	1280			
PCB-41/64/71/72	1620				PCB-86	ND	0.188		
PCB-42/59	362				PCB-87/117/125	2670			
PCB-43/49	2910				PCB-88/91	987			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-OF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-14	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.851	Date Analyzed :	18-Jan-15 04:25	Column:	ZB-1	Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.1				PCB-136	490			
PCB-90/101	12600			E	PCB-137	677			
PCB-93	ND	0.168			PCB-138/163/164	16600			B, E
PCB-94	8.92				PCB-139/149	7940			E
PCB-95/98/102	2560				PCB-140	57.8			
PCB-96	14.1				PCB-141	2080			E
PCB-97	1690				PCB-144	594			
PCB-99	8340			E	PCB-145	1.52			
PCB-100	110				PCB-146/165	3550			
PCB-103	194				PCB-147	487			
PCB-104	2.33				PCB-148	37.9			
PCB-105	2890			B, E	PCB-150	32.9			
PCB-106/118	10900			B, E	PCB-151	3360			E
PCB-107/109	1100				PCB-152	5.11			
PCB-108/112	36.9				PCB-153	23700			B, E
PCB-110	7300			E	PCB-154	569			
PCB-111/115	166				PCB-155	10.8			
PCB-113	ND	0.128			PCB-156	1120			
PCB-114	108				PCB-157	260			
PCB-119	395				PCB-158/160	1330			
PCB-120	57.5				PCB-159	ND	0.445		
PCB-121	ND	0.113			PCB-166	47.2			
PCB-122	9.97				PCB-167	608			
PCB-123	118				PCB-168	25.3			
PCB-124	132				PCB-169	2.22			
PCB-126	32.0				PCB-170	2900			E
PCB-127	ND	0.803			PCB-171	790			
PCB-128/162	1620				PCB-172	599			
PCB-129	194				PCB-173	26.6			
PCB-130	974				PCB-174	1690			
PCB-131	ND	0.703			PCB-175	195			
PCB-132/161	1140				PCB-176	235			
PCB-133/142	370				PCB-177	2080			E
PCB-134/143	142				PCB-178	1190			
PCB-135	493				PCB-179	676			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-14	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.851	Date Analyzed :	18-Jan-15 04:25	Column:	ZB-1	Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	8950			B, E	Total octaCB	7190			
PCB-181	19.2				Total nonaCB	905			
PCB-182/187	8160			E	DecaCB	241			
PCB-183	2730			E	Total PCB	185000			B
PCB-184	7.35								
PCB-185	289								
PCB-186	0.498								
PCB-188	28.5								
PCB-189	101								
PCB-190	595								
PCB-191	114								
PCB-192	ND	0.322							
PCB-193	494								
PCB-194	1250								
PCB-195	429								
PCB-196/203	2130								
PCB-197	56.6								
PCB-198	72.5								
PCB-199	2240			E					
PCB-200	121								
PCB-201	256								
PCB-202	588								
PCB-204	1.48								
PCB-205	49.5								
PCB-206	619								
PCB-207	67.2								
PCB-208	219								
PCB-209	241								
Total monoCB	1.86		2.11						
Total diCB	127			B					
Total triCB	2780			B					
Total tetraCB	17300			B					
Total pentaCB	55900			B					
Total hexaCB	68500			B					
Total heptaCB	31900			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-CH-01-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-14
Project:		Sample Size:	10.5 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.851	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 04:25
				Column:	ZB-1
				Analyst:	CVG

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	54.2	5 -145		13C-PCB-170	75.3	10 -145	
13C-PCB-3	61.5	5 -145		13C-PCB-180	76.6	10 -145	
13C-PCB-4	49.4	5 -145		13C-PCB-188	64.6	10 -145	
13C-PCB-11	57.9	5 -145		13C-PCB-189	71.9	10 -145	
13C-PCB-9	52.1	5 -145		13C-PCB-194	64.3	10 -145	
13C-PCB-19	70.4	5 -145		13C-PCB-202	69.1	10 -145	
13C-PCB-28	58.3	5 -145		13C-PCB-206	80.6	10 -145	
13C-PCB-32	76.3	5 -145		13C-PCB-208	70.9	10 -145	
13C-PCB-37	63.7	5 -145		13C-PCB-209	85.1	10 -145	
13C-PCB-47	57.9	5 -145		CRS 13C-PCB-79	67.7	10 -145	
13C-PCB-52	58.3	5 -145		13C-PCB-178	67.4	10 -145	
13C-PCB-54	51.0	5 -145					
13C-PCB-70	61.6	5 -145					
13C-PCB-77	63.9	10 -145					
13C-PCB-80	61.9	10 -145					
13C-PCB-81	63.2	10 -145					
13C-PCB-95	62.3	10 -145					
13C-PCB-97	66.1	10 -145					
13C-PCB-101	67.5	10 -145					
13C-PCB-104	55.8	10 -145					
13C-PCB-105	55.3	10 -145					
13C-PCB-114	50.0	10 -145					
13C-PCB-118	63.3	10 -145					
13C-PCB-123	61.2	10 -145					
13C-PCB-126	56.3	10 -145					
13C-PCB-127	55.1	10 -145					
13C-PCB-138	66.7	10 -145					
13C-PCB-141	63.5	10 -145					
13C-PCB-153	64.6	10 -145					
13C-PCB-155	62.1	10 -145					
13C-PCB-156	67.3	10 -145					
13C-PCB-157	65.5	10 -145					
13C-PCB-159	63.0	10 -145					
13C-PCB-167	64.2	10 -145					
13C-PCB-169	65.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-15	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.38 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	18-Jan-15 05:28	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.221			J	PCB-44	26.2			
PCB-2	ND	0.0397			PCB-45	1.71			
PCB-3	ND	0.0393			PCB-46	0.634			J
PCB-4/10	0.422			J	PCB-47	44.7			
PCB-5/8	0.916			J	PCB-48/75	10.5			
PCB-6	0.415			J	PCB-50	ND	0.202		
PCB-7/9	0.306			J	PCB-51	3.03			
PCB-11	1.78			B	PCB-52/69	244			
PCB-12/13	ND	0.137			PCB-53	7.54			
PCB-14	ND	0.116			PCB-54	0.369			J
PCB-15	1.58				PCB-55	1.26			
PCB-16/32	10.3				PCB-56/60	31.0			
PCB-17	1.58				PCB-57	1.36			
PCB-18	11.7				PCB-58	0.817			J
PCB-19	0.571			J	PCB-61/70	109			
PCB-20/21/33	2.57			J	PCB-62	ND	0.167		
PCB-22	3.72				PCB-63	10.4			
PCB-23	ND	0.128			PCB-65	ND	0.172		
PCB-24/27	0.864			J	PCB-66/76	210			B
PCB-25	4.51				PCB-67	3.52			
PCB-26	8.20				PCB-68	3.29			
PCB-28	98.7			B	PCB-73	ND	0.153		
PCB-29	ND	0.128			PCB-74	121			
PCB-30	ND	0.0906			PCB-77	9.89			
PCB-31	27.5				PCB-78	ND	0.163		
PCB-34	0.268			J	PCB-79	13.2			
PCB-35	ND	0.151			PCB-80	ND	0.142		
PCB-36	ND	0.142			PCB-81	0.912			J
PCB-37	5.13			B	PCB-82	2.60			
PCB-38	1.26				PCB-83	ND	0.126		
PCB-39	ND	0.138			PCB-84/92	95.4			
PCB-40	ND		1.15	I	PCB-85/116	19.9			
PCB-41/64/71/72	53.0				PCB-86	ND	0.193		
PCB-42/59	8.55				PCB-87/117/125	121			
PCB-43/49	153				PCB-88/91	33.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-15	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.38 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	18-Jan-15 05:28	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.182			PCB-136	27.4			
PCB-90/101	741				PCB-137	31.3			
PCB-93	ND	0.177			PCB-138/163/164	1100			B
PCB-94	ND	0.182			PCB-139/149	209			
PCB-95/98/102	108				PCB-140	4.68			
PCB-96	1.27				PCB-141	54.7			
PCB-97	89.8				PCB-144	29.5			
PCB-99	562				PCB-145	ND	0.125		
PCB-100	5.47				PCB-146/165	203			
PCB-103	8.06				PCB-147	28.5			
PCB-104	ND	0.112			PCB-148	2.61			
PCB-105	204			B	PCB-150	1.25			
PCB-106/118	775			B	PCB-151	203			
PCB-107/109	63.6				PCB-152	0.194			J
PCB-108/112	5.80				PCB-153	1490			B
PCB-110	189				PCB-154	36.5			
PCB-111/115	10.1				PCB-155	0.702			J
PCB-113	ND	0.141			PCB-156	66.5			
PCB-114	9.51				PCB-157	13.9			
PCB-119	20.1				PCB-158/160	83.1			
PCB-120	3.71				PCB-159	ND	0.210		
PCB-121	ND	0.119			PCB-166	2.47			
PCB-122	1.67				PCB-167	39.4			
PCB-123	13.3				PCB-168	1.64			
PCB-124	14.9				PCB-169	ND	0.231		
PCB-126	1.82				PCB-170	175			
PCB-127	ND	0.268			PCB-171	57.9			
PCB-128/162	121				PCB-172	26.7			
PCB-129	2.91				PCB-173	0.289			J
PCB-130	46.9				PCB-174	13.9			
PCB-131	ND	0.308			PCB-175	10.3			
PCB-132/161	19.0				PCB-176	3.72			
PCB-133/142	17.6				PCB-177	98.7			
PCB-134/143	11.4				PCB-178	54.8			
PCB-135	19.5				PCB-179	32.9			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-15	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	5.38 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00	Date Analyzed :	18-Jan-15 05:28	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	532			B	Total octaCB	344			
PCB-181	0.942				Total nonaCB	49.9			
PCB-182/187	442				DecaCB	18.4			
PCB-183	174				Total PCB	10300			B
PCB-184	0.423			J					
PCB-185	6.06								
PCB-186	ND	0.150							
PCB-188	1.74								
PCB-189	5.88								
PCB-190	33.7								
PCB-191	5.87								
PCB-192	ND	0.160							
PCB-193	20.5								
PCB-194	74.6								
PCB-195	24.2								
PCB-196/203	113								
PCB-197	4.00								
PCB-198	2.40								
PCB-199	81.1								
PCB-200	0.589			J					
PCB-201	14.1								
PCB-202	27.2								
PCB-204	0.102			J					
PCB-205	2.65								
PCB-206	38.2								
PCB-207	3.89								
PCB-208	7.79								
PCB-209	18.4								
Total monoCB	0.221								
Total diCB	5.43			B					
Total triCB	177			B					
Total tetraCB	1070			B					
Total pentaCB	3100			B					
Total hexaCB	3860			B					
Total heptaCB	1700			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-15
Project:		Sample Size:	5.38 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	0.00	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 05:28
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	84.6	5 -145		13C-PCB-170	91.8	10 -145	
13C-PCB-3	87.0	5 -145		13C-PCB-180	91.7	10 -145	
13C-PCB-4	68.8	5 -145		13C-PCB-188	89.9	10 -145	
13C-PCB-11	75.1	5 -145		13C-PCB-189	93.3	10 -145	
13C-PCB-9	68.2	5 -145		13C-PCB-194	85.3	10 -145	
13C-PCB-19	92.7	5 -145		13C-PCB-202	90.0	10 -145	
13C-PCB-28	75.1	5 -145		13C-PCB-206	107	10 -145	
13C-PCB-32	101	5 -145		13C-PCB-208	94.3	10 -145	
13C-PCB-37	75.3	5 -145		13C-PCB-209	122	10 -145	
13C-PCB-47	85.2	5 -145		CRS 13C-PCB-79	84.7	10 -145	
13C-PCB-52	87.7	5 -145		13C-PCB-178	91.5	10 -145	
13C-PCB-54	79.5	5 -145					
13C-PCB-70	85.0	5 -145					
13C-PCB-77	90.3	10 -145					
13C-PCB-80	82.3	10 -145					
13C-PCB-81	89.1	10 -145					
13C-PCB-95	75.6	10 -145					
13C-PCB-97	83.2	10 -145					
13C-PCB-101	78.9	10 -145					
13C-PCB-104	79.2	10 -145					
13C-PCB-105	72.1	10 -145					
13C-PCB-114	66.6	10 -145					
13C-PCB-118	90.2	10 -145					
13C-PCB-123	89.4	10 -145					
13C-PCB-126	72.9	10 -145					
13C-PCB-127	73.4	10 -145					
13C-PCB-138	86.8	10 -145					
13C-PCB-141	85.1	10 -145					
13C-PCB-153	87.7	10 -145					
13C-PCB-155	74.9	10 -145					
13C-PCB-156	84.7	10 -145					
13C-PCB-157	85.8	10 -145					
13C-PCB-159	84.1	10 -145					
13C-PCB-167	84.8	10 -145					
13C-PCB-169	83.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-OF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-16	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	12-Oct-2014 0:00	%Lipids:	6.74	Date Analyzed :	11-Feb-15 14:57	Column:	ZB-1 Analyst: DMS
					18-Jan-15 06:31	Column:	ZB-1 Analyst: CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.42				PCB-44	1740			
PCB-2	0.729				PCB-45	115			
PCB-3	0.496				PCB-46	44.5			
PCB-4/10	22.6				PCB-47	2930			E
PCB-5/8	50.6				PCB-48/75	836			
PCB-6	22.3				PCB-50	6.45			
PCB-7/9	23.3				PCB-51	211			
PCB-11	63.1			B	PCB-52/69	14100			E
PCB-12/13	1.65				PCB-53	542			
PCB-14	ND	0.0957			PCB-54	24.7			
PCB-15	99.0				PCB-55	108			
PCB-16/32	666				PCB-56/60	2000			
PCB-17	110				PCB-57	103			
PCB-18	811				PCB-58	60.0			
PCB-19	32.7				PCB-61/70	6970			E
PCB-20/21/33	169				PCB-62	ND	0.979		
PCB-22	240				PCB-63	764			
PCB-23	0.962				PCB-65	2.88			
PCB-24/27	50.3				PCB-66/76	13400			B, E
PCB-25	313				PCB-67	248			
PCB-26	557				PCB-68	234			
PCB-28	6130			B, E	PCB-73	ND	0.993		
PCB-29	10.1				PCB-74	7520			E
PCB-30	0.908				PCB-77	776			
PCB-31	1940				PCB-78	24.1			
PCB-34	16.0				PCB-79	800			
PCB-35	1.32				PCB-80	ND	0.795		
PCB-36	3.20				PCB-81	118			
PCB-37	354			B	PCB-82	196			
PCB-38	86.5				PCB-83	8.49			
PCB-39	2.31				PCB-84/92	6780			E
PCB-40	94.0				PCB-85/116	1110			
PCB-41/64/71/72	3460				PCB-86	ND	0.200		
PCB-42/59	600				PCB-87/117/125	8080			E
PCB-43/49	10000			E	PCB-88/91	2400			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-16
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	6.74	QC Batch:	B5A0031
				Date Analyzed:	11-Feb-15 14:57
				Column:	ZB-1
				Analyst:	DMS
				18-Jan-15 06:31	Column: ZB-1
				Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	14.5				PCB-136	1920			
PCB-90/101	44400			D	PCB-137	2410			E
PCB-93	ND	0.158			PCB-138/163/164	67000			B, E, D
PCB-94	7.66				PCB-139/149	12700			E
PCB-95/98/102	7080			E	PCB-140	301			
PCB-96	87.2				PCB-141	4360			E
PCB-97	6090			E	PCB-144	2100			E
PCB-99	33000			D	PCB-145	4.03			
PCB-100	432				PCB-146/165	16400			E
PCB-103	631				PCB-147	1990			E
PCB-104	5.41				PCB-148	149			
PCB-105	13400			B, E	PCB-150	98.4			
PCB-106/118	48800			B, D	PCB-151	13000			E
PCB-107/109	4460			E	PCB-152	15.6			
PCB-108/112	447				PCB-153	92500			B, E, D
PCB-110	11500			E	PCB-154	2600			E
PCB-111/115	702				PCB-155	45.4			
PCB-113	ND	0.156			PCB-156	4970			E
PCB-114	730				PCB-157	1160			
PCB-119	1510				PCB-158/160	6440			E
PCB-120	283				PCB-159	ND	0.860		
PCB-121	ND	0.106			PCB-166	188			
PCB-122	130				PCB-167	3240			E
PCB-123	976				PCB-168	127			
PCB-124	1110				PCB-169	9.63			
PCB-126	143				PCB-170	13000			E
PCB-127	ND	0.635			PCB-171	4850			E
PCB-128/162	8750			E	PCB-172	2340			E
PCB-129	241				PCB-173	17.6			
PCB-130	3950			E	PCB-174	1250			
PCB-131	ND	2.20			PCB-175	984			
PCB-132/161	1770				PCB-176	343			
PCB-133/142	1730				PCB-177	8220			E
PCB-134/143	1120				PCB-178	4800			E
PCB-135	1410				PCB-179	2940			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-16 Date Received: 13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031 Date Extracted: 08-Jan-2015 11:08
Date Collected:	12-Oct-2014 0:00	%Lipids:	6.74	Date Analyzed :	11-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					18-Jan-15 06:31 Column: ZB-1 Analyst: CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	32900			B, D	Total octaCB	29800			
PCB-181	91.3				Total nonaCB	4380			
PCB-182/187	33800			E	DecaCB	1360			
PCB-183	14400			E	Total PCB	689000			B
PCB-184	39.6								
PCB-185	551								
PCB-186	ND	0.470							
PCB-188	147								
PCB-189	535								
PCB-190	2790			E					
PCB-191	524								
PCB-192	ND	0.473							
PCB-193	1770								
PCB-194	6550			E					
PCB-195	2170			E					
PCB-196/203	9190			E					
PCB-197	383								
PCB-198	236								
PCB-199	6870			E					
PCB-200	51.7								
PCB-201	1290								
PCB-202	2810			E					
PCB-204	7.02								
PCB-205	258								
PCB-206	3250			E					
PCB-207	359								
PCB-208	767								
PCB-209	1360								
Total monoCB	4.64								
Total diCB	282			B					
Total triCB	11500			B					
Total tetraCB	67900			B					
Total pentaCB	194000			B					
Total hexaCB	253000			B					
Total heptaCB	126000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WS-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-16 Date Received: 13-Nov-2014 12:36
Project:		Sample Size:	10.2 g	QC Batch:	B5A0031 Date Extracted: 08-Jan-2015 11:08
Date Collected:	12-Oct-2014 0:00	%Lipids:	6.74	Date Analyzed :	11-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					18-Jan-15 06:31 Column: ZB-1 Analyst: CVG

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	89.5	5 -145		13C-PCB-170	81.2	10 -145	
13C-PCB-3	95.9	5 -145		13C-PCB-180	81.0	10 -145	
13C-PCB-4	75.0	5 -145		13C-PCB-188	77.2	10 -145	
13C-PCB-11	80.5	5 -145		13C-PCB-189	76.0	10 -145	
13C-PCB-9	80.2	5 -145		13C-PCB-194	79.0	10 -145	
13C-PCB-19	104	5 -145		13C-PCB-202	80.2	10 -145	
13C-PCB-28	72.6	5 -145		13C-PCB-206	96.2	10 -145	
13C-PCB-32	99.6	5 -145		13C-PCB-208	81.9	10 -145	
13C-PCB-37	81.6	5 -145		13C-PCB-209	100	10 -145	
13C-PCB-47	82.6	5 -145		CRS 13C-PCB-79	80.1	10 -145	
13C-PCB-52	80.3	5 -145		13C-PCB-178	85.0	10 -145	
13C-PCB-54	69.2	5 -145					
13C-PCB-70	82.3	5 -145					
13C-PCB-77	79.1	10 -145					
13C-PCB-80	81.1	10 -145					
13C-PCB-81	80.3	10 -145					
13C-PCB-95	89.1	10 -145					
13C-PCB-97	87.0	10 -145					
13C-PCB-101	85.6	10 -145					
13C-PCB-104	89.5	10 -145					
13C-PCB-105	69.5	10 -145					
13C-PCB-114	65.3	10 -145					
13C-PCB-118	84.6	10 -145					
13C-PCB-123	88.7	10 -145					
13C-PCB-126	67.2	10 -145					
13C-PCB-127	69.5	10 -145					
13C-PCB-138	76.4	10 -145					
13C-PCB-141	78.1	10 -145					
13C-PCB-153	69.3	10 -145					
13C-PCB-155	84.9	10 -145					
13C-PCB-156	81.3	10 -145					
13C-PCB-157	79.9	10 -145					
13C-PCB-159	78.7	10 -145					
13C-PCB-167	79.8	10 -145					
13C-PCB-169	72.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-17
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.66	QC Batch:	B5A0031
				Date Analyzed :	04-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					16-Feb-15 12:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	3.25				PCB-44	3130			E
PCB-2	0.242			J	PCB-45	262			
PCB-3	ND		0.206		PCB-46	46.2			
PCB-4/10	29.1				PCB-47	3790			E
PCB-5/8	59.6				PCB-48/75	446			
PCB-6	20.5				PCB-50	18.6			
PCB-7/9	5.39				PCB-51	111			
PCB-11	5.89			B	PCB-52/69	7600			E
PCB-12/13	ND	0.384			PCB-53	184			
PCB-14	ND	0.331			PCB-54	25.3			
PCB-15	3.07				PCB-55	163			
PCB-16/32	384				PCB-56/60	1530			
PCB-17	163				PCB-57	50.6			
PCB-18	444				PCB-58	26.5			
PCB-19	62.3				PCB-61/70	2590			
PCB-20/21/33	126				PCB-62	ND	0.138		
PCB-22	143				PCB-63	395			
PCB-23	0.229			J	PCB-65	ND	0.142		
PCB-24/27	71.7				PCB-66/76	8940			B, E
PCB-25	80.4				PCB-67	79.6			
PCB-26	196				PCB-68	92.2			
PCB-28	1550			B	PCB-73	ND	0.154		
PCB-29	1.24				PCB-74	4250			E
PCB-30	ND	0.128			PCB-77	72.7			
PCB-31	372				PCB-78	ND	0.129		
PCB-34	5.89				PCB-79	698			
PCB-35	ND	0.260			PCB-80	ND	0.111		
PCB-36	ND	0.251			PCB-81	65.3			
PCB-37	10.9			B	PCB-82	1730			
PCB-38	139				PCB-83	2.33			
PCB-39	0.288			J	PCB-84/92	9600			E
PCB-40	436				PCB-85/116	2230			
PCB-41/64/71/72	2840				PCB-86	ND	0.297		
PCB-42/59	1260				PCB-87/117/125	8070			E
PCB-43/49	7470			E	PCB-88/91	3710			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IB-FF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-17
Project:		Sample Size:	10.1 g	QC Batch:	B5A0031
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.66	Date Received:	13-Nov-2014 12:36
				Date Analyzed:	04-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					16-Feb-15 12:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	21.5				PCB-136	3990			E
PCB-90/101	38200			E	PCB-137	2340			E
PCB-93	ND	0.295			PCB-138/163/164	54300			B, E
PCB-94	19.9				PCB-139/149	27600			E
PCB-95/98/102	11200			E	PCB-140	289			
PCB-96	41.1				PCB-141	8150			E
PCB-97	7380			E	PCB-144	2290			E
PCB-99	26400			E	PCB-145	1.39			
PCB-100	352				PCB-146/165	15200			E
PCB-103	549				PCB-147	1590			
PCB-104	3.72				PCB-148	55.3			
PCB-105	9000			B, E	PCB-150	129			
PCB-106/118	39600			B, E	PCB-151	12000			E
PCB-107/109	2800				PCB-152	7.88			
PCB-108/112	891				PCB-153	77600			B, E, D
PCB-110	20400			E	PCB-154	1620			
PCB-111/115	443				PCB-155	27.0			
PCB-113	79.0				PCB-156	4490			E
PCB-114	613				PCB-157	962			
PCB-119	1200				PCB-158/160	6800			E
PCB-120	161				PCB-159	ND	2.03		
PCB-121	ND	0.178			PCB-166	182			
PCB-122	32.4				PCB-167	2290			E
PCB-123	486				PCB-168	147			
PCB-124	727				PCB-169	ND	2.08		
PCB-126	109				PCB-170	12000			E
PCB-127	ND	3.42			PCB-171	4400			E
PCB-128/162	7130			E	PCB-172	2700			E
PCB-129	1470				PCB-173	214			
PCB-130	3450			E	PCB-174	13500			E
PCB-131	ND	4.85			PCB-175	767			
PCB-132/161	10800			E	PCB-176	1550			
PCB-133/142	2020				PCB-177	11400			E
PCB-134/143	2340				PCB-178	4220			E
PCB-135	5160			E	PCB-179	7020			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-17
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.66	QC Batch:	B5A0031
				Date Analyzed :	04-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					16-Feb-15 12:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	33400			B, E	Total octaCB	30800			
PCB-181	59.2				Total nonaCB	4200			
PCB-182/187	25200			E	DecaCB	1020			
PCB-183	10300			E	Total PCB	661000			B
PCB-184	28.4								
PCB-185	1750								
PCB-186	ND	0.760							
PCB-188	92.3								
PCB-189	221								
PCB-190	2830			E					
PCB-191	605								
PCB-192	ND	1.06							
PCB-193	2020			E					
PCB-194	4680			E					
PCB-195	2340			E					
PCB-196/203	9140			E					
PCB-197	331								
PCB-198	279								
PCB-199	9130			E					
PCB-200	803								
PCB-201	1260								
PCB-202	2620			E					
PCB-204	4.57								
PCB-205	189								
PCB-206	2800			E					
PCB-207	339								
PCB-208	1060								
PCB-209	1020								
Total monoCB	3.49		3.69						
Total diCB	124			B					
Total triCB	3750			B					
Total tetraCB	46600			B					
Total pentaCB	186000			B					
Total hexaCB	254000			B					
Total heptaCB	134000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-FF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-17
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	2.66	QC Batch:	B5A0031
				Date Analyzed :	04-Feb-15 14:57 Column: ZB-1 Analyst: DMS
					16-Feb-15 12:35 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	82.0	5 -145		13C-PCB-170	70.5	10 -145	
13C-PCB-3	74.4	5 -145		13C-PCB-180	63.3	10 -145	
13C-PCB-4	75.1	5 -145		13C-PCB-188	71.9	10 -145	
13C-PCB-11	77.2	5 -145		13C-PCB-189	69.4	10 -145	
13C-PCB-9	75.8	5 -145		13C-PCB-194	83.0	10 -145	
13C-PCB-19	84.7	5 -145		13C-PCB-202	67.9	10 -145	
13C-PCB-28	79.9	5 -145		13C-PCB-206	93.4	10 -145	
13C-PCB-32	88.0	5 -145		13C-PCB-208	89.6	10 -145	
13C-PCB-37	79.0	5 -145		13C-PCB-209	86.1	10 -145	
13C-PCB-47	79.3	5 -145		CRS 13C-PCB-79	79.3	10 -145	
13C-PCB-52	73.9	5 -145		13C-PCB-178	79.1	10 -145	
13C-PCB-54	65.7	5 -145					
13C-PCB-70	77.8	5 -145					
13C-PCB-77	90.1	10 -145					
13C-PCB-80	81.9	10 -145					
13C-PCB-81	85.2	10 -145					
13C-PCB-95	83.1	10 -145					
13C-PCB-97	93.3	10 -145					
13C-PCB-101	78.0	10 -145					
13C-PCB-104	80.0	10 -145					
13C-PCB-105	86.6	10 -145					
13C-PCB-114	88.0	10 -145					
13C-PCB-118	65.3	10 -145					
13C-PCB-123	97.5	10 -145					
13C-PCB-126	90.9	10 -145					
13C-PCB-127	94.9	10 -145					
13C-PCB-138	68.8	10 -145					
13C-PCB-141	87.7	10 -145					
13C-PCB-153	64.1	10 -145					
13C-PCB-155	78.7	10 -145					
13C-PCB-156	79.6	10 -145					
13C-PCB-157	78.5	10 -145					
13C-PCB-159	81.0	10 -145					
13C-PCB-167	81.9	10 -145					
13C-PCB-169	79.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-18	Date Received:	13-Nov-2014 12:36				
Project:		Sample Size:	10.1 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08				
Date Collected:	12-Oct-2014 0:00	%Lipids:	10.8	Date Analyzed :	04-Feb-15 16:01	Column:	ZB-1	Analyst:	DMS		
				11-Feb-15 16:00				Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	17.9			D	PCB-44	13300			D
PCB-2	ND	6.22		D	PCB-45	915			D
PCB-3	ND	6.20		D	PCB-46	175			D
PCB-4/10	148			D	PCB-47	15400			D
PCB-5/8	304			D	PCB-48/75	1920			D
PCB-6	104			D	PCB-50	69.2			D
PCB-7/9	26.6			D	PCB-51	418			D
PCB-11	27.6			B, D	PCB-52/69	29800			D
PCB-12/13	ND	17.4		D	PCB-53	678			D
PCB-14	ND	14.9		D	PCB-54	93.5			D
PCB-15	14.1			D	PCB-55	614			D
PCB-16/32	1530			D	PCB-56/60	6540			D
PCB-17	662			D	PCB-57	194			D
PCB-18	1850			D	PCB-58	110			D
PCB-19	252			D	PCB-61/70	10000			D
PCB-20/21/33	543			D	PCB-62	ND	18.5		D
PCB-22	675			D	PCB-63	1630			D
PCB-23	ND	7.01		D	PCB-65	ND	19.0		D
PCB-24/27	292			D	PCB-66/76	38000			B, D
PCB-25	362			D	PCB-67	322			D
PCB-26	865			D	PCB-68	386			D
PCB-28	6680			B, D	PCB-73	48.6			D
PCB-29	6.13			J, D	PCB-74	17900			D
PCB-30	ND	2.37		D	PCB-77	336			D
PCB-31	1940			D	PCB-78	ND	17.9		D
PCB-34	29.4			D	PCB-79	3370			D
PCB-35	ND	8.27		D	PCB-80	ND	15.3		D
PCB-36	ND	8.00		D	PCB-81	182			D
PCB-37	50.8			B, D	PCB-82	9070			D
PCB-38	512			D	PCB-83	ND	47.3		D
PCB-39	ND	8.24		D	PCB-84/92	40400			D
PCB-40	1710			D	PCB-85/116	19400			D
PCB-41/64/71/72	11700			D	PCB-86	ND	76.2		D
PCB-42/59	5200			D	PCB-87/117/125	35600			D
PCB-43/49	27900			D	PCB-88/91	16800			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data							
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-18	Date Received:	13-Nov-2014 12:36				
Project:		Sample Size:	10.1 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08				
Date Collected:	12-Oct-2014 0:00	%Lipids:	10.8	Date Analyzed :	04-Feb-15 16:01	Column:	ZB-1	Analyst:	DMS		
				11-Feb-15 16:00				Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	128			D	PCB-136	17400			D
PCB-90/101	188000			E, D	PCB-137	8340			D
PCB-93	ND	31.5		D	PCB-138/163/164	212000			B, E, D
PCB-94	91.5			D	PCB-139/149	169000			E, D
PCB-95/98/102	53500			D	PCB-140	1290			D
PCB-96	193			D	PCB-141	35600			D
PCB-97	32100			D	PCB-144	9720			D
PCB-99	117000			E, D	PCB-145	ND	6.06		D
PCB-100	1550			D	PCB-146/165	40300			D
PCB-103	2420			D	PCB-147	7000			D
PCB-104	18.9			D	PCB-148	389			D
PCB-105	39300			B, D	PCB-150	577			D
PCB-106/118	165000			B, E, D	PCB-151	57400			E, D
PCB-107/109	14300			D	PCB-152	32.3			D
PCB-108/112	3900			D	PCB-153	286000			B, E, D
PCB-110	102000			E, D	PCB-154	7310			D
PCB-111/115	2440			D	PCB-155	132			D
PCB-113	231			D	PCB-156	19800			D
PCB-114	2600			D	PCB-157	3940			D
PCB-119	5180			D	PCB-158/160	18500			D
PCB-120	717			D	PCB-159	ND	20.6		D
PCB-121	ND	19.0		D	PCB-166	711			D
PCB-122	148			D	PCB-167	9980			D
PCB-123	2670			D	PCB-168	263			D
PCB-124	3660			D	PCB-169	ND	22.2		D
PCB-126	495			D	PCB-170	48000			E, D
PCB-127	ND	27.8		D	PCB-171	15200			D
PCB-128/162	30800			D	PCB-172	9240			D
PCB-129	3710			D	PCB-173	586			D
PCB-130	15700			D	PCB-174	44800			E, D
PCB-131	ND	27.0		D	PCB-175	3130			D
PCB-132/161	28700			D	PCB-176	7140			D
PCB-133/142	4950			D	PCB-177	37400			D
PCB-134/143	5580			D	PCB-178	17900			D
PCB-135	23800			D	PCB-179	32100			D

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-18
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	10.8	QC Batch:	B5A0031
				Date Analyzed:	04-Feb-15 16:01
				Column:	ZB-1
				Analyst:	DMS
				Date Analyzed:	11-Feb-15 16:00
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	144000			B, E, D	Total octaCB	148000			
PCB-181	203			D	Total nonaCB	21000			
PCB-182/187	131000			E, D	DecaCB	5030			
PCB-183	49400			E, D	Total PCB	2820000			B
PCB-184	147			D					
PCB-185	5440			D					
PCB-186	ND	8.65		D					
PCB-188	421			D					
PCB-189	1220			D					
PCB-190	9920			D					
PCB-191	2020			D					
PCB-192	ND	8.94		D					
PCB-193	6820			D					
PCB-194	24400			D					
PCB-195	11400			D					
PCB-196/203	43600			D					
PCB-197	1530			D					
PCB-198	1220			D					
PCB-199	43500			E, D					
PCB-200	3520			D					
PCB-201	5800			D					
PCB-202	12100			D					
PCB-204	22.6			D					
PCB-205	836			D					
PCB-206	14000			D					
PCB-207	1690			D					
PCB-208	5280			D					
PCB-209	5030			D					
Total monoCB	17.9	7.18							
Total diCB	623	41.1		B					
Total triCB	16200	23.3		B					
Total tetraCB	189000	177		B					
Total pentaCB	859000	58.8		B					
Total hexaCB	1020000	185		B					
Total heptaCB	566000	22.8		B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-OF-WC-10-05-20141012

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-18
Project:		Sample Size:	10.1 g	Date Received:	13-Nov-2014 12:36
Date Collected:	12-Oct-2014 0:00	%Lipids:	10.8	QC Batch:	B5A0031
				Date Analyzed:	04-Feb-15 16:01
				Column:	ZB-1
				Analyst:	DMS
				11-Feb-15 16:00	Column: ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	47.5	5 -145	D	13C-PCB-170	73.6	10 -145	D
13C-PCB-3	53.6	5 -145	D	13C-PCB-180	71.6	10 -145	D
13C-PCB-4	63.9	5 -145	D	13C-PCB-188	57.0	10 -145	D
13C-PCB-11	64.1	5 -145	D	13C-PCB-189	52.1	10 -145	D
13C-PCB-9	66.0	5 -145	D	13C-PCB-194	80.3	10 -145	D
13C-PCB-19	61.3	5 -145	D	13C-PCB-202	49.4	10 -145	D
13C-PCB-28	58.8	5 -145	D	13C-PCB-206	69.8	10 -145	D
13C-PCB-32	60.5	5 -145	D	13C-PCB-208	67.3	10 -145	D
13C-PCB-37	65.0	5 -145	D	13C-PCB-209	67.9	10 -145	D
13C-PCB-47	67.0	5 -145	D	CRS 13C-PCB-79	65.0	10 -145	D
13C-PCB-52	72.2	5 -145	D	13C-PCB-178	54.9	10 -145	D
13C-PCB-54	65.3	5 -145	D				
13C-PCB-70	63.7	5 -145	D				
13C-PCB-77	64.1	10 -145	D				
13C-PCB-80	63.0	10 -145	D				
13C-PCB-81	63.0	10 -145	D				
13C-PCB-95	61.4	10 -145	D				
13C-PCB-97	67.8	10 -145	D				
13C-PCB-101	63.1	10 -145	D				
13C-PCB-104	60.6	10 -145	D				
13C-PCB-105	79.1	10 -145	D				
13C-PCB-114	74.9	10 -145	D				
13C-PCB-118	70.0	10 -145	D				
13C-PCB-123	58.3	10 -145	D				
13C-PCB-126	75.4	10 -145	D				
13C-PCB-127	78.5	10 -145	D				
13C-PCB-138	83.8	10 -145	D				
13C-PCB-141	70.8	10 -145	D				
13C-PCB-153	85.0	10 -145	D				
13C-PCB-155	49.3	10 -145	D				
13C-PCB-156	67.5	10 -145	D				
13C-PCB-157	69.8	10 -145	D				
13C-PCB-159	63.7	10 -145	D				
13C-PCB-167	66.4	10 -145	D				
13C-PCB-169	61.8	10 -145	D				

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IA-FF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-19	Date Received:	13-Nov-2014 12:36
Project:		Sample Size:	10.0 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.38	Date Analyzed :	18-Jan-15 12:57	Column:	ZB-1 Analyst: CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	4.47				PCB-44	989			
PCB-2	0.334			J	PCB-45	73.2			
PCB-3	0.535				PCB-46	11.1			
PCB-4/10	14.4				PCB-47	1100			
PCB-5/8	36.3				PCB-48/75	134			
PCB-6	6.96				PCB-50	3.33			
PCB-7/9	2.87				PCB-51	15.3			
PCB-11	7.23			B	PCB-52/69	1900			
PCB-12/13	ND	0.100			PCB-53	28.1			
PCB-14	ND	0.0844			PCB-54	2.86			
PCB-15	4.66				PCB-55	33.8			
PCB-16/32	94.7				PCB-56/60	596			
PCB-17	45.9				PCB-57	12.5			
PCB-18	120				PCB-58	6.44			
PCB-19	11.4				PCB-61/70	1110			
PCB-20/21/33	47.3				PCB-62	ND	0.338		
PCB-22	69.5				PCB-63	124			
PCB-23	0.268			J	PCB-65	ND	0.346		
PCB-24/27	10.7				PCB-66/76	2680			B
PCB-25	26.6				PCB-67	24.1			
PCB-26	63.3				PCB-68	30.3			
PCB-28	775			B	PCB-73	3.33			
PCB-29	0.558				PCB-74	1420			
PCB-30	0.104			J	PCB-77	53.3			
PCB-31	188				PCB-78	13.6			
PCB-34	2.17				PCB-79	155			
PCB-35	ND	0.253			PCB-80	ND	0.276		
PCB-36	ND	0.239			PCB-81	18.3			
PCB-37	11.1			B	PCB-82	432			
PCB-38	33.8				PCB-83	2.55			
PCB-39	ND	0.232			PCB-84/92	2110			
PCB-40	133				PCB-85/116	1170			
PCB-41/64/71/72	829				PCB-86	ND	0.348		
PCB-42/59	391				PCB-87/117/125	1910			
PCB-43/49	1860				PCB-88/91	829			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-19	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	10.0 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.38	Date Analyzed :	18-Jan-15 12:57	Column:	ZB-1	Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	6.26				PCB-136	832			
PCB-90/101	9240			E	PCB-137	540			
PCB-93	ND	0.287			PCB-138/163/164	13600			B, E
PCB-94	3.99				PCB-139/149	7910			E
PCB-95/98/102	2620				PCB-140	67.9			
PCB-96	8.15				PCB-141	1610			
PCB-97	1660				PCB-144	448			
PCB-99	6270			E	PCB-145	ND	0.292		
PCB-100	96.8				PCB-146/165	2690			
PCB-103	131				PCB-147	427			
PCB-104	1.28				PCB-148	25.3			
PCB-105	2580			B, E	PCB-150	31.3			
PCB-106/118	8920			B, E	PCB-151	2750			E
PCB-107/109	786				PCB-152	1.66			
PCB-108/112	224				PCB-153	18900			B, E
PCB-110	5400			E	PCB-154	495			
PCB-111/115	129				PCB-155	9.68			
PCB-113	ND	0.246			PCB-156	1040			
PCB-114	161				PCB-157	254			
PCB-119	283				PCB-158/160	1230			
PCB-120	55.6				PCB-159	217			
PCB-121	ND	0.193			PCB-166	36.2			
PCB-122	5.90				PCB-167	490			
PCB-123	111				PCB-168	22.6			
PCB-124	180				PCB-169	ND	0.582		
PCB-126	30.5				PCB-170	2610			E
PCB-127	ND	0.492			PCB-171	847			
PCB-128/162	1510				PCB-172	489			
PCB-129	246				PCB-173	26.9			
PCB-130	789				PCB-174	2320			E
PCB-131	ND	0.826			PCB-175	161			
PCB-132/161	1770				PCB-176	274			
PCB-133/142	345				PCB-177	2140			E
PCB-134/143	331				PCB-178	990			
PCB-135	1080				PCB-179	1380			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-19
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.38	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 12:57
				Column:	ZB-1
				Analyst:	CVG

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	7740			B, E	Total octaCB	6440			
PCB-181	ND	0.373			Total nonaCB	1080			
PCB-182/187	6650			E	DecaCB	235			
PCB-183	2210			E	Total PCB	157000			B
PCB-184	8.84								
PCB-185	246								
PCB-186	ND	0.297							
PCB-188	27.5								
PCB-189	42.9								
PCB-190	535								
PCB-191	110								
PCB-192	ND	0.299							
PCB-193	419								
PCB-194	1270								
PCB-195	278								
PCB-196/203	1880								
PCB-197	60.5								
PCB-198	53.9								
PCB-199	1850								
PCB-200	129								
PCB-201	256								
PCB-202	625								
PCB-204	1.44								
PCB-205	44.7								
PCB-206	743								
PCB-207	83.0								
PCB-208	252								
PCB-209	235								
Total monoCB	5.34								
Total diCB	72.5			B					
Total triCB	1500			B					
Total tetraCB	13800			B					
Total pentaCB	45300			B					
Total hexaCB	59800			B					
Total heptaCB	29200			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-FF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-19
Project:		Sample Size:	10.0 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	1.38	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 12:57
				Column:	ZB-1
				Analyst:	CVG

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	78.1	5 -145		13C-PCB-170	89.3	10 -145	
13C-PCB-3	81.7	5 -145		13C-PCB-180	93.6	10 -145	
13C-PCB-4	68.2	5 -145		13C-PCB-188	90.9	10 -145	
13C-PCB-11	81.3	5 -145		13C-PCB-189	81.5	10 -145	
13C-PCB-9	74.2	5 -145		13C-PCB-194	81.2	10 -145	
13C-PCB-19	95.9	5 -145		13C-PCB-202	88.5	10 -145	
13C-PCB-28	83.7	5 -145		13C-PCB-206	102	10 -145	
13C-PCB-32	93.6	5 -145		13C-PCB-208	87.7	10 -145	
13C-PCB-37	93.1	5 -145		13C-PCB-209	117	10 -145	
13C-PCB-47	82.0	5 -145		CRS 13C-PCB-79	80.6	10 -145	
13C-PCB-52	78.8	5 -145		13C-PCB-178	98.6	10 -145	
13C-PCB-54	70.8	5 -145					
13C-PCB-70	87.4	5 -145					
13C-PCB-77	80.9	10 -145					
13C-PCB-80	83.8	10 -145					
13C-PCB-81	83.2	10 -145					
13C-PCB-95	88.9	10 -145					
13C-PCB-97	87.6	10 -145					
13C-PCB-101	83.9	10 -145					
13C-PCB-104	86.9	10 -145					
13C-PCB-105	75.7	10 -145					
13C-PCB-114	70.0	10 -145					
13C-PCB-118	88.6	10 -145					
13C-PCB-123	87.1	10 -145					
13C-PCB-126	75.8	10 -145					
13C-PCB-127	75.2	10 -145					
13C-PCB-138	90.3	10 -145					
13C-PCB-141	87.5	10 -145					
13C-PCB-153	86.8	10 -145					
13C-PCB-155	82.1	10 -145					
13C-PCB-156	89.3	10 -145					
13C-PCB-157	87.1	10 -145					
13C-PCB-159	87.8	10 -145					
13C-PCB-167	89.3	10 -145					
13C-PCB-169	82.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-OF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-20
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	8.90	QC Batch:	B5A0031
				Date Analyzed:	04-Feb-15 17:05
				Column:	ZB-1
				Analyst:	DMS
				18-Jan-15 14:00	Column: ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	30.7				PCB-44	6050			E
PCB-2	1.97				PCB-45	504			
PCB-3	3.17				PCB-46	81.2			
PCB-4/10	97.7				PCB-47	7450			E
PCB-5/8	243				PCB-48/75	786			
PCB-6	48.1				PCB-50	23.7			
PCB-7/9	19.6				PCB-51	123			
PCB-11	46.5			B	PCB-52/69	12600			E
PCB-12/13	1.57				PCB-53	225			
PCB-14	ND	0.153			PCB-54	19.8			
PCB-15	29.0				PCB-55	249			
PCB-16/32	616				PCB-56/60	4150			E
PCB-17	289				PCB-57	92.7			
PCB-18	715				PCB-58	50.9			
PCB-19	78.8				PCB-61/70	7230			E
PCB-20/21/33	317				PCB-62	ND	1.20		
PCB-22	470				PCB-63	845			
PCB-23	ND	0.596			PCB-65	4.55			
PCB-24/27	71.2				PCB-66/76	17800			B, E
PCB-25	189				PCB-67	171			
PCB-26	422				PCB-68	201			
PCB-28	4930			B, E	PCB-73	15.3			
PCB-29	3.06				PCB-74	9500			E
PCB-30	0.556				PCB-77	445			
PCB-31	1370				PCB-78	86.7			
PCB-34	15.1				PCB-79	1060			
PCB-35	ND	0.700			PCB-80	ND	1.06		
PCB-36	1.50				PCB-81	575			
PCB-37	94.2			B	PCB-82	2980			E
PCB-38	248				PCB-83	ND	0.284		
PCB-39	1.51				PCB-84/92	13900			E
PCB-40	816				PCB-85/116	ND	0.339		
PCB-41/64/71/72	5220				PCB-86	ND	0.435		
PCB-42/59	2510				PCB-87/117/125	13300			E
PCB-43/49	12100			E	PCB-88/91	6020			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-OF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-20
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	8.90	QC Batch:	B5A0031
				Date Analyzed :	04-Feb-15 17:05 Column: ZB-1 Analyst: DMS
					18-Jan-15 14:00 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.426			PCB-136	6250			E
PCB-90/101	62300			E, D	PCB-137	3510			E
PCB-93	ND	0.393			PCB-138/163/164	83800			B, E, D
PCB-94	28.6				PCB-139/149	58500			E
PCB-95/98/102	17900			E	PCB-140	570			
PCB-96	58.7				PCB-141	11100			E
PCB-97	11700			E	PCB-144	3480			E
PCB-99	43100			E, D	PCB-145	1.94			
PCB-100	707				PCB-146/165	20300			E
PCB-103	924				PCB-147	3360			E
PCB-104	9.10				PCB-148	285			
PCB-105	16800			B, E	PCB-150	270			
PCB-106/118	66000			B, E, D	PCB-151	21800			E
PCB-107/109	5490			E	PCB-152	11.1			
PCB-108/112	1480				PCB-153	118000			B, E, D
PCB-110	37300			E, D	PCB-154	4110			E
PCB-111/115	5610			E	PCB-155	78.0			
PCB-113	ND	0.331			PCB-156	7300			E
PCB-114	1140				PCB-157	1840			
PCB-119	1980			E	PCB-158/160	9130			E
PCB-120	381				PCB-159	1380			
PCB-121	ND	0.264			PCB-166	297			
PCB-122	47.9				PCB-167	3590			E
PCB-123	775				PCB-168	177			
PCB-124	1250				PCB-169	4.08			
PCB-126	235				PCB-170	18700			E
PCB-127	ND	1.26			PCB-171	6070			E
PCB-128/162	11600			E	PCB-172	3640			E
PCB-129	1800				PCB-173	207			
PCB-130	5640			E	PCB-174	15900			E
PCB-131	ND	2.70			PCB-175	1040			
PCB-132/161	12900			E	PCB-176	1930			
PCB-133/142	2700				PCB-177	14900			E
PCB-134/143	2610				PCB-178	6430			E
PCB-135	8650			E	PCB-179	9650			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-OF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-20
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	8.90	QC Batch:	B5A0031
				Date Analyzed :	04-Feb-15 17:05
				Column:	ZB-1
				Analyst:	DMS
				18-Jan-15 14:00	Column: ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	53800			B, E, D	Total octaCB	56900			
PCB-181	125				Total nonaCB	8200			
PCB-182/187	41900			E	DecaCB	1700			
PCB-183	14900			E	Total PCB	1080000			B
PCB-184	69.9								
PCB-185	1770								
PCB-186	0.475			J					
PCB-188	217								
PCB-189	326								
PCB-190	3930			E					
PCB-191	852								
PCB-192	ND	0.846							
PCB-193	3130			E					
PCB-194	9460			E					
PCB-195	4290			E					
PCB-196/203	16400			E					
PCB-197	517								
PCB-198	462								
PCB-199	17500			E					
PCB-200	1080								
PCB-201	2040			E					
PCB-202	4890			E					
PCB-204	11.3								
PCB-205	346								
PCB-206	5790			E					
PCB-207	618								
PCB-208	1800								
PCB-209	1700								
Total monoCB	35.9								
Total diCB	485			B					
Total triCB	9830			B					
Total tetraCB	91000			B					
Total pentaCB	311000			B					
Total hexaCB	405000			B					
Total heptaCB	199000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-OF-WC-09-07-20141011

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-20
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 12:36
Date Collected:	11-Oct-2014 0:00	%Lipids:	8.90	QC Batch:	B5A0031
				Date Analyzed:	04-Feb-15 17:05
				Column:	ZB-1
				Analyst:	DMS
				18-Jan-15 14:00	Column: ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	84.1	5 -145		13C-PCB-170	74.6	10 -145	
13C-PCB-3	86.9	5 -145		13C-PCB-180	72.4	10 -145	
13C-PCB-4	66.2	5 -145		13C-PCB-188	80.1	10 -145	
13C-PCB-11	71.4	5 -145		13C-PCB-189	67.5	10 -145	
13C-PCB-9	68.4	5 -145		13C-PCB-194	70.9	10 -145	
13C-PCB-19	86.6	5 -145		13C-PCB-202	63.0	10 -145	
13C-PCB-28	67.9	5 -145		13C-PCB-206	78.2	10 -145	
13C-PCB-32	95.4	5 -145		13C-PCB-208	86.7	10 -145	
13C-PCB-37	67.4	5 -145		13C-PCB-209	80.8	10 -145	
13C-PCB-47	73.6	5 -145		CRS 13C-PCB-79	77.1	10 -145	
13C-PCB-52	70.1	5 -145		13C-PCB-178	79.6	10 -145	
13C-PCB-54	71.4	5 -145					
13C-PCB-70	75.2	5 -145					
13C-PCB-77	78.7	10 -145					
13C-PCB-80	71.4	10 -145					
13C-PCB-81	79.4	10 -145					
13C-PCB-95	79.1	10 -145					
13C-PCB-97	87.9	10 -145					
13C-PCB-101	83.3	10 -145					
13C-PCB-104	77.7	10 -145					
13C-PCB-105	64.9	10 -145					
13C-PCB-114	62.9	10 -145					
13C-PCB-118	84.2	10 -145					
13C-PCB-123	88.7	10 -145					
13C-PCB-126	61.5	10 -145					
13C-PCB-127	65.5	10 -145					
13C-PCB-138	71.5	10 -145					
13C-PCB-141	77.0	10 -145					
13C-PCB-153	71.6	10 -145					
13C-PCB-155	75.8	10 -145					
13C-PCB-156	69.7	10 -145					
13C-PCB-157	68.7	10 -145					
13C-PCB-159	69.9	10 -145					
13C-PCB-167	68.8	10 -145					
13C-PCB-169	64.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-21	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	1.09 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.26	Date Analyzed :	18-Jan-15 15:03	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		1.23		PCB-44	3120			
PCB-2	ND	0.452			PCB-45	111			
PCB-3	ND	0.448			PCB-46	45.9			
PCB-4/10	8.70			J	PCB-47	1930			
PCB-5/8	8.20			J	PCB-48/75	339			
PCB-6	ND	0.945			PCB-50	ND	3.06		
PCB-7/9	ND	0.953			PCB-51	25.5			
PCB-11	14.9			B	PCB-52/69	5430			
PCB-12/13	ND	1.00			PCB-53	189			
PCB-14	ND	0.845			PCB-54	ND	2.45		
PCB-15	ND	0.885			PCB-55	87.4			
PCB-16/32	43.2				PCB-56/60	2330			
PCB-17	68.6				PCB-57	63.2			
PCB-18	309				PCB-58	35.5			
PCB-19	13.3				PCB-61/70	10800			
PCB-20/21/33	47.2				PCB-62	ND	2.45		
PCB-22	171				PCB-63	521			
PCB-23	1.92			J	PCB-65	ND	2.51		
PCB-24/27	14.8				PCB-66/76	8050			B
PCB-25	53.3				PCB-67	182			
PCB-26	120				PCB-68	236			
PCB-28	1180			B	PCB-73	14.4			
PCB-29	ND	2.16			PCB-74	4170			
PCB-30	ND	0.664			PCB-77	233			
PCB-31	875				PCB-78	ND	2.43		
PCB-34	ND		2.50		PCB-79	217			
PCB-35	ND	2.85			PCB-80	ND	2.15		
PCB-36	ND	2.69			PCB-81	58.4			
PCB-37	8.96			B	PCB-82	146			
PCB-38	57.8				PCB-83	10.3			
PCB-39	ND		7.63	I	PCB-84/92	8270			
PCB-40	151				PCB-85/116	9600			
PCB-41/64/71/72	2620				PCB-86	ND	3.28		
PCB-42/59	478				PCB-87/117/125	7720			
PCB-43/49	2830				PCB-88/91	1730			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-21	Date Received:	13-Nov-2014 12:36		
Project:		Sample Size:	1.09 g	QC Batch:	B5A0031	Date Extracted:	08-Jan-2015 11:08		
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.26	Date Analyzed :	18-Jan-15 15:03	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	42.7				PCB-136	1530			
PCB-90/101	32100				PCB-137	4390			
PCB-93	ND	3.17			PCB-138/163/164	121000			B, E
PCB-94	60.4				PCB-139/149	24800			
PCB-95/98/102	10800				PCB-140	624			
PCB-96	12.9				PCB-141	10500			
PCB-97	4270				PCB-144	1500			
PCB-99	24000			E	PCB-145	ND	2.81		
PCB-100	104				PCB-146/165	25200			
PCB-103	126				PCB-147	1860			
PCB-104	ND	2.00			PCB-148	223			
PCB-105	16500			B	PCB-150	42.5			
PCB-106/118	46500			B, E	PCB-151	8190			
PCB-107/109	6240				PCB-152	27.9			
PCB-108/112	938				PCB-153	160000			B, E
PCB-110	20400			E	PCB-154	1290			
PCB-111/115	712				PCB-155	95.4			
PCB-113	ND	2.39			PCB-156	7520			
PCB-114	1120				PCB-157	2080			
PCB-119	901				PCB-158/160	6230			
PCB-120	510				PCB-159	ND	6.34		
PCB-121	116				PCB-166	485			
PCB-122	103				PCB-167	4840			
PCB-123	789				PCB-168	161			
PCB-124	1920				PCB-169	74.1			
PCB-126	303				PCB-170	22300			E
PCB-127	29.1				PCB-171	6300			
PCB-128/162	17500				PCB-172	6360			
PCB-129	491				PCB-173	ND	4.71		
PCB-130	6730				PCB-174	8710			
PCB-131	ND	9.79			PCB-175	1570			
PCB-132/161	4150				PCB-176	510			
PCB-133/142	3540				PCB-177	14100			
PCB-134/143	1260				PCB-178	10200			
PCB-135	7280				PCB-179	4940			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-21
Project:		Sample Size:	1.09 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.26	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 15:03
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	74400			B, E	Total octaCB	69600			
PCB-181	304				Total nonaCB	7980			
PCB-182/187	53700			E	DecaCB	899			
PCB-183	20300			E	Total PCB	984000			B
PCB-184	353								
PCB-185	1680								
PCB-186	5.96								
PCB-188	305								
PCB-189	1290								
PCB-190	5450								
PCB-191	773								
PCB-192	26.1								
PCB-193	4510								
PCB-194	12500								
PCB-195	4220								
PCB-196/203	23000								
PCB-197	1150								
PCB-198	904								
PCB-199	19100			E					
PCB-200	185								
PCB-201	2720								
PCB-202	4920								
PCB-204	114								
PCB-205	749								
PCB-206	5260								
PCB-207	1180								
PCB-208	1540								
PCB-209	899								
Total monoCB	ND		1.23						
Total diCB	31.8			B					
Total triCB	2960		2970	B					
Total tetraCB	44300			B					
Total pentaCB	196000			B					
Total hexaCB	424000			B					
Total heptaCB	238000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400904-21
Project:		Sample Size:	1.09 g	Date Received:	13-Nov-2014 12:36
Date Collected:	10-Dec-2014 0:00	%Lipids:	8.26	QC Batch:	B5A0031
				Date Analyzed :	18-Jan-15 15:03
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.7	5 -145		13C-PCB-170	78.3	10 -145	
13C-PCB-3	58.7	5 -145		13C-PCB-180	75.8	10 -145	
13C-PCB-4	47.7	5 -145		13C-PCB-188	65.9	10 -145	
13C-PCB-11	60.7	5 -145		13C-PCB-189	71.7	10 -145	
13C-PCB-9	53.1	5 -145		13C-PCB-194	60.6	10 -145	
13C-PCB-19	69.2	5 -145		13C-PCB-202	67.3	10 -145	
13C-PCB-28	64.7	5 -145		13C-PCB-206	77.5	10 -145	
13C-PCB-32	80.5	5 -145		13C-PCB-208	68.8	10 -145	
13C-PCB-37	58.8	5 -145		13C-PCB-209	85.4	10 -145	
13C-PCB-47	62.8	5 -145		CRS 13C-PCB-79	64.3	10 -145	
13C-PCB-52	62.9	5 -145		13C-PCB-178	69.7	10 -145	
13C-PCB-54	58.2	5 -145					
13C-PCB-70	59.4	5 -145					
13C-PCB-77	63.7	10 -145					
13C-PCB-80	60.0	10 -145					
13C-PCB-81	65.1	10 -145					
13C-PCB-95	57.7	10 -145					
13C-PCB-97	65.0	10 -145					
13C-PCB-101	61.7	10 -145					
13C-PCB-104	59.0	10 -145					
13C-PCB-105	54.2	10 -145					
13C-PCB-114	52.1	10 -145					
13C-PCB-118	56.2	10 -145					
13C-PCB-123	58.1	10 -145					
13C-PCB-126	56.7	10 -145					
13C-PCB-127	53.3	10 -145					
13C-PCB-138	65.5	10 -145					
13C-PCB-141	62.4	10 -145					
13C-PCB-153	63.3	10 -145					
13C-PCB-155	59.4	10 -145					
13C-PCB-156	68.4	10 -145					
13C-PCB-157	67.9	10 -145					
13C-PCB-159	62.8	10 -145					
13C-PCB-167	65.6	10 -145					
13C-PCB-169	70.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400904-01	FH-FF-CH-07-08-20141013	21.1	09-Jan-2015	B5A0029
1400904-02	FH-OF-CH-07-08-20141013	24.1	09-Jan-2015	B5A0029
1400904-03	FH-FF-WS-01-08-20141013	22.1	09-Jan-2015	B5A0029
1400904-04	FH-OF-WS-01-08-20141013	27.1	09-Jan-2015	B5A0029
1400904-05	FH-FF-WC-10-08-20141013	23.6	09-Jan-2015	B5A0029
1400904-06	FH-OF-WC-10-08-20141013	30.9	09-Jan-2015	B5A0029
1400904-07	OA-FF-CH-06-06-20141011	22.3	09-Jan-2015	B5A0029
1400904-08	OA-OF-CH-06-06-20141011	27.5	09-Jan-2015	B5A0029
1400904-09	OA-FF-WS-07-06-20141013	22.4	09-Jan-2015	B5A0029
1400904-10	OA-OF-WS-07-06-20141013	30.2	09-Jan-2015	B5A0029
1400904-11	OA-FF-WC-02-06-20141011	23.0	09-Jan-2015	B5A0029
1400904-12	OA-OF-WC-02-06-20141011	33.3	09-Jan-2015	B5A0029
1400904-13	IB-FF-CH-01-05-20141012	23.1	09-Jan-2015	B5A0029
1400904-14	IB-OF-CH-01-05-20141012	23.6	09-Jan-2015	B5A0029
1400904-15	IB-FF-WS-10-05-20141012	21.8	09-Jan-2015	B5A0029
1400904-16	IB-OF-WS-10-05-20141012	30.6	09-Jan-2015	B5A0029
1400904-17	IB-FF-WC-10-05-20141012	23.4	09-Jan-2015	B5A0029
1400904-18	IB-OF-WC-10-05-20141012	32.5	09-Jan-2015	B5A0029
1400904-19	IA-FF-WC-09-07-20141011	22.3	09-Jan-2015	B5A0029
1400904-20	IA-OF-WC-09-07-20141011	32.9	09-Jan-2015	B5A0029

Sample ID	Lab ID	Total Length (cm)	Standard Length (cm)	Mass (g)
FH-FF/OF-WS-01-08-20141013	1400904-03	21.4	16.0	96.6
IB-FF/OF-WS-10-05-20141012	1400904-15	23.4	18.2	136.7

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) rpa, 166C	PCBs (low-res) 8770 Congeners - is conducted on sample ID - FF/OF (ONLY) NOT Offal (OF) - CALCEINCE	DDTs (8770 SIM DDx WDDNU) - CALCEINCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CIN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (oloth) and label (riboc) bag and NEW ID tag with replicate ID and fish total Length (TL) size in cm. If multiple fish components or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish packages will produce two full sets of labels. Because of this, the entire offal will be tested for chemistry and no offal will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
1	FH-FF-CH-01-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca Halibut	1	x	x	x	x	x	x							x	Scales already collected. Skin Off Fillets + Ortol from this replicate.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca Halibut	1	x		x	x	x									Scales already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca Halibut	5													x	"Lab prt 027" Contains 5 fish in 1 foil (A1-A5) Orig Archive.
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch	1-2	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate. CONFIRMED: NEEDS TO HAVE Archive A-4 ADDED to replicates + scales taken
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch	2	x		x	x	x				x					Scales already collected.
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch	3	x		x	x	x				x					Scales already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch	3	x		x	x	x				x					Scales already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch	3	x		x	x	x				x					Scales already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch	3	x		x	x	x				x					Scales already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch	1	x		x	x	x				x					Scales already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch	1	x		x	x	x				x					Scales already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch	1	x		x	x	x				x					Scales already collected.

ANCHOR OEA 1400904
0.2°C, 0.3°C, -0.9°C, -2.1°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID). Fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, CL = otolith, SC = scale. Location IDs: FH = Fish Harbor, CA = Los Angeles Outer Harbor, CS = Consolidated Slip, ID = Long Beach Inner Harbor, LA = Los Angeles Inner Harbor) NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Visla Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) EPA 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label check bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No lastling / keep frozen	Sea notes' section at bottom. FFOF fish replicates will produce two full sets of last. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7													Lab pic 028. Contains A1-A7. Ong. archive.	
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x			x					x				TAKE SCALES. Analyze this sample only for lipids and PCBs	
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish.	
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.	
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.	
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish	
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected of both fish in replicate. Note size of fish the Otolith comes from	
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x	x			Scales already collected.	
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x	x			Scales already collected. Note new Sample ID. Re-label bag + tag.	
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x		x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.	
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4											x		4 plus possibly another 4 more archive fish	
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x		x		x			Scales already collected. Skin-Off Fillets + Offal from this replicate.	
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	


ANCHOR QEA 1400904

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments					
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1669C	PCBs (low res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CIN Stable teelope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	 1400904	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish																
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x		x		x				Scales already collected.	
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x		x		x				Scales already collected.	
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x		x		x				Scales already collected.	
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5	x											x		Photo 29. Label says "OA-XX-CA-A-06-20141011"	
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x	x					TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.	
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.	
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.	
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x		x	x	x		x	x						Scales already collected.	
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x		x	x						Scales already collected.	
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x		x	x	x		x	x						Scales already collected.	
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x	x	x	x	x		x				x		Scales already collected. Skin-Off Fillets + Offal from this replicate.	
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x			
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x		x	x	x		x	x						Scales already collected.	
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x		x	x	x		x	x						Scales already collected.	
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x		x	x	x		x	x	x					TAKE SCALES. Note which fish taken from (size). No otolith.	
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x		Unknown actual number b/c of on-boat mis-ID	
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x		x	x	x		x			x				Scales already collected.	
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x		x	x	x		x			x				Scales already collected.	
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x		x	x	x		x			x				Scales already collected.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal. WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

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 Signature/Printed Name: _____ Date/Time: _____

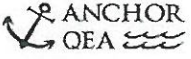
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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 309 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physits (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes' section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire ofial will be tested for chemistry and no otolith will be kept on this specific replicate.	 1400904
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x					x			Scales already collected.	
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm	
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm	
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4												x		
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21												x	# of Archive unknown b/c of final sorting	
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x			x			x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.	
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch	6	x		x	x	x				x	x			Scales already collected from one fish in this rep.	
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch	4	x		x	x	x				x	x			Scales already collected from one fish in this rep.	
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x				x	x			Scales already collected from one fish in this rep.	
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x				x	x	x		TAKE SCALES. Note which fish taken from (size) No otolith.	
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x				x	x			Scales already collected from both fish in this Rep #5.	
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x				x	x			Scales already collected from one fish in this rep.	
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch	1												x		
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch	1	x		x	x	x				x	x	x		TAKE SCALES. Note which fish taken from (size) No otolith.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID). fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining ofial after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/02/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Beth A. Bredet Vista Company: 12/02/14 11:19
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

* 1400892
 > 1400893
 ~ 1400901
 @ 1400906
 ⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low/res) 82/10 congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Filets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep sample alcohol to ship to physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID bag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests - because of this, the entire offal will be tested for elementary and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x				TAKE SCALES Note which fish taken from (size). No otolith	
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x				TAKE SCALES Note which fish taken from (size). No otolith	
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x		x	x			x	TAKE SCALES Note which fish taken from. Skin-Off Filets + Offal from this replicate.	
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6														
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g	
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID lo.	
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to	
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.	
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.	
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	x	x	x	x	x	x		x				x	Scales already collected. Skin-Off Filets + Offal from this replicate.	
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6														
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	

ANCHOR QEA 1400904

Vertical handwritten notes on the left margin of the table.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every 'FF/OF' sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Relinquished By: *via email 12/03/14* Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____
 Received By: *Antonia Bledgett Vista* Company: *12/04/14 120*
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____
 Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊗ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (C/N Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.	
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
111	IA-FF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x			x			x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.	
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4											x			
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

ANCHOR QEA
1400904

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name Date/Time

Received By: Bella Benedict Vista Company: 12/26/14 1458
Signature/Printed Name Date/Time

Relinquished By: _____ Company: _____
Signature/Printed Name Date/Time

Received By: _____ Company: _____
Signature/Printed Name Date/Time

≠ 1400902
Ⓟ 1400903
Ⓡ 1400904
Ⓢ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/22/14 0832</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>D2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

IB-OF/FF-CH-01-05-20141012
IB-OF/FF-WS-10-05-20141012

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT _____

Samples Arrival:	Date/Time 11/13/14 0849	Initials: BAB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: BAB	Location: WF-2
			Shelf/Rack: D2
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -0.3 (uncorrected)	Time: 0903		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

OA-FF/OF-WC-02-06-2014 10 11
 IA-FF/OF-WC-09-07-2014 10 11

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1400904

TAT

Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBSP	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: UBSP	Location: WF-2
			Shelf/Rack: D2
Delivered By:	FedEx	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	Ice	Blue Ice	Dry Ice
			None
Temp °C: -0.9 (uncorrected)	Time: 0912		Thermometer ID: IR-1
Temp °C: -0.9 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 6 of 9 Trk # 7718 4040 2229	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	Client	Retain
		Return	Dispose

Comments:

Label ID: OA-FF.CH-06-06-20141011(*)
 OA-WO-WS-07-06-20141012 - COCID: Per Email 12/19/14
 OA-FF/OF-WS-07-06-20141013

(*) Email from Ms. Ahr on 12/15/14 addresses the ID to be: OA-FF/OF-CH-06-06-20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: BSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: BSB	Location: WF-2
			Shelf/Rack: D2
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
	None		
Temp °C: 2.1 (uncorrected)	Time: 0906	Thermometer ID: IR-1	
Temp °C: -2.1 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 7049 Trk # 7718 4046 1472	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

IB-FF/OF - WC - 10-05-2014/1012

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: UBB	Location: WF2
			Shelf/Rack: D2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: -1.7 (uncorrected)	Time: 0916		Thermometer ID: IR-1
Temp °C: -1.7 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>0099</u> Trk # <u>7718 4040 2137</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container
		<input type="checkbox"/> None	
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

FH-OF/FF-WS-01-08-20141013*
 FH-FF/OF-CH-07-08-20141013

* As per email transferred one fish from "FH-08 WS Archive" to Sample with Tracking # 12 ~ 20cm in length. Sample is a total of 2 fish.

Sample Login 11/2013 ckt

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBB	Location: WF2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: UBB	Location: WF2
			Shelf/Rack: D2
Delivered By:	<u>(FedEx)</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>(Ice)</u>	Blue Ice	Dry Ice
			None
Temp °C: 0.3 (uncorrected)	Time: 0909		Thermometer ID: IR-1
Temp °C: 0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>(Client)</u>	Retain
			<u>(Return)</u>
			Dispose

Comments:

Sample ID:
FH-FF/OF-WC-10-08-20141013

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400904
 Date Received: 13-Nov-14 12:36
 Documented by/date: B. Benedict 12/22/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | | | |
|--|---|-----|-----------|
| <input type="checkbox"/> Temperature outside < 6°C Range | Samples Affected: _____ | | |
| Temperature _____°C | Ice Present? | Yes | No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size | | |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken | | |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type | | |

Comments:

COC ID:
 OA-FF/OF-CH-06-06-20141011
 OA-FF/OF-WS-07-06-20141013

Label ID:
 OA-FF-CH-06-06-20141011
 OA-WO-WS-07-06-20141012

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>ML 12/24/15</u>
Client Comments/Instructions <u>COC rec'd by email label ID correct per 12/15/14 email</u>	

February 02, 2015

Vista Project I.D.: 1400905

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 13, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400905

Case Narrative

Sample Condition on Receipt:

Two tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

As requested, scales were removed from sample "CS-FF/OF-CH-08-03-20141010". The chemist neglected to take the physical measurements of the scaled fish.

Skin-off fillets were taken from each fish. The entire fillets for each sample were ground and homogenized. All remaining offal was ground and homogenized. The fillet and offal portions were extracted and analyzed separately; the fillet portions include "FF" in the sample ID, and the offal portions include "OF" in the sample ID. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The results for the QC samples are included in Vista Work Order #1400903.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400905-01	CS-FF-CH-08-03-20141010	10-Oct-14 00:00	13-Nov-14 13:28	Tissue in Foil
1400905-02	CS-OF-CH-08-03-20141010	10-Oct-14 00:00	13-Nov-14 13:28	Tissue in Foil
1400905-03	CS-FF-WS-04-03-20141010	10-Oct-14 00:00	13-Nov-14 13:28	Tissue in Foil
1400905-04	CS-OF-WS-04-03-20141010	10-Oct-14 00:00	13-Nov-14 13:28	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0548			PCB-43/49	ND		0.104	
PCB-2	ND	0.0559			PCB-44	ND		0.118	
PCB-3	ND	0.0554			PCB-45	ND	0.0728		
PCB-4/10	ND	0.199			PCB-46	ND	0.0772		
PCB-5/8	ND	0.168			PCB-47	0.581			
PCB-6	ND	0.163			PCB-48/75	ND	0.0528		
PCB-7/9	ND	0.164			PCB-50	ND	0.0727		
PCB-11	ND		0.720		PCB-51	ND	0.0639		
PCB-12/13	ND	0.172			PCB-52/69	ND		0.126	
PCB-14	ND	0.145			PCB-53	ND	0.0658		
PCB-15	ND	0.152			PCB-54	ND	0.0583		
PCB-16/32	ND		0.142		PCB-55	ND	0.0435		
PCB-17	ND	0.0680			PCB-56/60	0.125			J
PCB-18	ND	0.0740			PCB-57	ND	0.0472		
PCB-19	ND	0.0748			PCB-58	ND	0.0453		
PCB-20/21/33	0.166			J	PCB-61/70	0.154			J
PCB-22	0.154			J	PCB-62	ND	0.0546		
PCB-23	ND	0.0521			PCB-63	ND	0.0449		
PCB-24/27	ND	0.0502			PCB-65	ND	0.0560		
PCB-25	ND	0.0584			PCB-66/76	ND		0.113	
PCB-26	ND	0.0530			PCB-67	ND	0.0484		
PCB-28	0.196			J	PCB-68	ND		0.112	
PCB-29	ND	0.0522			PCB-73	ND	0.0529		
PCB-30	ND	0.0474			PCB-74	ND		0.0630	
PCB-31	ND		0.131		PCB-77	0.0880			J
PCB-34	ND	0.0533			PCB-78	ND	0.0491		
PCB-35	0.0930			J	PCB-79	ND	0.0455		
PCB-36	ND	0.0492			PCB-80	ND	0.0396		
PCB-37	ND	0.0477			PCB-81	ND	0.0458		
PCB-38	ND	0.0506			PCB-82	ND	0.0690		
PCB-39	ND	0.0477			PCB-83	ND	0.0431		
PCB-40	ND	0.0836			PCB-84/92	ND	0.0563		
PCB-41/64/71/72	0.182			J	PCB-85/116	ND	0.0515		
PCB-42/59	ND		0.0700		PCB-86	ND	0.0661		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND		0.0580		PCB-133/142	ND	0.0540		
PCB-88/91	ND	0.0626			PCB-134/143	ND	0.0526		
PCB-89	ND	0.0587			PCB-135	ND	0.0351		
PCB-90/101	ND		0.109		PCB-136	ND	0.0258		
PCB-93	ND	0.0616			PCB-137	ND	0.0540		
PCB-94	ND	0.0635			PCB-138/163/164	ND	0.0458		
PCB-95/98/102	ND	0.0566			PCB-139/149	ND	0.0320		
PCB-96	ND	0.0466			PCB-140	ND	0.0350		
PCB-97	ND	0.0541			PCB-141	ND	0.0549		
PCB-99	ND	0.0501			PCB-144	ND	0.0333		
PCB-100	ND	0.0520			PCB-145	ND	0.0269		
PCB-103	ND	0.0510			PCB-146/165	ND	0.0449		
PCB-104	ND	0.0407			PCB-147	ND	0.0370		
PCB-105	0.0814			J	PCB-148	ND	0.0355		
PCB-106/118	0.108			J	PCB-150	ND	0.0257		
PCB-107/109	ND	0.0398			PCB-151	ND	0.0350		
PCB-108/112	ND	0.0503			PCB-152	ND	0.0258		
PCB-110	ND		0.0750		PCB-153	ND	0.0440		
PCB-111/115	ND	0.0394			PCB-154	ND	0.0327		
PCB-113	ND	0.0456			PCB-155	ND	0.0246		
PCB-114	ND	0.0419			PCB-156	ND	0.0385		
PCB-119	ND	0.0384			PCB-157	ND	0.0395		
PCB-120	ND	0.0376			PCB-158/160	ND	0.0426		
PCB-121	ND	0.0414			PCB-159	ND	0.0412		
PCB-122	ND	0.0486			PCB-166	ND	0.0442		
PCB-123	ND	0.0402			PCB-167	ND	0.0420		
PCB-124	ND	0.0397			PCB-168	ND	0.0375		
PCB-126	ND		0.0440		PCB-169	ND		0.0390	
PCB-127	ND	0.0466			PCB-170	ND	0.0343		
PCB-128/162	ND	0.0488			PCB-171	ND	0.0294		
PCB-129	ND	0.0626			PCB-172	ND	0.0294		
PCB-130	ND	0.0631			PCB-173	ND	0.0357		
PCB-131	ND	0.0577			PCB-174	ND	0.0332		
PCB-132/161	ND	0.0458			PCB-175	ND	0.0319		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.0233			Total triCB	0.608		0.881	
PCB-177	ND	0.0336			Total tetraCB	1.13		1.84	
PCB-178	ND	0.0310			Total pentaCB	0.189		0.475	
PCB-179	ND	0.0246			Total hexaCB	ND		0.0390	
PCB-180	ND	0.0301			Total heptaCB	0.0344			
PCB-181	ND	0.0303			Total octaCB	ND		0.0730	
PCB-182/187	ND	0.0291			Total nonaCB	ND	0.0275		
PCB-183	ND	0.0276			DecaCB	ND		0.0280	
PCB-184	ND	0.0250			Total PCB	1.96			
PCB-185	ND	0.0300							
PCB-186	ND	0.0234							
PCB-188	ND	0.0226							
PCB-189	0.0344			J					
PCB-190	ND	0.0258							
PCB-191	ND	0.0229							
PCB-192	ND	0.0243							
PCB-193	ND	0.0233							
PCB-194	ND		0.0730						
PCB-195	ND	0.0608							
PCB-196/203	ND	0.0427							
PCB-197	ND	0.0304							
PCB-198	ND	0.0440							
PCB-199	ND	0.0456							
PCB-200	ND	0.0343							
PCB-201	ND	0.0323							
PCB-202	ND	0.0352							
PCB-204	ND	0.0345							
PCB-205	ND	0.0460							
PCB-206	ND	0.0275							
PCB-207	ND	0.0199							
PCB-208	ND	0.0193							
PCB-209	ND		0.0280						
Total monoCB	ND	0.0559							
Total diCB	ND		0.720						

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0018	Lab Sample: B5A0018-BLK1
Sample Size: 10.0 g	Date Extracted: 06-Jan-2015 13:14	Date Analyzed: 13-Jan-15 21:14 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	56.9	5 - 145		13C-PCB-157	88.7	10 - 145	
13C-PCB-3	62.1	5 - 145		13C-PCB-159	85.2	10 - 145	
13C-PCB-4	68.6	5 - 145		13C-PCB-167	88.5	10 - 145	
13C-PCB-11	76.4	5 - 145		13C-PCB-169	88.6	10 - 145	
13C-PCB-9	73.0	5 - 145		13C-PCB-170	83.3	10 - 145	
13C-PCB-19	74.9	5 - 145		13C-PCB-180	86.6	10 - 145	
13C-PCB-28	78.8	5 - 145		13C-PCB-188	85.4	10 - 145	
13C-PCB-32	75.6	5 - 145		13C-PCB-189	90.6	10 - 145	
13C-PCB-37	83.9	5 - 145		13C-PCB-194	88.0	10 - 145	
13C-PCB-47	76.0	5 - 145		13C-PCB-202	85.5	10 - 145	
13C-PCB-52	75.9	5 - 145		13C-PCB-206	83.4	10 - 145	
13C-PCB-54	68.9	5 - 145		13C-PCB-208	74.8	10 - 145	
13C-PCB-70	84.5	5 - 145		13C-PCB-209	75.6	10 - 145	
13C-PCB-77	84.8	10 - 145		CRS 13C-PCB-79	82.8	10 - 145	
13C-PCB-80	83.2	10 - 145		13C-PCB-178	82.2	10 - 145	
13C-PCB-81	85.6	10 - 145					
13C-PCB-95	80.3	10 - 145					
13C-PCB-97	85.8	10 - 145					
13C-PCB-101	83.9	10 - 145					
13C-PCB-104	77.7	10 - 145					
13C-PCB-105	98.6	10 - 145					
13C-PCB-114	93.1	10 - 145					
13C-PCB-118	84.4	10 - 145					
13C-PCB-123	86.9	10 - 145					
13C-PCB-126	97.1	10 - 145					
13C-PCB-127	99.3	10 - 145					
13C-PCB-138	86.7	10 - 145					
13C-PCB-141	87.2	10 - 145					
13C-PCB-153	90.6	10 - 145					
13C-PCB-155	87.6	10 - 145					
13C-PCB-156	88.6	10 - 145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B5A0018
Date Extracted: 06-Jan-2015 13:14Lab Sample: B5A0018-BS1
Date Analyzed: 13-Jan-15 19:08 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	104	100	104	60 - 135	IS 13C-PCB-1	56.7	15 - 145
PCB-3	104	100	104	60 - 135	IS 13C-PCB-3	63.2	15 - 145
PCB-4/10	231	200	116	60 - 135	IS 13C-PCB-4	69.6	15 - 145
PCB-15	118	100	118	60 - 135	IS 13C-PCB-11	77.5	15 - 145
PCB-19	99.6	100	99.6	60 - 135	IS 13C-PCB-9	72.6	15 - 145
PCB-37	112	100	112	60 - 135	IS 13C-PCB-19	74.8	15 - 145
PCB-54	106	100	106	60 - 135	IS 13C-PCB-28	75.8	15 - 145
PCB-77	106	100	106	60 - 135	IS 13C-PCB-32	80.3	15 - 145
PCB-81	106	100	106	60 - 135	IS 13C-PCB-37	84.3	15 - 145
PCB-104	104	100	104	60 - 135	IS 13C-PCB-47	84.7	15 - 145
PCB-105	113	100	113	60 - 135	IS 13C-PCB-52	83.2	15 - 145
PCB-106/118	212	200	106	60 - 135	IS 13C-PCB-54	75.6	15 - 145
PCB-114	117	100	117	60 - 135	IS 13C-PCB-70	84.9	15 - 145
PCB-123	101	100	101	60 - 135	IS 13C-PCB-77	92.4	40 - 145
PCB-126	110	100	110	60 - 135	IS 13C-PCB-80	85.3	40 - 145
PCB-155	101	100	101	60 - 135	IS 13C-PCB-81	90.9	40 - 145
PCB-156	106	100	106	60 - 135	IS 13C-PCB-95	81.2	40 - 145
PCB-157	106	100	106	60 - 135	IS 13C-PCB-97	91.4	40 - 145
PCB-167	104	100	104	60 - 135	IS 13C-PCB-101	88.0	40 - 145
PCB-169	105	100	105	60 - 135	IS 13C-PCB-104	82.2	40 - 145
PCB-188	103	100	103	60 - 135	IS 13C-PCB-105	99.0	40 - 145
PCB-189	105	100	105	60 - 135	IS 13C-PCB-114	92.3	40 - 145
PCB-202	99.7	100	99.7	60 - 135	IS 13C-PCB-118	95.3	40 - 145
PCB-205	108	100	108	60 - 135	IS 13C-PCB-123	99.0	40 - 145
PCB-206	104	100	104	60 - 135	IS 13C-PCB-126	99.2	40 - 145
PCB-208	107	100	107	60 - 135	IS 13C-PCB-127	98.5	40 - 145
PCB-209	102	100	102	60 - 135	IS 13C-PCB-138	88.9	40 - 145
					IS 13C-PCB-141	91.1	40 - 145
					IS 13C-PCB-153	89.6	40 - 145
					IS 13C-PCB-155	91.8	40 - 145
					IS 13C-PCB-156	89.6	40 - 145
					IS 13C-PCB-157	89.2	40 - 145
					IS 13C-PCB-159	88.8	40 - 145
					IS 13C-PCB-167	90.1	40 - 145
					IS 13C-PCB-169	92.0	40 - 145
					IS 13C-PCB-170	88.8	40 - 145
					IS 13C-PCB-180	94.5	40 - 145
					IS 13C-PCB-188	88.0	40 - 145
					IS 13C-PCB-189	89.9	40 - 145
					IS 13C-PCB-194	91.5	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0018
Date Extracted: 06-Jan-2015 13:14

Lab Sample: B5A0018-BS1
Date Analyzed: 13-Jan-15 19:08 Column: ZB-1 Analyst: ANP

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	88.4	40 - 145
					IS 13C-PCB-206	84.9	40 - 145
					IS 13C-PCB-208	78.9	40 - 145
					IS 13C-PCB-209	79.1	40 - 145
					CRS 13C-PCB-79	88.9	40 - 145
					CRS 13C-PCB-178	88.2	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: CS-FF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-01
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	QC Batch:	B5A0018
				Date Analyzed:	14-Jan-15 17:16
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0682			PCB-44	8.70			
PCB-2	ND	0.0642			PCB-45	4.00			
PCB-3	ND	0.0636			PCB-46	0.296			J
PCB-4/10	0.977			J	PCB-47	288			B
PCB-5/8	3.08				PCB-48/75	30.5			
PCB-6	0.649			J	PCB-50	1.09			
PCB-7/9	ND	0.255			PCB-51	183			
PCB-11	1.77				PCB-52/69	1000			
PCB-12/13	ND	0.268			PCB-53	58.5			
PCB-14	ND	0.226			PCB-54	13.8			
PCB-15	ND	0.237			PCB-55	5.00			
PCB-16/32	25.4				PCB-56/60	78.6			B
PCB-17	8.36				PCB-57	4.53			
PCB-18	18.0				PCB-58	ND	0.235		
PCB-19	1.90				PCB-61/70	57.0			B
PCB-20/21/33	9.89			B	PCB-62	ND	0.310		
PCB-22	18.5			B	PCB-63	13.0			
PCB-23	ND	0.196			PCB-65	ND	0.318		
PCB-24/27	1.91				PCB-66/76	371			
PCB-25	1.73				PCB-67	6.02			
PCB-26	14.1				PCB-68	3.85			
PCB-28	67.1			B	PCB-73	5.72			
PCB-29	ND	0.196			PCB-74	175			
PCB-30	ND	0.0464			PCB-77	0.910			B
PCB-31	23.6				PCB-78	ND	0.236		
PCB-34	0.567				PCB-79	45.0			
PCB-35	ND	0.200			PCB-80	ND	0.208		
PCB-36	ND	0.189			PCB-81	3.29			
PCB-37	ND		0.203		PCB-82	3.75			
PCB-38	7.37				PCB-83	ND	0.126		
PCB-39	ND	0.183			PCB-84/92	341			
PCB-40	0.685				PCB-85/116	164			
PCB-41/64/71/72	262			B	PCB-86	1.40			
PCB-42/59	23.5				PCB-87/117/125	346			
PCB-43/49	672				PCB-88/91	176			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-01
Project:		Sample Size:	10.4 g	QC Batch:	B5A0018
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	Date Received:	13-Nov-2014 13:28
				Date Analyzed:	14-Jan-15 17:16
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	ND	0.182			PCB-136	37.2			
PCB-90/101	2420				PCB-137	121			
PCB-93	ND	0.180			PCB-138/163/164	3040			
PCB-94	2.15				PCB-139/149	1310			
PCB-95/98/102	398				PCB-140	7.85			
PCB-96	2.98				PCB-141	451			
PCB-97	123				PCB-144	111			
PCB-99	1880			E	PCB-145	ND		0.121	
PCB-100	185				PCB-146/165	766			
PCB-103	134				PCB-147	259			
PCB-104	12.1				PCB-148	26.3			
PCB-105	533			B	PCB-150	17.1			
PCB-106/118	1570			B	PCB-151	796			
PCB-107/109	140				PCB-152	6.00			
PCB-108/112	3.15				PCB-153	5740			E
PCB-110	956				PCB-154	494			
PCB-111/115	28.6				PCB-155	7.84			
PCB-113	ND	0.141			PCB-156	198			
PCB-114	14.9				PCB-157	34.6			
PCB-119	133				PCB-158/160	288			
PCB-120	10.2				PCB-159	ND	0.355		
PCB-121	ND	0.121			PCB-166	6.46			
PCB-122	ND	0.339			PCB-167	93.7			
PCB-123	12.6				PCB-168	14.7			
PCB-124	7.62				PCB-169	ND	0.402		
PCB-126	5.11				PCB-170	677			
PCB-127	ND	0.303			PCB-171	191			
PCB-128/162	314				PCB-172	121			
PCB-129	15.8				PCB-173	3.41			
PCB-130	113				PCB-174	207			
PCB-131	ND	0.508			PCB-175	32.8			
PCB-132/161	133				PCB-176	23.5			
PCB-133/142	62.0				PCB-177	258			
PCB-134/143	7.08				PCB-178	211			
PCB-135	43.3				PCB-179	76.2			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-01
Project:		Sample Size:	10.4 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	QC Batch:	B5A0018
				Date Analyzed:	14-Jan-15 17:16
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2250			E	Total octaCB	1490			
PCB-181	5.38				Total nonaCB	118			
PCB-182/187	1630				DecaCB	20.6			
PCB-183	570				Total PCB	35900			B
PCB-184	1.39								
PCB-185	66.4								
PCB-186	ND	0.190							
PCB-188	19.8								
PCB-189	21.0			B					
PCB-190	151								
PCB-191	30.3								
PCB-192	ND	0.207							
PCB-193	124								
PCB-194	299								
PCB-195	114								
PCB-196/203	499								
PCB-197	12.8								
PCB-198	13.3								
PCB-199	384								
PCB-200	14.5								
PCB-201	48.8								
PCB-202	89.0								
PCB-204	0.254			J					
PCB-205	12.0								
PCB-206	84.8								
PCB-207	11.7								
PCB-208	21.0								
PCB-209	20.6								
Total monoCB	ND	0.682							
Total diCB	6.48								
Total triCB	198		199	B					
Total tetraCB	3320			B					
Total pentaCB	9600			B					
Total hexaCB	14500								
Total heptaCB	6670			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-01 Date Received: 13-Nov-2014 13:28
Project:		Sample Size:	10.4 g	QC Batch:	B5A0018 Date Extracted: 06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.00960	Date Analyzed :	14-Jan-15 17:16 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	45.6	5 -145		13C-PCB-170	82.0	10 -145	
13C-PCB-3	53.4	5 -145		13C-PCB-180	78.3	10 -145	
13C-PCB-4	62.1	5 -145		13C-PCB-188	83.6	10 -145	
13C-PCB-11	71.7	5 -145		13C-PCB-189	87.7	10 -145	
13C-PCB-9	66.1	5 -145		13C-PCB-194	85.3	10 -145	
13C-PCB-19	66.1	5 -145		13C-PCB-202	69.3	10 -145	
13C-PCB-28	83.2	5 -145		13C-PCB-206	82.0	10 -145	
13C-PCB-32	66.1	5 -145		13C-PCB-208	73.1	10 -145	
13C-PCB-37	92.6	5 -145		13C-PCB-209	76.8	10 -145	
13C-PCB-47	68.5	5 -145		CRS 13C-PCB-79	85.4	10 -145	
13C-PCB-52	67.3	5 -145		13C-PCB-178	78.7	10 -145	
13C-PCB-54	55.6	5 -145					
13C-PCB-70	79.2	5 -145					
13C-PCB-77	85.7	10 -145					
13C-PCB-80	80.7	10 -145					
13C-PCB-81	85.9	10 -145					
13C-PCB-95	74.8	10 -145					
13C-PCB-97	82.5	10 -145					
13C-PCB-101	79.3	10 -145					
13C-PCB-104	66.5	10 -145					
13C-PCB-105	104	10 -145					
13C-PCB-114	95.3	10 -145					
13C-PCB-118	85.5	10 -145					
13C-PCB-123	82.5	10 -145					
13C-PCB-126	97.1	10 -145					
13C-PCB-127	103	10 -145					
13C-PCB-138	88.5	10 -145					
13C-PCB-141	89.9	10 -145					
13C-PCB-153	92.8	10 -145					
13C-PCB-155	78.6	10 -145					
13C-PCB-156	80.9	10 -145					
13C-PCB-157	81.6	10 -145					
13C-PCB-159	81.5	10 -145					
13C-PCB-167	81.4	10 -145					
13C-PCB-169	85.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-02 Date Received: 13-Nov-2014 13:28
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018 Date Extracted: 06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.513	Date Analyzed :	14-Jan-15 21:35 Column: ZB-1 Analyst: ANP
					18-Jan-15 16:06 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND		0.427		PCB-44	128			
PCB-2	ND	0.0808			PCB-45	63.9			
PCB-3	ND		0.129		PCB-46	3.64			
PCB-4/10	9.01				PCB-47	4940			B, E
PCB-5/8	28.6				PCB-48/75	557			
PCB-6	6.29				PCB-50	16.4			
PCB-7/9	1.86			J	PCB-51	2740			E
PCB-11	8.74				PCB-52/69	15600			E
PCB-12/13	ND	0.252			PCB-53	1010			
PCB-14	ND	0.213			PCB-54	235			
PCB-15	1.50				PCB-55	123			
PCB-16/32	338				PCB-56/60	1190			B
PCB-17	127				PCB-57	121			
PCB-18	279				PCB-58	ND	0.619		
PCB-19	23.2				PCB-61/70	1020			B
PCB-20/21/33	137			B	PCB-62	ND	0.673		
PCB-22	237			B	PCB-63	252			
PCB-23	ND	0.478			PCB-65	ND	0.690		
PCB-24/27	22.8				PCB-66/76	5960			E
PCB-25	21.5				PCB-67	137			
PCB-26	195				PCB-68	66.6			
PCB-28	977			B	PCB-73	80.4			
PCB-29	1.07				PCB-74	3050			E
PCB-30	ND	0.0749			PCB-77	21.6			B
PCB-31	355				PCB-78	ND	0.720		
PCB-34	7.68				PCB-79	861			
PCB-35	ND	0.570			PCB-80	ND	0.542		
PCB-36	ND	0.537			PCB-81	109			
PCB-37	2.54				PCB-82	67.9			
PCB-38	140				PCB-83	9.97			
PCB-39	ND	0.521			PCB-84/92	7350			E
PCB-40	6.18				PCB-85/116	3160			E
PCB-41/64/71/72	3760			B	PCB-86	20.0			
PCB-42/59	371				PCB-87/117/125	7060			E
PCB-43/49	11500			E	PCB-88/91	3610			E

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-OF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-02	Date Received:	13-Nov-2014 13:28		
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.513	Date Analyzed :	14-Jan-15 21:35	Column:	ZB-1	Analyst:	ANP
					18-Jan-15 16:06	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	12.2				PCB-136	908			
PCB-90/101	49100			E	PCB-137	3000			E
PCB-93	ND	0.276			PCB-138/163/164	68000			E
PCB-94	36.7				PCB-139/149	28600			E
PCB-95/98/102	7280			E	PCB-140	182			
PCB-96	51.5				PCB-141	10500			E
PCB-97	2450			E	PCB-144	2870			E
PCB-99	39400			E	PCB-145	2.79			
PCB-100	3490			E	PCB-146/165	18600			E
PCB-103	2720			E	PCB-147	6700			E
PCB-104	256				PCB-148	696			
PCB-105	9750			B, E	PCB-150	447			
PCB-106/118	33600			B, E	PCB-151	18700			E
PCB-107/109	3120			E	PCB-152	132			
PCB-108/112	66.2				PCB-153	132000			E, D
PCB-110	17900			E	PCB-154	12300			E
PCB-111/115	656				PCB-155	210			
PCB-113	ND	0.283			PCB-156	4690			E
PCB-114	337				PCB-157	905			
PCB-119	2850			E	PCB-158/160	6940			E
PCB-120	262				PCB-159	ND	1.45		
PCB-121	ND	0.185			PCB-166	158			
PCB-122	ND	1.07			PCB-167	2540			E
PCB-123	269				PCB-168	396			
PCB-124	169				PCB-169	9.66			
PCB-126	120				PCB-170	17600			E
PCB-127	ND	0.877			PCB-171	5190			E
PCB-128/162	7010			E	PCB-172	3730			E
PCB-129	389				PCB-173	81.4			
PCB-130	3180			E	PCB-174	5420			E
PCB-131	ND	2.83			PCB-175	1160			
PCB-132/161	2860				PCB-176	766			
PCB-133/142	1700				PCB-177	7290			E
PCB-134/143	171				PCB-178	6590			E
PCB-135	1070				PCB-179	2350			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-02 Date Received: 13-Nov-2014 13:28
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018 Date Extracted: 06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.513	Date Analyzed :	14-Jan-15 21:35 Column: ZB-1 Analyst: ANP
					18-Jan-15 16:06 Column: ZB-1 Analyst: ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	60700			E	Total octaCB	43100			
PCB-181	178				Total nonaCB	3340			
PCB-182/187	49200			E	DecaCB	424			
PCB-183	18100			E	Total PCB	825000			B
PCB-184	43.3								
PCB-185	1870			E					
PCB-186	1.50								
PCB-188	577								
PCB-189	698			B					
PCB-190	4110			E					
PCB-191	929								
PCB-192	ND	0.958							
PCB-193	3740			E					
PCB-194	9030			E					
PCB-195	3410			E					
PCB-196/203	13800			E					
PCB-197	422								
PCB-198	474								
PCB-199	10800			E					
PCB-200	447								
PCB-201	1530			E					
PCB-202	2670			E					
PCB-204	6.16								
PCB-205	401								
PCB-206	2440			E					
PCB-207	327								
PCB-208	578								
PCB-209	424								
Total monoCB	ND		0.556						
Total diCB	56.0								
Total triCB	2870			B					
Total tetraCB	53900			B					
Total pentaCB	195000			B					
Total hexaCB	336000								
Total heptaCB	190000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-CH-08-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-02 Date Received: 13-Nov-2014 13:28
Project:		Sample Size:	10.3 g	QC Batch:	B5A0018 Date Extracted: 06-Jan-2015 13:14
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.513	Date Analyzed :	14-Jan-15 21:35 Column: ZB-1 Analyst: ANP
					18-Jan-15 16:06 Column: ZB-1 Analyst: ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	47.5	5 -145		13C-PCB-170	76.4	10 -145	
13C-PCB-3	49.8	5 -145		13C-PCB-180	72.3	10 -145	
13C-PCB-4	58.6	5 -145		13C-PCB-188	64.8	10 -145	
13C-PCB-11	72.1	5 -145		13C-PCB-189	76.2	10 -145	
13C-PCB-9	65.7	5 -145		13C-PCB-194	80.4	10 -145	
13C-PCB-19	61.1	5 -145		13C-PCB-202	64.6	10 -145	
13C-PCB-28	73.5	5 -145		13C-PCB-206	76.5	10 -145	
13C-PCB-32	60.9	5 -145		13C-PCB-208	67.7	10 -145	
13C-PCB-37	78.1	5 -145		13C-PCB-209	68.5	10 -145	
13C-PCB-47	82.0	5 -145		CRS 13C-PCB-79	82.0	10 -145	
13C-PCB-52	83.8	5 -145		13C-PCB-178	70.9	10 -145	
13C-PCB-54	71.3	5 -145					
13C-PCB-70	81.5	5 -145					
13C-PCB-77	81.6	10 -145					
13C-PCB-80	79.2	10 -145					
13C-PCB-81	79.1	10 -145					
13C-PCB-95	78.4	10 -145					
13C-PCB-97	80.6	10 -145					
13C-PCB-101	76.4	10 -145					
13C-PCB-104	81.5	10 -145					
13C-PCB-105	91.3	10 -145					
13C-PCB-114	80.8	10 -145					
13C-PCB-118	81.4	10 -145					
13C-PCB-123	85.0	10 -145					
13C-PCB-126	89.8	10 -145					
13C-PCB-127	90.1	10 -145					
13C-PCB-138	78.4	10 -145					
13C-PCB-141	75.7	10 -145					
13C-PCB-153	90.8	10 -145	D				
13C-PCB-155	77.3	10 -145					
13C-PCB-156	78.4	10 -145					
13C-PCB-157	78.1	10 -145					
13C-PCB-159	75.1	10 -145					
13C-PCB-167	76.4	10 -145					
13C-PCB-169	78.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-03
Project:		Sample Size:	6.34 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.316	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 22:37
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0740			PCB-44	350			
PCB-2	ND	0.0749			PCB-45	8.02			
PCB-3	ND	0.0742			PCB-46	7.72			
PCB-4/10	ND	0.292			PCB-47	245			B
PCB-5/8	1.45			J	PCB-48/75	52.4			
PCB-6	0.738			J	PCB-50	0.666			J
PCB-7/9	0.746			J	PCB-51	230			
PCB-11	4.96				PCB-52/69	3140			
PCB-12/13	ND	0.250			PCB-53	179			
PCB-14	ND	0.211			PCB-54	32.7			
PCB-15	4.99				PCB-55	11.9			
PCB-16/32	44.6				PCB-56/60	283			B
PCB-17	4.63				PCB-57	21.3			
PCB-18	41.8				PCB-58	9.23			
PCB-19	2.96				PCB-61/70	703			B
PCB-20/21/33	5.88			B	PCB-62	ND	0.486		
PCB-22	23.2			B	PCB-63	58.0			
PCB-23	ND	0.275			PCB-65	ND	0.498		
PCB-24/27	4.99				PCB-66/76	973			
PCB-25	23.2				PCB-67	24.1			
PCB-26	107				PCB-68	15.3			
PCB-28	584			B	PCB-73	8.45			
PCB-29	0.427			J	PCB-74	838			
PCB-30	ND	0.0635			PCB-77	99.2			B
PCB-31	177				PCB-78	1.55			
PCB-34	ND		0.552		PCB-79	79.1			
PCB-35	ND	0.330			PCB-80	ND	0.397		
PCB-36	ND	0.311			PCB-81	5.98			
PCB-37	51.8				PCB-82	9.76			
PCB-38	6.96				PCB-83	1.08			
PCB-39	ND	0.302			PCB-84/92	499			
PCB-40	8.35				PCB-85/116	35.3			
PCB-41/64/71/72	377			B	PCB-86	ND	0.422		
PCB-42/59	55.4				PCB-87/117/125	493			
PCB-43/49	1900				PCB-88/91	311			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-03	Date Received:	13-Nov-2014 13:28		
Project:		Sample Size:	6.34 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.316	Date Analyzed :	14-Jan-15 22:37	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	1.46				PCB-136	169			
PCB-90/101	3380				PCB-137	154			
PCB-93	ND	0.420			PCB-138/163/164	4000			
PCB-94	5.28				PCB-139/149	1140			
PCB-95/98/102	749				PCB-140	11.2			
PCB-96	31.7				PCB-141	336			
PCB-97	260				PCB-144	132			
PCB-99	2970			E	PCB-145	ND	0.337		
PCB-100	300				PCB-146/165	894			
PCB-103	281				PCB-147	445			
PCB-104	25.8				PCB-148	53.4			
PCB-105	901			B	PCB-150	38.5			
PCB-106/118	2610			B	PCB-151	1290			
PCB-107/109	207				PCB-152	17.2			
PCB-108/112	19.8				PCB-153	6690			E
PCB-110	672				PCB-154	840			
PCB-111/115	55.3				PCB-155	15.3			
PCB-113	ND	0.304			PCB-156	295			
PCB-114	52.1				PCB-157	45.9			
PCB-119	210				PCB-158/160	386			
PCB-120	18.0				PCB-159	ND	0.399		
PCB-121	ND	0.282			PCB-166	7.67			
PCB-122	4.71				PCB-167	153			
PCB-123	44.2				PCB-168	18.9			
PCB-124	51.9				PCB-169	ND	0.440		
PCB-126	11.8				PCB-170	822			
PCB-127	ND	0.458			PCB-171	245			
PCB-128/162	345				PCB-172	121			
PCB-129	10.1				PCB-173	1.33			
PCB-130	135				PCB-174	101			
PCB-131	ND	0.632			PCB-175	49.3			
PCB-132/161	94.4				PCB-176	20.7			
PCB-133/142	85.2				PCB-177	306			
PCB-134/143	43.6				PCB-178	290			
PCB-135	100				PCB-179	207			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-03	Date Received:	13-Nov-2014 13:28		
Project:		Sample Size:	6.34 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.316	Date Analyzed :	14-Jan-15 22:37	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	2690			E	Total octaCB	1620			
PCB-181	ND	0.304			Total nonaCB	164			
PCB-182/187	2390				DecaCB	25.4			
PCB-183	826				Total PCB	53300			B
PCB-184	3.24								
PCB-185	39.1								
PCB-186	ND	0.243							
PCB-188	27.0								
PCB-189	27.6			B					
PCB-190	188								
PCB-191	36.8								
PCB-192	ND	0.243							
PCB-193	134								
PCB-194	410								
PCB-195	154								
PCB-196/203	549								
PCB-197	17.7								
PCB-198	10.7								
PCB-199	309								
PCB-200	4.50								
PCB-201	51.8								
PCB-202	90.6								
PCB-204	ND	0.112							
PCB-205	17.5								
PCB-206	132								
PCB-207	15.8								
PCB-208	16.1								
PCB-209	25.4								
Total monoCB	ND	0.0749							
Total diCB	12.9								
Total triCB	1080			B					
Total tetraCB	9720			B					
Total pentaCB	14200			B					
Total hexaCB	17900								
Total heptaCB	8520			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-FF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-03
Project:		Sample Size:	6.34 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	0.316	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 22:37
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	51.2	5 -145		13C-PCB-170	76.6	10 -145	
13C-PCB-3	57.2	5 -145		13C-PCB-180	78.7	10 -145	
13C-PCB-4	64.6	5 -145		13C-PCB-188	68.7	10 -145	
13C-PCB-11	75.3	5 -145		13C-PCB-189	74.1	10 -145	
13C-PCB-9	72.9	5 -145		13C-PCB-194	82.4	10 -145	
13C-PCB-19	68.7	5 -145		13C-PCB-202	73.4	10 -145	
13C-PCB-28	85.0	5 -145		13C-PCB-206	77.9	10 -145	
13C-PCB-32	70.3	5 -145		13C-PCB-208	71.6	10 -145	
13C-PCB-37	80.5	5 -145		13C-PCB-209	78.3	10 -145	
13C-PCB-47	79.7	5 -145		CRS 13C-PCB-79	87.9	10 -145	
13C-PCB-52	83.4	5 -145		13C-PCB-178	76.9	10 -145	
13C-PCB-54	75.5	5 -145					
13C-PCB-70	80.3	5 -145					
13C-PCB-77	91.3	10 -145					
13C-PCB-80	78.8	10 -145					
13C-PCB-81	87.8	10 -145					
13C-PCB-95	72.4	10 -145					
13C-PCB-97	81.9	10 -145					
13C-PCB-101	78.8	10 -145					
13C-PCB-104	71.7	10 -145					
13C-PCB-105	91.6	10 -145					
13C-PCB-114	84.4	10 -145					
13C-PCB-118	83.9	10 -145					
13C-PCB-123	85.4	10 -145					
13C-PCB-126	94.3	10 -145					
13C-PCB-127	89.7	10 -145					
13C-PCB-138	82.1	10 -145					
13C-PCB-141	76.4	10 -145					
13C-PCB-153	80.2	10 -145					
13C-PCB-155	74.8	10 -145					
13C-PCB-156	84.0	10 -145					
13C-PCB-157	85.0	10 -145					
13C-PCB-159	81.5	10 -145					
13C-PCB-167	83.2	10 -145					
13C-PCB-169	81.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-04	Date Received:	13-Nov-2014 13:28		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	8.67	Date Analyzed :	14-Jan-15 23:40	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.43				PCB-44	6530			E
PCB-2	1.64				PCB-45	162			
PCB-3	0.562				PCB-46	157			
PCB-4/10	21.5				PCB-47	5030			B, E
PCB-5/8	31.6				PCB-48/75	1010			
PCB-6	14.3				PCB-50	12.1			
PCB-7/9	14.6				PCB-51	4230			E
PCB-11	96.1				PCB-52/69	55900			E
PCB-12/13	1.89			J	PCB-53	3430			E
PCB-14	ND	0.253			PCB-54	718			
PCB-15	114				PCB-55	265			
PCB-16/32	916				PCB-56/60	5340			B, E
PCB-17	97.3				PCB-57	453			
PCB-18	891				PCB-58	ND	1.07		
PCB-19	59.4				PCB-61/70	13000			B, E
PCB-20/21/33	303			B	PCB-62	ND	1.14		
PCB-22	459			B	PCB-63	1200			
PCB-23	ND	1.11			PCB-65	5.45			
PCB-24/27	97.5				PCB-66/76	18300			E
PCB-25	448				PCB-67	724			
PCB-26	1890			E	PCB-68	348			
PCB-28	10500			B, E	PCB-73	ND	1.28		
PCB-29	7.28				PCB-74	15700			E
PCB-30	0.853				PCB-77	2120			B, E
PCB-31	2720			E	PCB-78	26.3			
PCB-34	24.0				PCB-79	1330			
PCB-35	ND	1.24			PCB-80	ND	0.991		
PCB-36	3.44				PCB-81	190			
PCB-37	976				PCB-82	228			
PCB-38	147				PCB-83	15.3			
PCB-39	3.02				PCB-84/92	10800			E
PCB-40	159				PCB-85/116	835			
PCB-41/64/71/72	7380			B, E	PCB-86	ND	0.443		
PCB-42/59	1110				PCB-87/117/125	10300			E
PCB-43/49	35800			E	PCB-88/91	6660			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-04	Date Received:	13-Nov-2014 13:28		
Project:		Sample Size:	10.2 g	QC Batch:	B5A0018	Date Extracted:	06-Jan-2015 13:14		
Date Collected:	10-Oct-2014 0:00	%Lipids:	8.67	Date Analyzed :	14-Jan-15 23:40	Column:	ZB-1	Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.2				PCB-136	3610			E
PCB-90/101	72000			E	PCB-137	3700			E
PCB-93	ND	0.348			PCB-138/163/164	84800			E
PCB-94	105				PCB-139/149	20400			E
PCB-95/98/102	15200			E	PCB-140	206			
PCB-96	733				PCB-141	7630			E
PCB-97	5680			E	PCB-144	2810			E
PCB-99	62300			E	PCB-145	3.25			
PCB-100	6760			E	PCB-146/165	20300			E
PCB-103	6280			E	PCB-147	8120			E
PCB-104	593				PCB-148	941			
PCB-105	17600			B, E	PCB-150	867			
PCB-106/118	53400			B, E	PCB-151	23500			E
PCB-107/109	4730			E	PCB-152	370			
PCB-108/112	462				PCB-153	130000			E
PCB-110	13200			E	PCB-154	16300			E
PCB-111/115	1070				PCB-155	368			
PCB-113	ND	0.328			PCB-156	6610			E
PCB-114	1190				PCB-157	1170			
PCB-119	4740			E	PCB-158/160	8670			E
PCB-120	323				PCB-159	ND	1.91		I
PCB-121	ND	0.234			PCB-166	215			
PCB-122	94.5				PCB-167	3630			E
PCB-123	986				PCB-168	481			
PCB-124	1300				PCB-169	10.4			
PCB-126	295				PCB-170	19500			E
PCB-127	ND	1.54			PCB-171	5440			E
PCB-128/162	7790			E	PCB-172	3070			E
PCB-129	235				PCB-173	30.0			
PCB-130	3290			E	PCB-174	2410			E
PCB-131	ND	3.41			PCB-175	1150			
PCB-132/161	2150				PCB-176	519			
PCB-133/142	2260				PCB-177	7090			E
PCB-134/143	1130				PCB-178	6770			E
PCB-135	1910			E	PCB-179	5190			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-04
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	8.67	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 23:40
				Column:	ZB-1
				Analyst:	ANP

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	61200			E	Total octaCB	46000			
PCB-181	212				Total nonaCB	4000			
PCB-182/187	52300			E	DecaCB	575			
PCB-183	18100			E	Total PCB	1110000			B
PCB-184	83.7								
PCB-185	957								
PCB-186	ND	1.06							
PCB-188	726								
PCB-189	742			B					
PCB-190	4560			E					
PCB-191	956								
PCB-192	ND	0.999							
PCB-193	3260			E					
PCB-194	9460			E					
PCB-195	3980			E					
PCB-196/203	16800			E					
PCB-197	518								
PCB-198	369								
PCB-199	9740			E					
PCB-200	124								
PCB-201	1570			E					
PCB-202	3000			E					
PCB-204	7.57								
PCB-205	428								
PCB-206	3110			E					
PCB-207	421								
PCB-208	470								
PCB-209	575								
Total monoCB	3.62								
Total diCB	294								
Total triCB	19600			B					
Total tetraCB	181000			B					
Total pentaCB	298000			B					
Total hexaCB	363000								
Total heptaCB	194000			B					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-OF-WS-04-03-20141010

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400905-04
Project:		Sample Size:	10.2 g	Date Received:	13-Nov-2014 13:28
Date Collected:	10-Oct-2014 0:00	%Lipids:	8.67	QC Batch:	B5A0018
				Date Analyzed :	14-Jan-15 23:40
				Column:	ZB-1
				Analyst:	ANP

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.9	5 -145		13C-PCB-170	76.8	10 -145	
13C-PCB-3	66.8	5 -145		13C-PCB-180	75.9	10 -145	
13C-PCB-4	73.9	5 -145		13C-PCB-188	68.3	10 -145	
13C-PCB-11	77.5	5 -145		13C-PCB-189	73.2	10 -145	
13C-PCB-9	81.7	5 -145		13C-PCB-194	82.6	10 -145	
13C-PCB-19	68.8	5 -145		13C-PCB-202	60.5	10 -145	
13C-PCB-28	87.2	5 -145		13C-PCB-206	78.8	10 -145	
13C-PCB-32	70.0	5 -145		13C-PCB-208	69.8	10 -145	
13C-PCB-37	86.0	5 -145		13C-PCB-209	74.6	10 -145	
13C-PCB-47	77.6	5 -145		CRS 13C-PCB-79	82.2	10 -145	
13C-PCB-52	79.0	5 -145		13C-PCB-178	67.3	10 -145	
13C-PCB-54	67.4	5 -145					
13C-PCB-70	82.6	5 -145					
13C-PCB-77	79.0	10 -145					
13C-PCB-80	80.6	10 -145					
13C-PCB-81	75.8	10 -145					
13C-PCB-95	88.2	10 -145					
13C-PCB-97	85.5	10 -145					
13C-PCB-101	88.6	10 -145					
13C-PCB-104	84.1	10 -145					
13C-PCB-105	99.0	10 -145					
13C-PCB-114	93.2	10 -145					
13C-PCB-118	81.4	10 -145					
13C-PCB-123	77.3	10 -145					
13C-PCB-126	95.3	10 -145					
13C-PCB-127	97.7	10 -145					
13C-PCB-138	81.0	10 -145					
13C-PCB-141	76.4	10 -145					
13C-PCB-153	80.5	10 -145					
13C-PCB-155	84.1	10 -145					
13C-PCB-156	81.9	10 -145					
13C-PCB-157	78.4	10 -145					
13C-PCB-159	77.6	10 -145					
13C-PCB-167	78.7	10 -145					
13C-PCB-169	76.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400905-01	CS-FF-CH-08-03-20141010	21.4	08-Jan-2015	B5A0016
1400905-02	CS-OF-CH-08-03-20141010	25.2	08-Jan-2015	B5A0016
1400905-03	CS-FF-WS-04-03-20141010	21.8	08-Jan-2015	B5A0016
1400905-04	CS-OF-WS-04-03-20141010	29.3	08-Jan-2015	B5A0016

DATA QUALIFIERS & ABBREVIATIONS


B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 1400905 0.4%, 0.1%		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (658) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1698C	PCBs (low res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physits (C/N Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive. No testing / keep frozen.	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
Track #	Field Sample ID	Collection Date/Time	Type of Fish													PCBs (high res) epa 1698C		
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x							x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x								TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x								TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13													x	
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
128	CS-FF/OF-WS-04-03-2014101010	10/10/14	White Surfprch.	1	x	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1													x	
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x		x	x	x			x	x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3													x	
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1													x	L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1													x	Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <u>Via email 12/02/14</u> Signature/Printed Name _____ Date/Time _____	Company: <u>Anchor QEA</u>	Received By: <u>Elizabeth Benedict Vista</u> Signature/Printed Name _____ Date/Time _____	Company: <u>12/04/14 1207</u>
Relinquished By: _____ Signature/Printed Name _____ Date/Time _____	Company: _____	Received By: _____ Signature/Printed Name _____ Date/Time _____	Company: _____

> 1400893
 (B) 1400903
 ∞ 1400905
 Ø 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400905 TAT 28

Samples Arrival:	Date/Time: 11/13/14 0849	Initials: UBB	Location: WF-2
Logged In:	Date/Time: 12/12/14 0926	Initials: UBB	Location: WF2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
Temp °C: 0.1 (uncorrected)	Time: 0900	Thermometer ID: IR-1	
Temp °C: 0.1 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>299</u> Trk # <u>7718 4040 1830</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input checked="" type="checkbox"/> Return

Comments:

Sample ID: CS-OF/FF-CH-08-03-20141010

SAMPLE LOG-IN CHECKLIST



1400905

Vista Project #: _____ TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBAB	Location: WF 2	Shelf/Rack: NA		
Logged In:	Date/Time 12/2/14 0926	Initials: UBAB	Location: WF-2 ^{UBAB 12/2/14}	Shelf/Rack: D2		
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C: 0.4 (uncorrected)	Time: 0920		Thermometer ID: IR-1			
Temp °C: 0.4 (corrected)						

	YES	NO	NA		
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>				
Holding Time Acceptable?	<input checked="" type="checkbox"/>				
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>				
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>				
Airbill 1 of 9 Trk # 7718 4040 1759	<input checked="" type="checkbox"/>				
Sample Container Intact?			<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>		
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>				
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>		
Na ₂ S ₂ O ₃ Preservation Documented? NA	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None		
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain	<input checked="" type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

Sample ID: CS-FF/OF-WS-04-03-20141010

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400905
 Date Received: 13-Nov-14 13:28
 Documented by/date: B.Benedict 12/12/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|--|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____ °C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date: <u>MMH 1/30/15</u>
Client Comments/Instructions: <u>COC rec'd by email.</u>	

January 29, 2015

Vista Project I.D.: 1400960

Mr. Chris Stransky
AMEC Earth & Environmental
9210 Sky Park Court Suite 200
San Diego, CA 92123

Dear Mr. Stransky,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 16, 2014. This sample set was analyzed on a standard turn-around time.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1400960

Case Narrative

Sample Condition on Receipt:

Twenty tissue samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

The mussels and oysters were shucked, rinsed, ground and homogenized. The percent solids of each sample was determined. Aliquots were collected for shipment to Calscience and Physis for additional analyses.

Analytical Notes:

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

As requested, two additional QC samples were analyzed: a duplicate analysis was performed on sample "OA-ST-MS-COMP3-01-2014-10-22" and an aliquot of Standard Reference Material (SRM) was extracted and analyzed with the samples. The certified values for NIST SRM 1946 are included in the report.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400960-01	OA-ST-MS-COMP1-01-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-02	OA-ST-MS-COMP2-01-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-03	OA-ST-MS-COMP3-01-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-04	OA-ST-MS-COMP4-01-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-05	OA-ST-MS-COMP5-01-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-06	IA-ST-MS-COMP1-02-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-07	IA-ST-MS-COMP2-02-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-08	IA-ST-MS-COMP3-02-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-09	IA-ST-MS-COMP4-02-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-10	IA-ST-MS-COMP5-02-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-11	CS-ST-OY-COMP1-03-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-12	CS-ST-OY-COMP2-03-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-13	CS-ST-OY-COMP3-03-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-14	CS-ST-OY-COMP4-03-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-15	CS-ST-OY-COMP5-03-2014-10-22	22-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-16	IB-ST-MS-COMP1-04-2014-10-27	27-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-17	IB-ST-MS-COMP2-04-2014-10-27	27-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-18	IB-ST-MS-COMP3-04-2014-10-27	27-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-19	IB-ST-MS-COMP4-04-2014-10-27	27-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil
1400960-20	IB-ST-MS-COMP5-04-2014-10-27	27-Oct-14 00:00	16-Dec-14 08:50	Tissue in Foil

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0043	Lab Sample: B5A0043-BLK1
Sample Size: 10.0 g	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 14:43 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	ND	0.0889			PCB-43/49	ND	0.0874		
PCB-2	ND	0.0917			PCB-44	ND	0.114		
PCB-3	ND	0.0915			PCB-45	ND	0.0956		
PCB-4/10	ND	0.564			PCB-46	ND	0.105		
PCB-5/8	ND	0.466			PCB-47	ND	0.0830		
PCB-6	ND	0.478			PCB-48/75	ND	0.0749		
PCB-7/9	ND	0.473			PCB-50	ND	0.0941		
PCB-11	0.690			J	PCB-51	ND	0.0857		
PCB-12/13	ND	0.463			PCB-52/69	0.114			J
PCB-14	ND	0.399			PCB-53	ND	0.0875		
PCB-15	ND	0.407			PCB-54	ND	0.0715		
PCB-16/32	ND	0.0870			PCB-55	ND	0.0659		
PCB-17	ND	0.0834			PCB-56/60	ND		0.0783	
PCB-18	ND	0.257			PCB-57	ND	0.0718		
PCB-19	ND	0.0996			PCB-58	ND	0.0708		
PCB-20/21/33	ND	0.0691			PCB-61/70	ND	0.0715		
PCB-22	ND	0.0687			PCB-62	ND	0.0732		
PCB-23	ND	0.0661			PCB-63	ND	0.0692		
PCB-24/27	ND	0.0614			PCB-65	ND	0.0755		
PCB-25	ND	0.0728			PCB-66/76	ND	0.0682		
PCB-26	ND	0.0646			PCB-67	ND	0.0737		
PCB-28	ND	0.106			PCB-68	ND	0.0617		
PCB-29	ND	0.0661			PCB-73	ND	0.0705		
PCB-30	ND	0.0630			PCB-74	ND	0.0663		
PCB-31	ND	0.105			PCB-77	ND	0.0721		
PCB-34	ND	0.0615			PCB-78	ND	0.0760		
PCB-35	ND	0.0639			PCB-79	ND	0.0699		
PCB-36	ND	0.0618			PCB-80	ND	0.0612		
PCB-37	ND	0.0595			PCB-81	ND	0.0694		
PCB-38	ND	0.0646			PCB-82	ND	0.257		
PCB-39	ND	0.0637			PCB-83	ND	0.161		
PCB-40	ND	0.116			PCB-84/92	ND	0.196		
PCB-41/64/71/72	ND	0.0743			PCB-85/116	ND	0.193		
PCB-42/59	ND	0.0804			PCB-86	ND	0.260		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Method Blank**EPA Method 1668C**Matrix: Tissue
Sample Size: 10.0 gQC Batch: B5A0043
Date Extracted: 14-Jan-2015 10:53Lab Sample: B5A0043-BLK1
Date Analyzed: 20-Jan-15 14:43 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	0.169			PCB-133/142	ND	0.162		
PCB-88/91	ND	0.201			PCB-134/143	ND	0.158		
PCB-89	ND	0.211			PCB-135	ND	0.191		
PCB-90/101	ND	0.174			PCB-136	ND	0.134		
PCB-93	ND	0.213			PCB-137	ND	0.147		
PCB-94	ND	0.200			PCB-138/163/164	ND	0.126		
PCB-95/98/102	ND	0.175			PCB-139/149	ND	0.175		
PCB-96	ND	0.139			PCB-140	ND	0.196		
PCB-97	ND	0.207			PCB-141	ND	0.149		
PCB-99	ND	0.168			PCB-144	ND	0.178		
PCB-100	ND	0.157			PCB-145	ND	0.140		
PCB-103	ND	0.156			PCB-146/165	ND	0.136		
PCB-104	ND	0.120			PCB-147	ND	0.196		
PCB-105	ND	0.117			PCB-148	ND	0.187		
PCB-106/118	ND	0.147			PCB-150	ND	0.135		
PCB-107/109	ND	0.143			PCB-151	ND	0.187		
PCB-108/112	ND	0.191			PCB-152	ND	0.131		
PCB-110	ND	0.158			PCB-153	ND	0.123		
PCB-111/115	ND	0.145			PCB-154	ND	0.171		
PCB-113	ND	0.157			PCB-155	ND	0.127		
PCB-114	ND	0.126			PCB-156	ND	0.119		
PCB-119	ND	0.143			PCB-157	ND	0.123		
PCB-120	ND	0.135			PCB-158/160	ND	0.118		
PCB-121	ND	0.128			PCB-159	ND	0.121		
PCB-122	ND	0.150			PCB-166	ND	0.130		
PCB-123	ND	0.153			PCB-167	ND	0.116		
PCB-124	ND	0.147			PCB-168	ND	0.108		
PCB-126	ND	0.149			PCB-169	ND	0.136		
PCB-127	ND	0.130			PCB-170	ND	0.139		
PCB-128/162	ND	0.144			PCB-171	ND	0.140		
PCB-129	ND	0.176			PCB-172	ND	0.151		
PCB-130	ND	0.188			PCB-173	ND	0.184		
PCB-131	ND	0.174			PCB-174	ND	0.158		
PCB-132/161	ND	0.131			PCB-175	ND	0.132		

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0043	Lab Sample: B5A0043-BLK1
Sample Size: 10.0 g	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 14:43 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-176	ND	0.0950			Total triCB	ND	0.257		
PCB-177	ND	0.161			Total tetraCB	0.114		0.192	
PCB-178	ND	0.129			Total pentaCB	ND	0.260		
PCB-179	ND	0.0994			Total hexaCB	ND	0.196		
PCB-180	ND	0.141			Total heptaCB	ND	0.184		
PCB-181	ND	0.151			Total octaCB	ND	0.270		
PCB-182/187	ND	0.122			Total nonaCB	ND	0.142		
PCB-183	ND	0.113			DecaCB	ND	0.105		
PCB-184	ND	0.103			Total PCB	0.804			
PCB-185	ND	0.145							
PCB-186	ND	0.0949							
PCB-188	ND	0.0909							
PCB-189	ND	0.103							
PCB-190	ND	0.103							
PCB-191	ND	0.109							
PCB-192	ND	0.117							
PCB-193	ND	0.110							
PCB-194	ND	0.0834							
PCB-195	ND	0.0946							
PCB-196/203	ND	0.241							
PCB-197	ND	0.171							
PCB-198	ND	0.265							
PCB-199	ND	0.270							
PCB-200	ND	0.193							
PCB-201	ND	0.182							
PCB-202	ND	0.196							
PCB-204	ND	0.186							
PCB-205	ND	0.0669							
PCB-206	ND	0.142							
PCB-207	ND	0.0671							
PCB-208	ND	0.0680							
PCB-209	ND	0.105							
Total monoCB	ND	0.0917							
Total diCB	0.690								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: Tissue	QC Batch: B5A0043	Lab Sample: B5A0043-BLK1
Sample Size: 10.0 g	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 14:43 Column: ZB-1 Analyst: MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	91.6	5-145		13C-PCB-157	88.5	10-145	
13C-PCB-3	94.1	5-145		13C-PCB-159	89.9	10-145	
13C-PCB-4	77.9	5-145		13C-PCB-167	92.8	10-145	
13C-PCB-11	83.0	5-145		13C-PCB-169	85.6	10-145	
13C-PCB-9	78.9	5-145		13C-PCB-170	74.4	10-145	
13C-PCB-19	71.0	5-145		13C-PCB-180	75.4	10-145	
13C-PCB-28	77.4	5-145		13C-PCB-188	82.0	10-145	
13C-PCB-32	73.7	5-145		13C-PCB-189	72.8	10-145	
13C-PCB-37	94.2	5-145		13C-PCB-194	90.4	10-145	
13C-PCB-47	94.9	5-145		13C-PCB-202	69.3	10-145	
13C-PCB-52	98.1	5-145		13C-PCB-206	83.0	10-145	
13C-PCB-54	87.9	5-145		13C-PCB-208	88.8	10-145	
13C-PCB-70	90.0	5-145		13C-PCB-209	73.4	10-145	
13C-PCB-77	84.4	10-145		CRS 13C-PCB-79	93.9	10-145	
13C-PCB-80	91.1	10-145		13C-PCB-178	84.6	10-145	
13C-PCB-81	82.2	10-145					
13C-PCB-95	94.7	10-145					
13C-PCB-97	91.9	10-145					
13C-PCB-101	94.1	10-145					
13C-PCB-104	101	10-145					
13C-PCB-105	108	10-145					
13C-PCB-114	99.7	10-145					
13C-PCB-118	89.9	10-145					
13C-PCB-123	93.6	10-145					
13C-PCB-126	104	10-145					
13C-PCB-127	107	10-145					
13C-PCB-138	91.6	10-145					
13C-PCB-141	91.8	10-145					
13C-PCB-153	92.1	10-145					
13C-PCB-155	82.1	10-145					
13C-PCB-156	87.6	10-145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit
Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0043
Date Extracted: 14-Jan-2015 10:53

Lab Sample: B5A0043-BS1
Date Analyzed: 20-Jan-15 12:34 Column: ZB-1 Analyst: MAS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	102	100	102	60 - 135	IS 13C-PCB-1	74.3	15 - 145
PCB-3	99.1	100	99.1	60 - 135	IS 13C-PCB-3	80.3	15 - 145
PCB-4/10	196	200	97.9	60 - 135	IS 13C-PCB-4	68.9	15 - 145
PCB-15	96.9	100	96.9	60 - 135	IS 13C-PCB-9	71.6	15 - 145
PCB-19	125	100	125	60 - 135	IS 13C-PCB-11	77.3	15 - 145
PCB-37	96.2	100	96.2	60 - 135	IS 13C-PCB-19	61.0	15 - 145
PCB-54	103	100	103	60 - 135	IS 13C-PCB-28	74.5	15 - 145
PCB-77	105	100	105	60 - 135	IS 13C-PCB-32	65.2	15 - 145
PCB-81	106	100	106	60 - 135	IS 13C-PCB-37	89.3	15 - 145
PCB-104	98.7	100	98.7	60 - 135	IS 13C-PCB-47	82.1	15 - 145
PCB-105	92.5	100	92.5	60 - 135	IS 13C-PCB-52	92.6	15 - 145
PCB-106/118	192	200	96.2	60 - 135	IS 13C-PCB-54	82.9	15 - 145
PCB-114	94.8	100	94.8	60 - 135	IS 13C-PCB-70	88.0	15 - 145
PCB-123	98.0	100	98.0	60 - 135	IS 13C-PCB-77	87.7	40 - 145
PCB-126	97.2	100	97.2	60 - 135	IS 13C-PCB-80	87.5	40 - 145
PCB-155	102	100	102	60 - 135	IS 13C-PCB-81	79.3	40 - 145
PCB-156	103	100	103	60 - 135	IS 13C-PCB-95	91.9	40 - 145
PCB-157	98.5	100	98.5	60 - 135	IS 13C-PCB-97	88.2	40 - 145
PCB-167	100	100	100	60 - 135	IS 13C-PCB-101	88.6	40 - 145
PCB-169	103	100	103	60 - 135	IS 13C-PCB-104	94.8	40 - 145
PCB-188	102	100	102	60 - 135	IS 13C-PCB-105	105	40 - 145
PCB-189	104	100	104	60 - 135	IS 13C-PCB-114	101	40 - 145
PCB-202	104	100	104	60 - 135	IS 13C-PCB-118	86.9	40 - 145
PCB-205	97.8	100	97.8	60 - 135	IS 13C-PCB-123	88.3	40 - 145
PCB-206	97.5	100	97.5	60 - 135	IS 13C-PCB-126	101	40 - 145
PCB-208	94.8	100	94.8	60 - 135	IS 13C-PCB-127	105	40 - 145
PCB-209	94.3	100	94.3	60 - 135	IS 13C-PCB-138	89.9	40 - 145
					IS 13C-PCB-141	90.6	40 - 145
					IS 13C-PCB-153	90.4	40 - 145
					IS 13C-PCB-155	78.4	40 - 145
					IS 13C-PCB-156	87.8	40 - 145
					IS 13C-PCB-157	87.3	40 - 145
					IS 13C-PCB-159	87.9	40 - 145
					IS 13C-PCB-167	89.4	40 - 145
					IS 13C-PCB-169	82.3	40 - 145
					IS 13C-PCB-170	72.2	40 - 145
					IS 13C-PCB-180	72.5	40 - 145
					IS 13C-PCB-188	81.6	40 - 145
					IS 13C-PCB-189	69.4	40 - 145
					IS 13C-PCB-194	87.7	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: Tissue
Sample Size: 10.0 g

QC Batch: B5A0043
Date Extracted: 14-Jan-2015 10:53

Lab Sample: B5A0043-BS1
Date Analyzed: 20-Jan-15 12:34 Column: ZB-1 Analyst: MAS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	67.2	40 - 145
					IS 13C-PCB-206	83.5	40 - 145
					IS 13C-PCB-208	82.2	40 - 145
					IS 13C-PCB-209	78.2	40 - 145
					CRS 13C-PCB-79	87.9	40 - 145
					CRS 13C-PCB-178	82.5	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: OA-ST-MS-COMP1-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-01
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.11	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 16:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.404			J	PCB-44	491			
PCB-2	0.382			J	PCB-45	51.5			
PCB-3	0.296			J	PCB-46	26.7			
PCB-4/10	4.56				PCB-47	332			
PCB-5/8	15.6				PCB-48/75	112			
PCB-6	3.03				PCB-50	2.98			
PCB-7/9	1.13			J	PCB-51	25.7			
PCB-11	58.3			B	PCB-52/69	931			B
PCB-12/13	ND	0.873			PCB-53	114			
PCB-14	ND	0.615			PCB-54	6.46			
PCB-15	12.8				PCB-55	22.3			
PCB-16/32	78.8				PCB-56/60	377			
PCB-17	42.8				PCB-57	8.03			
PCB-18	110				PCB-58	5.18			
PCB-19	12.4				PCB-61/70	886			
PCB-20/21/33	59.5				PCB-62	ND	0.301		
PCB-22	38.9				PCB-63	33.0			
PCB-23	0.221			J	PCB-65	ND	0.310		
PCB-24/27	14.7				PCB-66/76	951			
PCB-25	17.5				PCB-67	31.4			
PCB-26	22.9				PCB-68	10.3			
PCB-28	242				PCB-73	2.97			
PCB-29	0.519				PCB-74	394			
PCB-30	ND	0.134			PCB-77	89.5			
PCB-31	122				PCB-78	ND	0.364		
PCB-34	1.32				PCB-79	75.8			
PCB-35	5.97				PCB-80	ND	0.272		
PCB-36	7.60				PCB-81	6.78			
PCB-37	33.2				PCB-82	217			
PCB-38	20.3				PCB-83	0.895			
PCB-39	0.982				PCB-84/92	861			
PCB-40	78.3				PCB-85/116	312			
PCB-41/64/71/72	482				PCB-86	ND	0.340		
PCB-42/59	184				PCB-87/117/125	694			
PCB-43/49	754				PCB-88/91	336			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP1-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-01
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.11	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 16:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	16.4				PCB-136	292			
PCB-90/101	3070			E	PCB-137	48.4			
PCB-93	ND	0.296			PCB-138/163/164	3300			
PCB-94	17.0				PCB-139/149	2430			
PCB-95/98/102	1470				PCB-140	20.3			
PCB-96	16.6				PCB-141	41.1			
PCB-97	770				PCB-144	114			
PCB-99	1700			E	PCB-145	1.15			
PCB-100	41.0				PCB-146/165	743			
PCB-103	54.9				PCB-147	114			
PCB-104	3.67				PCB-148	6.65			
PCB-105	751				PCB-150	16.3			
PCB-106/118	2590				PCB-151	689			
PCB-107/109	229				PCB-152	4.82			
PCB-108/112	108				PCB-153	4410			E
PCB-110	2120			E	PCB-154	136			
PCB-111/115	33.0				PCB-155	3.50			
PCB-113	16.9				PCB-156	200			
PCB-114	41.9				PCB-157	56.6			
PCB-119	89.1				PCB-158/160	288			
PCB-120	16.1				PCB-159	ND	0.555		
PCB-121	ND	0.178			PCB-166	6.94			
PCB-122	26.5				PCB-167	150			
PCB-123	45.5				PCB-168	5.47			
PCB-124	114				PCB-169	0.633			
PCB-126	13.2				PCB-170	59.7			
PCB-127	1.26				PCB-171	173			
PCB-128/162	456				PCB-172	6.71			
PCB-129	12.1				PCB-173	0.438			J
PCB-130	230				PCB-174	5.51			
PCB-131	ND	0.171			PCB-175	30.5			
PCB-132/161	572				PCB-176	79.6			
PCB-133/142	103				PCB-177	422			
PCB-134/143	127				PCB-178	187			
PCB-135	428				PCB-179	319			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP1-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-01
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.11	QC Batch:	B5A0043
				Date Analyzed:	20-Jan-15 16:52
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	373				Total octaCB	224			
PCB-181	0.784				Total nonaCB	0.422		2.30	
PCB-182/187	1230				DecaCB	1.86			
PCB-183	449				Total PCB	41800			B
PCB-184	3.44								
PCB-185	4.72								
PCB-186	ND	0.305							
PCB-188	7.98								
PCB-189	13.7								
PCB-190	47.3								
PCB-191	6.78								
PCB-192	ND	0.367							
PCB-193	16.9								
PCB-194	14.9								
PCB-195	2.01								
PCB-196/203	24.5								
PCB-197	13.3								
PCB-198	0.380			J					
PCB-199	3.55								
PCB-200	0.257			J					
PCB-201	48.8								
PCB-202	115								
PCB-204	ND	0.156							
PCB-205	1.49								
PCB-206	ND		1.65						
PCB-207	ND		0.222						
PCB-208	0.422			J					
PCB-209	1.86								
Total monoCB	1.08								
Total diCB	95.5			B					
Total triCB	832								
Total tetraCB	6480			B					
Total pentaCB	15800								
Total hexaCB	15000								
Total heptaCB	3440								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP1-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-01
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.11	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 16:52
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	92.5	5 -145		13C-PCB-170	71.1	10 -145	
13C-PCB-3	90.3	5 -145		13C-PCB-180	72.6	10 -145	
13C-PCB-4	78.0	5 -145		13C-PCB-188	78.2	10 -145	
13C-PCB-11	80.1	5 -145		13C-PCB-189	47.8	10 -145	
13C-PCB-9	80.7	5 -145		13C-PCB-194	87.0	10 -145	
13C-PCB-19	66.5	5 -145		13C-PCB-202	68.2	10 -145	
13C-PCB-28	87.3	5 -145		13C-PCB-206	83.1	10 -145	
13C-PCB-32	72.2	5 -145		13C-PCB-208	87.5	10 -145	
13C-PCB-37	88.9	5 -145		13C-PCB-209	83.8	10 -145	
13C-PCB-47	77.1	5 -145		CRS 13C-PCB-79	89.1	10 -145	
13C-PCB-52	76.1	5 -145		13C-PCB-178	82.3	10 -145	
13C-PCB-54	61.4	5 -145					
13C-PCB-70	81.3	5 -145					
13C-PCB-77	81.8	10 -145					
13C-PCB-80	86.0	10 -145					
13C-PCB-81	78.2	10 -145					
13C-PCB-95	84.9	10 -145					
13C-PCB-97	87.9	10 -145					
13C-PCB-101	85.9	10 -145					
13C-PCB-104	81.6	10 -145					
13C-PCB-105	84.0	10 -145					
13C-PCB-114	76.1	10 -145					
13C-PCB-118	84.8	10 -145					
13C-PCB-123	89.1	10 -145					
13C-PCB-126	81.3	10 -145					
13C-PCB-127	83.6	10 -145					
13C-PCB-138	84.2	10 -145					
13C-PCB-141	83.9	10 -145					
13C-PCB-153	83.5	10 -145					
13C-PCB-155	79.9	10 -145					
13C-PCB-156	79.2	10 -145					
13C-PCB-157	80.0	10 -145					
13C-PCB-159	79.0	10 -145					
13C-PCB-167	79.4	10 -145					
13C-PCB-169	72.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP2-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-02	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.7 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.43	Date Analyzed :	20-Jan-15 17:57	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.453			J	PCB-44	653			
PCB-2	0.423			J	PCB-45	61.4			
PCB-3	0.365			J	PCB-46	34.4			
PCB-4/10	6.11				PCB-47	430			
PCB-5/8	19.9				PCB-48/75	141			
PCB-6	3.80				PCB-50	3.07			
PCB-7/9	1.63			J	PCB-51	27.4			
PCB-11	75.6			B	PCB-52/69	1190			B
PCB-12/13	1.82			J	PCB-53	140			
PCB-14	ND	0.435			PCB-54	8.20			
PCB-15	16.2				PCB-55	27.4			
PCB-16/32	96.2				PCB-56/60	474			
PCB-17	51.6				PCB-57	10.3			
PCB-18	137				PCB-58	5.94			
PCB-19	15.4				PCB-61/70	1120			
PCB-20/21/33	86.6				PCB-62	ND	0.547		
PCB-22	57.6				PCB-63	41.0			
PCB-23	0.172			J	PCB-65	ND	0.565		
PCB-24/27	18.2				PCB-66/76	1170			
PCB-25	27.5				PCB-67	39.2			
PCB-26	36.9				PCB-68	13.4			
PCB-28	313				PCB-73	4.71			
PCB-29	0.944				PCB-74	498			
PCB-30	ND	0.177			PCB-77	111			
PCB-31	164				PCB-78	ND	0.357		
PCB-34	2.11				PCB-79	96.0			
PCB-35	8.46				PCB-80	ND	0.302		
PCB-36	10.0				PCB-81	8.47			
PCB-37	48.4				PCB-82	270			
PCB-38	25.4				PCB-83	0.809			
PCB-39	1.55				PCB-84/92	1080			
PCB-40	98.0				PCB-85/116	390			
PCB-41/64/71/72	616				PCB-86	ND	0.489		
PCB-42/59	237				PCB-87/117/125	872			
PCB-43/49	957				PCB-88/91	425			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP2-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-02
Project:		Sample Size:	10.7 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.43	QC Batch:	B5A0043
				Date Analyzed:	20-Jan-15 17:57
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	19.6				PCB-136	357			
PCB-90/101	3820			E	PCB-137	54.2			
PCB-93	ND	0.442			PCB-138/163/164	3870			
PCB-94	21.7				PCB-139/149	2890			E
PCB-95/98/102	1870				PCB-140	26.1			
PCB-96	20.9				PCB-141	49.3			
PCB-97	943				PCB-144	160			
PCB-99	2170			E	PCB-145	1.37			
PCB-100	50.4				PCB-146/165	845			
PCB-103	69.1				PCB-147	134			
PCB-104	4.68				PCB-148	11.1			
PCB-105	892				PCB-150	20.3			
PCB-106/118	3200			E	PCB-151	820			
PCB-107/109	286				PCB-152	5.95			
PCB-108/112	133				PCB-153	4980			E
PCB-110	2610			E	PCB-154	165			
PCB-111/115	40.6				PCB-155	4.21			
PCB-113	10.1				PCB-156	240			
PCB-114	46.9				PCB-157	70.3			
PCB-119	108				PCB-158/160	341			
PCB-120	20.9				PCB-159	ND	0.324		
PCB-121	ND	0.266			PCB-166	8.21			
PCB-122	34.1				PCB-167	176			
PCB-123	57.2				PCB-168	5.92			
PCB-124	143				PCB-169	0.676			
PCB-126	16.1				PCB-170	69.1			
PCB-127	ND	0.770			PCB-171	204			
PCB-128/162	533				PCB-172	9.11			
PCB-129	15.3				PCB-173	ND	0.391		
PCB-130	274				PCB-174	9.63			
PCB-131	ND	0.619			PCB-175	39.6			
PCB-132/161	705				PCB-176	98.3			
PCB-133/142	127				PCB-177	499			
PCB-134/143	157				PCB-178	234			
PCB-135	493				PCB-179	396			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP2-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-02
Project:		Sample Size:	10.7 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.43	QC Batch:	B5A0043
				Date Analyzed:	20-Jan-15 17:57
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	414				Total octaCB	258		260	
PCB-181	0.887				Total nonaCB	2.88		3.19	
PCB-182/187	1500				DecaCB	1.75			
PCB-183	540				Total PCB	51000			B
PCB-184	3.75								
PCB-185	5.59								
PCB-186	ND	0.315							
PCB-188	9.20								
PCB-189	15.6								
PCB-190	52.5								
PCB-191	8.03								
PCB-192	ND	0.365							
PCB-193	19.4								
PCB-194	16.1								
PCB-195	ND		2.21						
PCB-196/203	27.5								
PCB-197	15.6								
PCB-198	0.512								
PCB-199	5.55								
PCB-200	0.343			J					
PCB-201	57.6								
PCB-202	133								
PCB-204	ND	0.196							
PCB-205	1.61								
PCB-206	2.11								
PCB-207	ND		0.311						
PCB-208	0.765								
PCB-209	1.75								
Total monoCB	1.24								
Total diCB	125			B					
Total triCB	1100								
Total tetraCB	8220			B					
Total pentaCB	19600								
Total hexaCB	17500								
Total heptaCB	4130								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP2-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-02
Project:		Sample Size:	10.7 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.43	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 17:57
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	90.6	5 -145		13C-PCB-170	71.1	10 -145	
13C-PCB-3	91.3	5 -145		13C-PCB-180	71.9	10 -145	
13C-PCB-4	76.1	5 -145		13C-PCB-188	74.2	10 -145	
13C-PCB-11	79.2	5 -145		13C-PCB-189	57.7	10 -145	
13C-PCB-9	79.4	5 -145		13C-PCB-194	87.1	10 -145	
13C-PCB-19	69.2	5 -145		13C-PCB-202	67.4	10 -145	
13C-PCB-28	84.5	5 -145		13C-PCB-206	83.7	10 -145	
13C-PCB-32	74.2	5 -145		13C-PCB-208	82.5	10 -145	
13C-PCB-37	104	5 -145		13C-PCB-209	77.3	10 -145	
13C-PCB-47	80.8	5 -145		CRS 13C-PCB-79	94.7	10 -145	
13C-PCB-52	80.9	5 -145		13C-PCB-178	84.2	10 -145	
13C-PCB-54	65.8	5 -145					
13C-PCB-70	84.5	5 -145					
13C-PCB-77	86.2	10 -145					
13C-PCB-80	86.7	10 -145					
13C-PCB-81	84.6	10 -145					
13C-PCB-95	82.0	10 -145					
13C-PCB-97	87.8	10 -145					
13C-PCB-101	82.8	10 -145					
13C-PCB-104	80.9	10 -145					
13C-PCB-105	81.8	10 -145					
13C-PCB-114	77.8	10 -145					
13C-PCB-118	83.1	10 -145					
13C-PCB-123	85.1	10 -145					
13C-PCB-126	87.6	10 -145					
13C-PCB-127	79.4	10 -145					
13C-PCB-138	85.0	10 -145					
13C-PCB-141	83.4	10 -145					
13C-PCB-153	80.9	10 -145					
13C-PCB-155	77.7	10 -145					
13C-PCB-156	79.9	10 -145					
13C-PCB-157	82.6	10 -145					
13C-PCB-159	80.3	10 -145					
13C-PCB-167	81.4	10 -145					
13C-PCB-169	74.1	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP3-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-03	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.28	Date Analyzed :	20-Jan-15 19:01	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.443			J	PCB-44	622			
PCB-2	0.449			J	PCB-45	58.5			
PCB-3	ND		0.324		PCB-46	32.5			
PCB-4/10	6.03				PCB-47	406			
PCB-5/8	18.8				PCB-48/75	138			
PCB-6	3.55				PCB-50	3.73			
PCB-7/9	1.71			J	PCB-51	28.9			
PCB-11	74.9			B	PCB-52/69	1100			B
PCB-12/13	1.57			J	PCB-53	144			
PCB-14	ND	0.416			PCB-54	7.78			
PCB-15	14.5				PCB-55	24.4			
PCB-16/32	90.1				PCB-56/60	447			
PCB-17	47.6				PCB-57	9.47			
PCB-18	125				PCB-58	5.21			
PCB-19	15.2				PCB-61/70	1040			
PCB-20/21/33	79.5				PCB-62	ND	0.160		
PCB-22	48.3				PCB-63	39.7			
PCB-23	0.198			J	PCB-65	ND	0.165		
PCB-24/27	16.9				PCB-66/76	1070			
PCB-25	25.7				PCB-67	39.8			
PCB-26	33.3				PCB-68	12.4			
PCB-28	310				PCB-73	4.57			
PCB-29	0.810				PCB-74	490			
PCB-30	ND	0.150			PCB-77	106			
PCB-31	158				PCB-78	ND	0.136		
PCB-34	1.62				PCB-79	83.5			
PCB-35	7.66				PCB-80	ND	0.122		
PCB-36	10.1				PCB-81	2.98			
PCB-37	45.9				PCB-82	247			
PCB-38	22.6				PCB-83	1.02			
PCB-39	1.30				PCB-84/92	960			
PCB-40	93.6				PCB-85/116	354			
PCB-41/64/71/72	596				PCB-86	ND	0.359		
PCB-42/59	228				PCB-87/117/125	782			
PCB-43/49	883				PCB-88/91	377			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP3-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-03	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.28	Date Analyzed :	20-Jan-15 19:01	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	18.7				PCB-136	323			
PCB-90/101	3330			E	PCB-137	39.2			
PCB-93	ND	0.337			PCB-138/163/164	3340			
PCB-94	19.5				PCB-139/149	2530			
PCB-95/98/102	1640				PCB-140	23.5			
PCB-96	18.3				PCB-141	45.2			
PCB-97	858				PCB-144	141			
PCB-99	1910			E	PCB-145	1.33			
PCB-100	48.4				PCB-146/165	723			
PCB-103	62.6				PCB-147	123			
PCB-104	4.25				PCB-148	10.1			
PCB-105	800				PCB-150	18.0			
PCB-106/118	2800				PCB-151	729			
PCB-107/109	242				PCB-152	5.02			
PCB-108/112	120				PCB-153	4250			E
PCB-110	2320			E	PCB-154	150			
PCB-111/115	40.6				PCB-155	3.80			
PCB-113	21.0				PCB-156	206			
PCB-114	42.7				PCB-157	58.2			
PCB-119	100				PCB-158/160	301			
PCB-120	19.0				PCB-159	ND	1.80		
PCB-121	ND	0.203			PCB-166	6.92			
PCB-122	28.5				PCB-167	156			
PCB-123	50.1				PCB-168	5.70			
PCB-124	121				PCB-169	0.795			
PCB-126	15.3				PCB-170	57.8			
PCB-127	ND	0.486			PCB-171	171			
PCB-128/162	475				PCB-172	9.06			
PCB-129	14.1				PCB-173	0.506			
PCB-130	281				PCB-174	8.31			
PCB-131	ND	0.183			PCB-175	34.0			
PCB-132/161	585				PCB-176	81.1			
PCB-133/142	116				PCB-177	428			
PCB-134/143	139				PCB-178	195			
PCB-135	434				PCB-179	311			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP3-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-03
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.28	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 19:01
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	335				Total octaCB	220			
PCB-181	0.817				Total nonaCB	2.42			
PCB-182/187	1240				DecaCB	1.01			
PCB-183	442				Total PCB	45100			B
PCB-184	3.20								
PCB-185	4.82								
PCB-186	ND	0.267							
PCB-188	8.38								
PCB-189	13.6								
PCB-190	40.9								
PCB-191	5.99								
PCB-192	ND	0.312							
PCB-193	17.1								
PCB-194	14.0								
PCB-195	2.25								
PCB-196/203	21.6								
PCB-197	13.4								
PCB-198	0.419			J					
PCB-199	4.86								
PCB-200	0.328			J					
PCB-201	49.9								
PCB-202	112								
PCB-204	ND	0.260							
PCB-205	1.33								
PCB-206	1.59								
PCB-207	0.269			J					
PCB-208	0.555								
PCB-209	1.01								
Total monoCB	0.892		1.22						
Total diCB	121			B					
Total triCB	1040								
Total tetraCB	7720			B					
Total pentaCB	17400								
Total hexaCB	15200								
Total heptaCB	3410								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP3-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-03
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.28	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 19:01
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	92.2	5 -145		13C-PCB-170	72.2	10 -145	
13C-PCB-3	93.6	5 -145		13C-PCB-180	72.5	10 -145	
13C-PCB-4	76.9	5 -145		13C-PCB-188	75.1	10 -145	
13C-PCB-11	79.9	5 -145		13C-PCB-189	56.0	10 -145	
13C-PCB-9	79.6	5 -145		13C-PCB-194	85.8	10 -145	
13C-PCB-19	72.3	5 -145		13C-PCB-202	67.0	10 -145	
13C-PCB-28	84.9	5 -145		13C-PCB-206	83.6	10 -145	
13C-PCB-32	78.5	5 -145		13C-PCB-208	85.6	10 -145	
13C-PCB-37	90.0	5 -145		13C-PCB-209	77.6	10 -145	
13C-PCB-47	79.3	5 -145		CRS 13C-PCB-79	92.5	10 -145	
13C-PCB-52	80.0	5 -145		13C-PCB-178	76.6	10 -145	
13C-PCB-54	62.7	5 -145					
13C-PCB-70	85.1	5 -145					
13C-PCB-77	86.7	10 -145					
13C-PCB-80	86.9	10 -145					
13C-PCB-81	86.6	10 -145					
13C-PCB-95	82.2	10 -145					
13C-PCB-97	87.1	10 -145					
13C-PCB-101	82.7	10 -145					
13C-PCB-104	80.3	10 -145					
13C-PCB-105	80.0	10 -145					
13C-PCB-114	77.4	10 -145					
13C-PCB-118	84.3	10 -145					
13C-PCB-123	87.0	10 -145					
13C-PCB-126	86.0	10 -145					
13C-PCB-127	79.2	10 -145					
13C-PCB-138	82.9	10 -145					
13C-PCB-141	77.9	10 -145					
13C-PCB-153	80.3	10 -145					
13C-PCB-155	75.7	10 -145					
13C-PCB-156	81.4	10 -145					
13C-PCB-157	83.6	10 -145					
13C-PCB-159	80.4	10 -145					
13C-PCB-167	80.3	10 -145					
13C-PCB-169	75.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-ST-MS-COMP3-01-2014-10-22	QC Batch: B5A0043	Lab Sample: B5A0043-DUP1
Source LabNumber: 1400960-03	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 15:47 Column: ZB-1 Analyst: MAS
Matrix: Tissue		
Sample Size: 10.9 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.459				PCB-41/64/71/72	646			
PCB-2	0.435			J	PCB-42/59	240			
PCB-3	0.347			J	PCB-43/49	930			
PCB-4/10	5.99				PCB-44	670			
PCB-5/8	19.3				PCB-45	60.8			
PCB-6	3.74				PCB-46	35.1			
PCB-7/9	1.69			J	PCB-47	428			
PCB-11	79.2			B	PCB-48/75	139			
PCB-12/13	1.70			J	PCB-50	3.79			
PCB-14	ND	0.487			PCB-51	28.5			
PCB-15	15.5				PCB-52/69	1170			B
PCB-16/32	104				PCB-53	151			
PCB-17	55.0				PCB-54	8.23			
PCB-18	143				PCB-55	29.5			
PCB-19	16.8				PCB-56/60	489			
PCB-20/21/33	77.7				PCB-57	10.2			
PCB-22	45.1				PCB-58	5.66			
PCB-23	0.124			J	PCB-61/70	1100			
PCB-24/27	19.5				PCB-62	ND	0.340		
PCB-25	22.8				PCB-63	41.5			
PCB-26	31.5				PCB-65	ND	0.351		
PCB-28	294				PCB-66/76	1120			
PCB-29	0.625				PCB-67	41.1			
PCB-30	ND	0.184			PCB-68	12.9			
PCB-31	172				PCB-73	4.42			
PCB-34	1.84				PCB-74	503			
PCB-35	7.54				PCB-77	100			
PCB-36	9.13				PCB-78	ND	0.328		
PCB-37	46.3				PCB-79	96.2			
PCB-38	24.9				PCB-80	ND	0.291		
PCB-39	1.45				PCB-81	7.32			
PCB-40	99.1				PCB-82	278			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-ST-MS-COMP3-01-2014-10-22	QC Batch: B5A0043	Lab Sample: B5A0043-DUP1
Source LabNumber: 1400960-03	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 15:47 Column: ZB-1 Analyst: MAS
Matrix: Tissue		
Sample Size: 10.9 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-83	0.980				PCB-127	2.76			
PCB-84/92	992				PCB-128/162	493			
PCB-85/116	384				PCB-129	14.0			
PCB-86	ND	0.357			PCB-130	258			
PCB-87/117/125	819				PCB-131	ND	0.304		
PCB-88/91	388				PCB-132/161	635			
PCB-89	18.4				PCB-133/142	119			
PCB-90/101	3430			E	PCB-134/143	148			
PCB-93	ND	0.327			PCB-135	446			
PCB-94	20.1				PCB-136	339			
PCB-95/98/102	1730				PCB-137	36.6			
PCB-96	19.2				PCB-138/163/164	3510			
PCB-97	902				PCB-139/149	2640			
PCB-99	1910			E	PCB-140	24.3			
PCB-100	47.8				PCB-141	45.4			
PCB-103	62.8				PCB-144	147			
PCB-104	4.26				PCB-145	1.34			
PCB-105	845				PCB-146/165	751			
PCB-106/118	2920			E	PCB-147	127			
PCB-107/109	270				PCB-148	10.5			
PCB-108/112	120				PCB-150	19.3			
PCB-110	2440			E	PCB-151	761			
PCB-111/115	43.2				PCB-152	5.67			
PCB-113	4.58				PCB-153	4580			E
PCB-114	43.8				PCB-154	156			
PCB-119	101				PCB-155	4.05			
PCB-120	18.4				PCB-156	212			
PCB-121	ND	0.197			PCB-157	55.5			
PCB-122	27.4				PCB-158/160	320			
PCB-123	52.3				PCB-159	ND	0.556		
PCB-124	133				PCB-166	7.29			
PCB-126	15.7				PCB-167	160			

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-ST-MS-COMP3-01-2014-10-22	QC Batch: B5A0043	Lab Sample: B5A0043-DUP1
Source LabNumber: 1400960-03	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 15:47 Column: ZB-1 Analyst: MAS
Matrix: Tissue		
Sample Size: 10.9 g		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-168	7.05				PCB-201	52.5			
PCB-169	0.579				PCB-202	122			
PCB-170	61.3				PCB-204	ND	0.133		
PCB-171	190				PCB-205	1.30			
PCB-172	9.83				PCB-206	1.75			
PCB-173	0.784				PCB-207	0.241			J
PCB-174	8.15				PCB-208	ND		0.459	
PCB-175	31.7				PCB-209	0.987			
PCB-176	86.1				Total monoCB	1.24			
PCB-177	466				Total diCB	127			B
PCB-178	210				Total triCB	1070			
PCB-179	358				Total tetraCB	8160			B
PCB-180	369				Total pentaCB	18000			
PCB-181	0.707				Total hexaCB	16000			
PCB-182/187	1360				Total heptaCB	3720			
PCB-183	475				Total octaCB	234			
PCB-184	3.62				Total nonaCB	1.99		2.45	
PCB-185	5.26				DecaCB	0.987			
PCB-186	ND	0.202			Total PCB	47400			B
PCB-188	8.67								
PCB-189	14.2								
PCB-190	43.8								
PCB-191	6.80								
PCB-192	0.453			J					
PCB-193	18.3								
PCB-194	14.5								
PCB-195	2.06								
PCB-196/203	22.5								
PCB-197	14.2								
PCB-198	0.412			J					
PCB-199	4.70								
PCB-200	ND		0.310						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: Duplicate

EPA Method 1668C

Source Client ID: OA-ST-MS-COMP3-01-2014-10-22	QC Batch: B5A0043	Lab Sample: B5A0043-DUP1
Source LabNumber: 1400960-03	Date Extracted: 14-Jan-2015 10:53	Date Analyzed: 20-Jan-15 15:47 Column: ZB-1 Analyst: MAS
Matrix: Tissue		
Sample Size: 10.9 g		

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	82.7	5-145		13C-PCB-156	76.1	10-145	
13C-PCB-3	79.5	5-145		13C-PCB-157	74.4	10-145	
13C-PCB-4	73.6	5-145		13C-PCB-159	76.0	10-145	
13C-PCB-11	76.6	5-145		13C-PCB-167	76.8	10-145	
13C-PCB-9	75.2	5-145		13C-PCB-169	64.7	10-145	
13C-PCB-19	61.7	5-145		13C-PCB-170	64.8	10-145	
13C-PCB-28	75.3	5-145		13C-PCB-180	66.6	10-145	
13C-PCB-32	67.1	5-145		13C-PCB-188	71.2	10-145	
13C-PCB-37	83.1	5-145		13C-PCB-189	52.2	10-145	
13C-PCB-47	75.8	5-145		13C-PCB-194	82.1	10-145	
13C-PCB-52	75.8	5-145		13C-PCB-202	62.9	10-145	
13C-PCB-54	62.5	5-145		13C-PCB-206	77.7	10-145	
13C-PCB-70	78.5	5-145		13C-PCB-208	86.5	10-145	
13C-PCB-77	78.4	10-145		13C-PCB-209	73.8	10-145	
13C-PCB-80	76.8	10-145		CRS 13C-PCB-79	80.5	10-145	
13C-PCB-81	78.9	10-145		13C-PCB-178	76.0	10-145	
13C-PCB-95	76.4	10-145					
13C-PCB-97	79.8	10-145					
13C-PCB-101	77.7	10-145					
13C-PCB-104	77.1	10-145					
13C-PCB-105	78.7	10-145					
13C-PCB-114	76.8	10-145					
13C-PCB-118	77.1	10-145					
13C-PCB-123	75.3	10-145					
13C-PCB-126	80.8	10-145					
13C-PCB-127	80.0	10-145					
13C-PCB-138	79.6	10-145					
13C-PCB-141	78.8	10-145					
13C-PCB-153	80.6	10-145					
13C-PCB-155	70.4	10-145					

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP4-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-04	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.1 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.45	Date Analyzed :	20-Jan-15 20:06	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.424			J	PCB-44	639			
PCB-2	0.436			J	PCB-45	58.9			
PCB-3	0.330			J	PCB-46	34.6			
PCB-4/10	6.01				PCB-47	420			
PCB-5/8	19.6				PCB-48/75	166			
PCB-6	3.86				PCB-50	3.81			
PCB-7/9	1.66			J	PCB-51	24.0			
PCB-11	77.7			B	PCB-52/69	1190			B
PCB-12/13	1.66			J	PCB-53	127			
PCB-14	ND	0.481			PCB-54	8.26			
PCB-15	15.8				PCB-55	26.9			
PCB-16/32	92.9				PCB-56/60	473			
PCB-17	49.9				PCB-57	9.73			
PCB-18	133				PCB-58	5.55			
PCB-19	14.8				PCB-61/70	1150			
PCB-20/21/33	84.3				PCB-62	ND	0.410		
PCB-22	54.5				PCB-63	43.3			
PCB-23	0.119			J	PCB-65	ND	0.423		
PCB-24/27	18.2				PCB-66/76	1150			
PCB-25	28.7				PCB-67	42.2			
PCB-26	38.2				PCB-68	13.0			
PCB-28	335				PCB-73	4.19			
PCB-29	0.895				PCB-74	513			
PCB-30	ND	0.345			PCB-77	111			
PCB-31	188				PCB-78	ND	0.156		
PCB-34	2.21				PCB-79	86.8			
PCB-35	8.93				PCB-80	ND	0.133		
PCB-36	10.5				PCB-81	6.36			
PCB-37	48.9				PCB-82	268			
PCB-38	24.0				PCB-83	1.02			
PCB-39	1.59				PCB-84/92	1050			
PCB-40	100				PCB-85/116	362			
PCB-41/64/71/72	619				PCB-86	ND	0.382		
PCB-42/59	231				PCB-87/117/125	824			
PCB-43/49	980				PCB-88/91	413			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP4-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-04	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.1 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.45	Date Analyzed :	20-Jan-15 20:06	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	17.4				PCB-136	339			
PCB-90/101	3690			E	PCB-137	51.1			
PCB-93	ND	0.367			PCB-138/163/164	3590			
PCB-94	20.5				PCB-139/149	2710			
PCB-95/98/102	1810				PCB-140	24.2			
PCB-96	20.5				PCB-141	53.7			
PCB-97	912				PCB-144	149			
PCB-99	2040			E	PCB-145	1.35			
PCB-100	52.1				PCB-146/165	799			
PCB-103	69.7				PCB-147	124			
PCB-104	4.30				PCB-148	10.3			
PCB-105	865				PCB-150	19.4			
PCB-106/118	3060			E	PCB-151	786			
PCB-107/109	268				PCB-152	5.50			
PCB-108/112	126				PCB-153	4740			E
PCB-110	2460			E	PCB-154	155			
PCB-111/115	47.1				PCB-155	3.90			
PCB-113	12.0				PCB-156	230			
PCB-114	45.8				PCB-157	65.7			
PCB-119	105				PCB-158/160	324			
PCB-120	21.2				PCB-159	ND	0.530		
PCB-121	ND	0.221			PCB-166	8.02			
PCB-122	30.8				PCB-167	165			
PCB-123	53.2				PCB-168	6.81			
PCB-124	139				PCB-169	0.709			
PCB-126	16.6				PCB-170	70.8			
PCB-127	ND	1.36			PCB-171	177			
PCB-128/162	505				PCB-172	9.68			
PCB-129	15.5				PCB-173	0.628			
PCB-130	268				PCB-174	7.80			
PCB-131	ND	0.330			PCB-175	33.3			
PCB-132/161	686				PCB-176	90.7			
PCB-133/142	122				PCB-177	439			
PCB-134/143	151				PCB-178	216			
PCB-135	480				PCB-179	368			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP4-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-04
Project:		Sample Size:	10.1 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.45	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 20:06
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	429				Total octaCB	245			
PCB-181	0.817				Total nonaCB	2.49		2.69	
PCB-182/187	1370				DecaCB	1.45			
PCB-183	500				Total PCB	49000			B
PCB-184	3.50								
PCB-185	6.07								
PCB-186	ND	0.227							
PCB-188	9.17								
PCB-189	15.8								
PCB-190	50.7								
PCB-191	7.58								
PCB-192	ND	0.249							
PCB-193	21.2								
PCB-194	17.5								
PCB-195	2.29								
PCB-196/203	29.5								
PCB-197	14.2								
PCB-198	0.400			J					
PCB-199	4.96								
PCB-200	0.338			J					
PCB-201	52.0								
PCB-202	122								
PCB-204	ND	0.304							
PCB-205	1.61								
PCB-206	1.89								
PCB-207	ND		0.195						
PCB-208	0.601								
PCB-209	1.45								
Total monoCB	1.19								
Total diCB	126			B					
Total triCB	1130								
Total tetraCB	8230			B					
Total pentaCB	18800								
Total hexaCB	16600								
Total heptaCB	3830								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP4-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-04
Project:		Sample Size:	10.1 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.45	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 20:06
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	97.8	5 -145		13C-PCB-170	77.2	10 -145	
13C-PCB-3	97.6	5 -145		13C-PCB-180	77.0	10 -145	
13C-PCB-4	78.7	5 -145		13C-PCB-188	74.9	10 -145	
13C-PCB-11	79.2	5 -145		13C-PCB-189	55.4	10 -145	
13C-PCB-9	81.4	5 -145		13C-PCB-194	87.7	10 -145	
13C-PCB-19	72.6	5 -145		13C-PCB-202	70.3	10 -145	
13C-PCB-28	78.8	5 -145		13C-PCB-206	89.3	10 -145	
13C-PCB-32	77.8	5 -145		13C-PCB-208	85.6	10 -145	
13C-PCB-37	101	5 -145		13C-PCB-209	84.2	10 -145	
13C-PCB-47	81.4	5 -145		CRS 13C-PCB-79	90.2	10 -145	
13C-PCB-52	80.3	5 -145		13C-PCB-178	80.3	10 -145	
13C-PCB-54	59.4	5 -145					
13C-PCB-70	86.6	5 -145					
13C-PCB-77	87.6	10 -145					
13C-PCB-80	89.7	10 -145					
13C-PCB-81	85.5	10 -145					
13C-PCB-95	85.3	10 -145					
13C-PCB-97	91.6	10 -145					
13C-PCB-101	86.4	10 -145					
13C-PCB-104	80.6	10 -145					
13C-PCB-105	83.9	10 -145					
13C-PCB-114	82.3	10 -145					
13C-PCB-118	85.3	10 -145					
13C-PCB-123	90.1	10 -145					
13C-PCB-126	94.2	10 -145					
13C-PCB-127	90.7	10 -145					
13C-PCB-138	87.0	10 -145					
13C-PCB-141	85.2	10 -145					
13C-PCB-153	81.4	10 -145					
13C-PCB-155	79.6	10 -145					
13C-PCB-156	81.2	10 -145					
13C-PCB-157	89.3	10 -145					
13C-PCB-159	84.2	10 -145					
13C-PCB-167	84.5	10 -145					
13C-PCB-169	81.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP5-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-05	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	11.3 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.745	Date Analyzed :	20-Jan-15 21:10	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.297			J	PCB-44	410			
PCB-2	0.265			J	PCB-45	39.1			
PCB-3	0.211			J	PCB-46	22.4			
PCB-4/10	3.99				PCB-47	262			
PCB-5/8	13.2				PCB-48/75	92.4			
PCB-6	2.57				PCB-50	2.34			
PCB-7/9	ND	0.839			PCB-51	21.6			
PCB-11	46.2			B	PCB-52/69	726			B
PCB-12/13	1.08			J	PCB-53	86.5			
PCB-14	ND	0.737			PCB-54	5.38			
PCB-15	9.94				PCB-55	17.4			
PCB-16/32	57.0				PCB-56/60	306			
PCB-17	30.0				PCB-57	6.57			
PCB-18	77.1				PCB-58	3.96			
PCB-19	8.31				PCB-61/70	696			
PCB-20/21/33	61.7				PCB-62	ND	0.264		
PCB-22	44.2				PCB-63	27.5			
PCB-23	0.163			J	PCB-65	ND	0.272		
PCB-24/27	10.5				PCB-66/76	753			
PCB-25	19.1				PCB-67	26.6			
PCB-26	26.9				PCB-68	9.11			
PCB-28	241				PCB-73	2.24			
PCB-29	0.659				PCB-74	332			
PCB-30	ND	0.0999			PCB-77	64.1			
PCB-31	118				PCB-78	ND	0.347		
PCB-34	1.39				PCB-79	58.0			
PCB-35	5.07				PCB-80	ND	0.286		
PCB-36	6.48				PCB-81	3.32			
PCB-37	32.3				PCB-82	176			
PCB-38	13.9				PCB-83	0.858			
PCB-39	0.894				PCB-84/92	685			
PCB-40	65.6				PCB-85/116	254			
PCB-41/64/71/72	409				PCB-86	ND	0.316		
PCB-42/59	152				PCB-87/117/125	551			
PCB-43/49	590				PCB-88/91	265			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP5-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-05
Project:		Sample Size:	11.3 g	QC Batch:	B5A0043
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.745	Date Received:	16-Dec-2014 8:50
				Date Extracted:	14-Jan-2015 10:53
				Date Analyzed:	20-Jan-15 21:10
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	13.1				PCB-136	225			
PCB-90/101	2460				PCB-137	34.3			
PCB-93	ND	0.298			PCB-138/163/164	2580			
PCB-94	13.3				PCB-139/149	1850			
PCB-95/98/102	1140				PCB-140	16.6			
PCB-96	12.6				PCB-141	35.5			
PCB-97	604				PCB-144	87.4			
PCB-99	1360			E	PCB-145	0.779			
PCB-100	31.7				PCB-146/165	561			
PCB-103	42.6				PCB-147	88.5			
PCB-104	2.88				PCB-148	5.58			
PCB-105	593				PCB-150	12.4			
PCB-106/118	2090				PCB-151	522			
PCB-107/109	181				PCB-152	3.68			
PCB-108/112	85.5				PCB-153	3480			E
PCB-110	1680			E	PCB-154	105			
PCB-111/115	24.3				PCB-155	2.87			
PCB-113	4.94				PCB-156	162			
PCB-114	31.5				PCB-157	46.0			
PCB-119	69.1				PCB-158/160	235			
PCB-120	12.2				PCB-159	ND	0.550		
PCB-121	ND	0.180			PCB-166	5.76			
PCB-122	19.9				PCB-167	116			
PCB-123	36.9				PCB-168	3.79			
PCB-124	91.2				PCB-169	0.463			
PCB-126	10.7				PCB-170	46.9			
PCB-127	ND	0.990			PCB-171	136			
PCB-128/162	360				PCB-172	6.72			
PCB-129	9.92				PCB-173	0.338			J
PCB-130	198				PCB-174	5.92			
PCB-131	ND	0.425			PCB-175	26.4			
PCB-132/161	435				PCB-176	67.5			
PCB-133/142	85.7				PCB-177	316			
PCB-134/143	103				PCB-178	159			
PCB-135	343				PCB-179	263			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP5-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-05
Project:		Sample Size:	11.3 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.745	QC Batch:	B5A0043
				Date Analyzed:	20-Jan-15 21:10
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	284				Total octaCB	185			
PCB-181	0.506				Total nonaCB	0.767		2.27	
PCB-182/187	1050				DecaCB	2.00			
PCB-183	391				Total PCB	33300			B
PCB-184	2.66								
PCB-185	3.88								
PCB-186	ND	0.255							
PCB-188	6.65								
PCB-189	10.8								
PCB-190	35.9								
PCB-191	4.95								
PCB-192	ND	0.279							
PCB-193	13.4								
PCB-194	12.6								
PCB-195	2.05								
PCB-196/203	20.2								
PCB-197	11.3								
PCB-198	0.364			J					
PCB-199	4.18								
PCB-200	0.287			J					
PCB-201	39.4								
PCB-202	93.1								
PCB-204	ND	0.194							
PCB-205	1.18								
PCB-206	ND		1.51						
PCB-207	0.231			J					
PCB-208	0.537								
PCB-209	2.00								
Total monoCB	0.773								
Total diCB	77.0			B					
Total triCB	754								
Total tetraCB	5190			B					
Total pentaCB	12500								
Total hexaCB	11700								
Total heptaCB	2830								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: OA-ST-MS-COMP5-01-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-05
Project:		Sample Size:	11.3 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.745	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 21:10
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	86.7	5 -145		13C-PCB-170	74.7	10 -145	
13C-PCB-3	86.8	5 -145		13C-PCB-180	73.8	10 -145	
13C-PCB-4	67.3	5 -145		13C-PCB-188	69.4	10 -145	
13C-PCB-11	73.7	5 -145		13C-PCB-189	52.7	10 -145	
13C-PCB-9	72.7	5 -145		13C-PCB-194	78.4	10 -145	
13C-PCB-19	67.5	5 -145		13C-PCB-202	69.2	10 -145	
13C-PCB-28	64.3	5 -145		13C-PCB-206	78.3	10 -145	
13C-PCB-32	71.6	5 -145		13C-PCB-208	80.4	10 -145	
13C-PCB-37	86.7	5 -145		13C-PCB-209	77.6	10 -145	
13C-PCB-47	74.2	5 -145		CRS 13C-PCB-79	81.8	10 -145	
13C-PCB-52	74.6	5 -145		13C-PCB-178	75.8	10 -145	
13C-PCB-54	56.5	5 -145					
13C-PCB-70	79.1	5 -145					
13C-PCB-77	81.0	10 -145					
13C-PCB-80	81.4	10 -145					
13C-PCB-81	78.6	10 -145					
13C-PCB-95	78.9	10 -145					
13C-PCB-97	83.2	10 -145					
13C-PCB-101	78.5	10 -145					
13C-PCB-104	76.6	10 -145					
13C-PCB-105	85.0	10 -145					
13C-PCB-114	82.2	10 -145					
13C-PCB-118	77.4	10 -145					
13C-PCB-123	81.0	10 -145					
13C-PCB-126	83.7	10 -145					
13C-PCB-127	83.6	10 -145					
13C-PCB-138	77.6	10 -145					
13C-PCB-141	77.5	10 -145					
13C-PCB-153	81.2	10 -145					
13C-PCB-155	72.8	10 -145					
13C-PCB-156	82.2	10 -145					
13C-PCB-157	87.3	10 -145					
13C-PCB-159	75.2	10 -145					
13C-PCB-167	76.3	10 -145					
13C-PCB-169	78.4	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP1-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-06	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.07	Date Analyzed :	20-Jan-15 22:15	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.295			J	PCB-44	754			
PCB-2	0.311			J	PCB-45	72.7			
PCB-3	0.246			J	PCB-46	42.8			
PCB-4/10	5.90				PCB-47	517			
PCB-5/8	12.3				PCB-48/75	167			
PCB-6	2.25				PCB-50	3.80			
PCB-7/9	1.08			J	PCB-51	66.0			
PCB-11	50.8			B	PCB-52/69	1530			B
PCB-12/13	1.41			J	PCB-53	202			
PCB-14	ND	0.677			PCB-54	19.4			
PCB-15	16.4				PCB-55	36.7			
PCB-16/32	91.4				PCB-56/60	596			
PCB-17	46.9				PCB-57	14.5			
PCB-18	125				PCB-58	7.81			
PCB-19	14.0				PCB-61/70	1270			
PCB-20/21/33	82.9				PCB-62	ND	0.388		
PCB-22	61.8				PCB-63	46.4			
PCB-23	0.144			J	PCB-65	ND	0.400		
PCB-24/27	17.2				PCB-66/76	1300			
PCB-25	32.3				PCB-67	44.6			
PCB-26	47.1				PCB-68	14.7			
PCB-28	385				PCB-73	8.43			
PCB-29	0.725				PCB-74	557			
PCB-30	ND	0.147			PCB-77	158			
PCB-31	185				PCB-78	ND	0.345		
PCB-34	2.17				PCB-79	110			
PCB-35	9.01				PCB-80	ND	0.306		
PCB-36	7.53				PCB-81	10.2			
PCB-37	61.1				PCB-82	373			
PCB-38	27.7				PCB-83	1.22			
PCB-39	1.47				PCB-84/92	1420			
PCB-40	123				PCB-85/116	517			
PCB-41/64/71/72	754				PCB-86	ND	0.336		
PCB-42/59	281				PCB-87/117/125	1160			
PCB-43/49	1200				PCB-88/91	584			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP1-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-06
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.07	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 22:15
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	29.4				PCB-136	518			
PCB-90/101	4940			E	PCB-137	77.4			
PCB-93	ND	0.332			PCB-138/163/164	4970			E
PCB-94	37.2				PCB-139/149	3900			E
PCB-95/98/102	2580				PCB-140	30.4			
PCB-96	33.9				PCB-141	94.8			
PCB-97	1200				PCB-144	205			
PCB-99	2600			E	PCB-145	1.68			
PCB-100	98.0				PCB-146/165	1080			
PCB-103	117				PCB-147	209			
PCB-104	12.6				PCB-148	13.3			
PCB-105	1180				PCB-150	33.2			
PCB-106/118	3760			E	PCB-151	1180			
PCB-107/109	323				PCB-152	12.4			
PCB-108/112	175				PCB-153	6160			E
PCB-110	3480			E	PCB-154	254			
PCB-111/115	50.3				PCB-155	5.20			
PCB-113	9.29				PCB-156	302			
PCB-114	60.1				PCB-157	80.6			
PCB-119	151				PCB-158/160	504			
PCB-120	21.3				PCB-159	ND	0.422		
PCB-121	ND	0.200			PCB-166	9.36			
PCB-122	39.8				PCB-167	207			
PCB-123	66.7				PCB-168	7.28			
PCB-124	182				PCB-169	0.845			
PCB-126	23.2				PCB-170	113			
PCB-127	ND	1.18			PCB-171	269			
PCB-128/162	696				PCB-172	15.1			
PCB-129	30.9				PCB-173	0.698			
PCB-130	382				PCB-174	17.7			
PCB-131	ND	0.695			PCB-175	46.7			
PCB-132/161	1090				PCB-176	129			
PCB-133/142	166				PCB-177	631			
PCB-134/143	235				PCB-178	284			
PCB-135	668				PCB-179	500			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP1-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-06
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.07	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 22:15
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	599				Total octaCB	284			
PCB-181	0.885				Total nonaCB	4.03			
PCB-182/187	1850				DecaCB	3.37			
PCB-183	683				Total PCB	65100			B
PCB-184	3.51								
PCB-185	9.30								
PCB-186	ND	0.329							
PCB-188	12.8								
PCB-189	14.5								
PCB-190	68.1								
PCB-191	7.90								
PCB-192	ND	0.403							
PCB-193	29.2								
PCB-194	23.7								
PCB-195	4.12								
PCB-196/203	37.2								
PCB-197	17.8								
PCB-198	0.493			J					
PCB-199	7.99								
PCB-200	0.578								
PCB-201	55.8								
PCB-202	134								
PCB-204	ND	0.355							
PCB-205	2.02								
PCB-206	2.78								
PCB-207	0.427			J					
PCB-208	0.827								
PCB-209	3.37								
Total monoCB	0.852								
Total diCB	90.2			B					
Total triCB	1200								
Total tetraCB	9910			B					
Total pentaCB	25200								
Total hexaCB	23100								
Total heptaCB	5280								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP1-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-06
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.07	QC Batch:	B5A0043
				Date Analyzed :	20-Jan-15 22:15
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	112	5 -145		13C-PCB-170	78.9	10 -145	
13C-PCB-3	111	5 -145		13C-PCB-180	78.1	10 -145	
13C-PCB-4	85.2	5 -145		13C-PCB-188	80.0	10 -145	
13C-PCB-11	85.8	5 -145		13C-PCB-189	10.1	10 -145	
13C-PCB-9	87.8	5 -145		13C-PCB-194	95.5	10 -145	
13C-PCB-19	82.2	5 -145		13C-PCB-202	74.7	10 -145	
13C-PCB-28	74.9	5 -145		13C-PCB-206	94.9	10 -145	
13C-PCB-32	84.7	5 -145		13C-PCB-208	93.7	10 -145	
13C-PCB-37	97.1	5 -145		13C-PCB-209	97.3	10 -145	
13C-PCB-47	82.9	5 -145		CRS 13C-PCB-79	91.6	10 -145	
13C-PCB-52	80.5	5 -145		13C-PCB-178	88.0	10 -145	
13C-PCB-54	65.3	5 -145					
13C-PCB-70	85.3	5 -145					
13C-PCB-77	86.9	10 -145					
13C-PCB-80	87.1	10 -145					
13C-PCB-81	86.6	10 -145					
13C-PCB-95	89.3	10 -145					
13C-PCB-97	95.5	10 -145					
13C-PCB-101	92.3	10 -145					
13C-PCB-104	89.4	10 -145					
13C-PCB-105	90.7	10 -145					
13C-PCB-114	92.3	10 -145					
13C-PCB-118	87.9	10 -145					
13C-PCB-123	94.4	10 -145					
13C-PCB-126	102	10 -145					
13C-PCB-127	91.0	10 -145					
13C-PCB-138	84.8	10 -145					
13C-PCB-141	84.9	10 -145					
13C-PCB-153	85.0	10 -145					
13C-PCB-155	84.8	10 -145					
13C-PCB-156	89.1	10 -145					
13C-PCB-157	96.4	10 -145					
13C-PCB-159	89.2	10 -145					
13C-PCB-167	77.9	10 -145					
13C-PCB-169	82.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP2-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-07	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.18	Date Analyzed :	17-Jan-15 17:33	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.761				PCB-44	672			
PCB-2	0.960				PCB-45	69.1			
PCB-3	0.915				PCB-46	40.0			
PCB-4/10	5.53				PCB-47	521			
PCB-5/8	13.3				PCB-48/75	143			
PCB-6	2.72				PCB-50	4.00			
PCB-7/9	ND	0.994			PCB-51	80.3			
PCB-11	57.8			B	PCB-52/69	1470			B
PCB-12/13	1.69			J	PCB-53	201			
PCB-14	ND	0.937			PCB-54	18.9			
PCB-15	17.0				PCB-55	37.5			
PCB-16/32	107				PCB-56/60	534			
PCB-17	55.4				PCB-57	14.3			
PCB-18	128				PCB-58	6.55			
PCB-19	15.6				PCB-61/70	1250			
PCB-20/21/33	83.0				PCB-62	ND	0.384		
PCB-22	58.9				PCB-63	43.2			
PCB-23	ND	0.221			PCB-65	ND	0.396		
PCB-24/27	18.1				PCB-66/76	1230			
PCB-25	27.3				PCB-67	44.7			
PCB-26	50.0				PCB-68	12.2			
PCB-28	335				PCB-73	7.69			
PCB-29	0.741				PCB-74	526			
PCB-30	ND	0.107			PCB-77	138			
PCB-31	156				PCB-78	ND	0.364		
PCB-34	2.46				PCB-79	108			
PCB-35	8.18				PCB-80	ND	0.323		
PCB-36	8.59				PCB-81	9.74			
PCB-37	56.5				PCB-82	396			
PCB-38	43.2				PCB-83	1.42			
PCB-39	1.52				PCB-84/92	1550			
PCB-40	109				PCB-85/116	563			
PCB-41/64/71/72	663				PCB-86	ND	0.299		
PCB-42/59	242				PCB-87/117/125	1300			
PCB-43/49	1140				PCB-88/91	663			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP2-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-07	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.18	Date Analyzed :	17-Jan-15 17:33	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	33.2				PCB-136	575			
PCB-90/101	5360			E	PCB-137	59.5			
PCB-93	ND	0.286			PCB-138/163/164	4880			E
PCB-94	41.9				PCB-139/149	4350			E
PCB-95/98/102	2860				PCB-140	35.6			
PCB-96	37.2				PCB-141	71.3			
PCB-97	1330				PCB-144	251			
PCB-99	2870			E	PCB-145	1.87			
PCB-100	116				PCB-146/165	1100			
PCB-103	132				PCB-147	237			
PCB-104	15.2				PCB-148	17.9			
PCB-105	1250				PCB-150	37.8			
PCB-106/118	4160			E	PCB-151	1340			
PCB-107/109	347				PCB-152	14.0			
PCB-108/112	187				PCB-153	6350			E
PCB-110	3860			E	PCB-154	293			
PCB-111/115	55.3				PCB-155	6.19			
PCB-113	8.08				PCB-156	284			
PCB-114	60.4				PCB-157	74.5			
PCB-119	168				PCB-158/160	435			
PCB-120	27.3				PCB-159	ND	0.530		
PCB-121	ND	0.172			PCB-166	9.32			
PCB-122	40.0				PCB-167	202			
PCB-123	77.5				PCB-168	6.61			
PCB-124	182				PCB-169	0.970			
PCB-126	25.4				PCB-170	87.6			
PCB-127	ND	1.72			PCB-171	274			
PCB-128/162	692				PCB-172	13.8			
PCB-129	21.9				PCB-173	0.511			
PCB-130	380				PCB-174	12.5			
PCB-131	ND	0.848			PCB-175	50.3			
PCB-132/161	1040				PCB-176	142			
PCB-133/142	175				PCB-177	665			
PCB-134/143	235				PCB-178	314			
PCB-135	728				PCB-179	559			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP2-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-07	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.18	Date Analyzed :	17-Jan-15 17:33	Column:	ZB-1
				Analyst:	DMS		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	504				Total octaCB	298			
PCB-181	ND	0.444			Total nonaCB	3.46			
PCB-182/187	2020				DecaCB	2.04			
PCB-183	748				Total PCB	68100			B
PCB-184	3.98								
PCB-185	7.30								
PCB-186	ND	0.312							
PCB-188	14.4								
PCB-189	17.8								
PCB-190	58.6								
PCB-191	9.70								
PCB-192	ND	0.345							
PCB-193	25.1								
PCB-194	19.8								
PCB-195	3.03								
PCB-196/203	32.9								
PCB-197	20.3								
PCB-198	ND		0.607						
PCB-199	7.25								
PCB-200	0.564								
PCB-201	68.4								
PCB-202	144								
PCB-204	ND	0.182							
PCB-205	1.76								
PCB-206	2.40								
PCB-207	0.381			J					
PCB-208	0.680								
PCB-209	2.04								
Total monoCB	2.64								
Total diCB	98.0			B					
Total triCB	1160								
Total tetraCB	9340			B					
Total pentaCB	27700								
Total hexaCB	23900								
Total heptaCB	5520								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP2-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-07
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.18	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 17:33
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	73.9	5 -145		13C-PCB-170	89.8	10 -145	
13C-PCB-3	83.3	5 -145		13C-PCB-180	84.7	10 -145	
13C-PCB-4	69.7	5 -145		13C-PCB-188	82.9	10 -145	
13C-PCB-11	80.6	5 -145		13C-PCB-189	69.6	10 -145	
13C-PCB-9	75.5	5 -145		13C-PCB-194	92.0	10 -145	
13C-PCB-19	73.8	5 -145		13C-PCB-202	83.6	10 -145	
13C-PCB-28	77.8	5 -145		13C-PCB-206	92.2	10 -145	
13C-PCB-32	80.6	5 -145		13C-PCB-208	91.5	10 -145	
13C-PCB-37	79.8	5 -145		13C-PCB-209	98.8	10 -145	
13C-PCB-47	88.8	5 -145		CRS 13C-PCB-79	94.8	10 -145	
13C-PCB-52	86.7	5 -145		13C-PCB-178	96.5	10 -145	
13C-PCB-54	78.9	5 -145					
13C-PCB-70	85.8	5 -145					
13C-PCB-77	86.6	10 -145					
13C-PCB-80	87.3	10 -145					
13C-PCB-81	87.1	10 -145					
13C-PCB-95	85.8	10 -145					
13C-PCB-97	91.1	10 -145					
13C-PCB-101	87.7	10 -145					
13C-PCB-104	84.0	10 -145					
13C-PCB-105	67.9	10 -145					
13C-PCB-114	71.4	10 -145					
13C-PCB-118	86.9	10 -145					
13C-PCB-123	94.5	10 -145					
13C-PCB-126	67.3	10 -145					
13C-PCB-127	68.9	10 -145					
13C-PCB-138	85.1	10 -145					
13C-PCB-141	83.2	10 -145					
13C-PCB-153	81.0	10 -145					
13C-PCB-155	91.0	10 -145					
13C-PCB-156	81.7	10 -145					
13C-PCB-157	83.0	10 -145					
13C-PCB-159	83.2	10 -145					
13C-PCB-167	81.1	10 -145					
13C-PCB-169	82.2	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP3-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-08
Project:		Sample Size:	10.6 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.22	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 18:38
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.561				PCB-44	617			
PCB-2	0.805				PCB-45	59.6			
PCB-3	0.704				PCB-46	33.9			
PCB-4/10	5.56				PCB-47	457			
PCB-5/8	12.8				PCB-48/75	131			
PCB-6	2.55				PCB-50	3.74			
PCB-7/9	0.943			J	PCB-51	68.0			
PCB-11	54.6			B	PCB-52/69	1320			B
PCB-12/13	1.62			J	PCB-53	190			
PCB-14	ND	0.725			PCB-54	16.6			
PCB-15	15.9				PCB-55	35.7			
PCB-16/32	111				PCB-56/60	488			
PCB-17	59.1				PCB-57	12.6			
PCB-18	139				PCB-58	5.61			
PCB-19	16.1				PCB-61/70	1110			
PCB-20/21/33	75.3				PCB-62	ND	0.507		
PCB-22	43.4				PCB-63	37.7			
PCB-23	ND	0.110			PCB-65	0.221			J
PCB-24/27	19.0				PCB-66/76	1090			
PCB-25	21.7				PCB-67	43.4			
PCB-26	37.7				PCB-68	14.0			
PCB-28	305				PCB-73	7.47			
PCB-29	0.837				PCB-74	468			
PCB-30	0.169			J	PCB-77	121			
PCB-31	132				PCB-78	ND	0.462		
PCB-34	2.42				PCB-79	109			
PCB-35	6.64				PCB-80	ND	0.410		
PCB-36	7.28				PCB-81	11.3			
PCB-37	50.3				PCB-82	392			
PCB-38	44.4				PCB-83	0.991			
PCB-39	1.28				PCB-84/92	1530			
PCB-40	97.4				PCB-85/116	538			
PCB-41/64/71/72	699				PCB-86	ND	0.276		
PCB-42/59	235				PCB-87/117/125	1270			
PCB-43/49	978				PCB-88/91	636			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP3-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-08	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.6 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.22	Date Analyzed :	17-Jan-15 18:38	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	32.2				PCB-136	580			
PCB-90/101	5320			E	PCB-137	63.3			
PCB-93	ND	0.264			PCB-138/163/164	4900			E
PCB-94	40.3				PCB-139/149	4290			E
PCB-95/98/102	2810				PCB-140	35.5			
PCB-96	36.7				PCB-141	71.7			
PCB-97	1310				PCB-144	257			
PCB-99	2840			E	PCB-145	1.70			
PCB-100	117				PCB-146/165	1120			
PCB-103	129				PCB-147	242			
PCB-104	14.8				PCB-148	17.4			
PCB-105	1210				PCB-150	39.3			
PCB-106/118	4190			E	PCB-151	1380			
PCB-107/109	354				PCB-152	14.1			
PCB-108/112	184				PCB-153	6340			E
PCB-110	3850			E	PCB-154	304			
PCB-111/115	45.0				PCB-155	6.45			
PCB-113	ND		7.81		PCB-156	283			
PCB-114	60.5				PCB-157	74.9			
PCB-119	169				PCB-158/160	442			
PCB-120	22.4				PCB-159	ND	1.07		
PCB-121	ND	0.159			PCB-166	9.29			
PCB-122	40.5				PCB-167	203			
PCB-123	68.4				PCB-168	7.01			
PCB-124	188				PCB-169	0.971			
PCB-126	25.5				PCB-170	95.5			
PCB-127	ND	0.769			PCB-171	280			
PCB-128/162	685				PCB-172	14.6			
PCB-129	21.7				PCB-173	0.490			
PCB-130	365				PCB-174	13.9			
PCB-131	ND	1.83			PCB-175	53.3			
PCB-132/161	1060				PCB-176	152			
PCB-133/142	181				PCB-177	686			
PCB-134/143	238				PCB-178	338			
PCB-135	755				PCB-179	586			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP3-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-08
Project:		Sample Size:	10.6 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.22	QC Batch:	B5A0043
				Date Analyzed:	17-Jan-15 18:38
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	543				Total octaCB	306			
PCB-181	ND	0.304			Total nonaCB	3.19		3.93	
PCB-182/187	2120				DecaCB	2.22			
PCB-183	807				Total PCB	67200			B
PCB-184	4.12								
PCB-185	8.58								
PCB-186	ND	0.214							
PCB-188	15.5								
PCB-189	20.3								
PCB-190	62.8								
PCB-191	9.49								
PCB-192	ND	0.236							
PCB-193	28.6								
PCB-194	22.2								
PCB-195	3.83								
PCB-196/203	37.2								
PCB-197	20.7								
PCB-198	0.549								
PCB-199	7.86								
PCB-200	0.465			J					
PCB-201	66.7								
PCB-202	144								
PCB-204	ND	0.206							
PCB-205	2.08								
PCB-206	2.74								
PCB-207	0.455			J					
PCB-208	ND		0.737						
PCB-209	2.22								
Total monoCB	2.07								
Total diCB	94.0			B					
Total triCB	1070								
Total tetraCB	8460			B					
Total pentaCB	27400								
Total hexaCB	24000								
Total heptaCB	5840								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP3-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-08
Project:		Sample Size:	10.6 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.22	QC Batch:	B5A0043
				Date Analyzed:	17-Jan-15 18:38
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	64.0	5 -145		13C-PCB-170	88.3	10 -145	
13C-PCB-3	77.0	5 -145		13C-PCB-180	80.7	10 -145	
13C-PCB-4	70.3	5 -145		13C-PCB-188	76.3	10 -145	
13C-PCB-11	78.8	5 -145		13C-PCB-189	58.2	10 -145	
13C-PCB-9	76.6	5 -145		13C-PCB-194	82.4	10 -145	
13C-PCB-19	61.7	5 -145		13C-PCB-202	79.6	10 -145	
13C-PCB-28	79.2	5 -145		13C-PCB-206	90.8	10 -145	
13C-PCB-32	66.2	5 -145		13C-PCB-208	87.3	10 -145	
13C-PCB-37	76.0	5 -145		13C-PCB-209	93.8	10 -145	
13C-PCB-47	80.6	5 -145		CRS 13C-PCB-79	85.0	10 -145	
13C-PCB-52	85.6	5 -145		13C-PCB-178	89.7	10 -145	
13C-PCB-54	74.7	5 -145					
13C-PCB-70	83.8	5 -145					
13C-PCB-77	79.0	10 -145					
13C-PCB-80	81.2	10 -145					
13C-PCB-81	82.2	10 -145					
13C-PCB-95	84.3	10 -145					
13C-PCB-97	91.1	10 -145					
13C-PCB-101	87.3	10 -145					
13C-PCB-104	81.6	10 -145					
13C-PCB-105	58.9	10 -145					
13C-PCB-114	64.0	10 -145					
13C-PCB-118	82.1	10 -145					
13C-PCB-123	95.2	10 -145					
13C-PCB-126	61.7	10 -145					
13C-PCB-127	60.5	10 -145					
13C-PCB-138	81.5	10 -145					
13C-PCB-141	79.7	10 -145					
13C-PCB-153	77.5	10 -145					
13C-PCB-155	89.7	10 -145					
13C-PCB-156	77.7	10 -145					
13C-PCB-157	81.3	10 -145					
13C-PCB-159	80.5	10 -145					
13C-PCB-167	79.3	10 -145					
13C-PCB-169	82.5	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP4-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-09	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	Date Analyzed :	17-Jan-15 19:42	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.420			J	PCB-44	688			
PCB-2	0.517				PCB-45	66.9			
PCB-3	0.449			J	PCB-46	39.5			
PCB-4/10	6.78				PCB-47	479			
PCB-5/8	15.1				PCB-48/75	153			
PCB-6	3.15				PCB-50	3.37			
PCB-7/9	1.21			J	PCB-51	75.0			
PCB-11	65.4			B	PCB-52/69	1450			B
PCB-12/13	1.88			J	PCB-53	202			
PCB-14	ND	0.597			PCB-54	18.9			
PCB-15	19.4				PCB-55	37.1			
PCB-16/32	121				PCB-56/60	535			
PCB-17	60.1				PCB-57	15.4			
PCB-18	161				PCB-58	7.40			
PCB-19	18.5				PCB-61/70	1190			
PCB-20/21/33	86.6				PCB-62	ND	0.457		
PCB-22	57.4				PCB-63	46.1			
PCB-23	ND	0.314			PCB-65	ND	0.471		
PCB-24/27	23.0				PCB-66/76	1270			
PCB-25	28.6				PCB-67	46.9			
PCB-26	41.2				PCB-68	13.8			
PCB-28	334				PCB-73	7.35			
PCB-29	0.856				PCB-74	531			
PCB-30	ND		0.189		PCB-77	148			
PCB-31	153				PCB-78	ND	0.390		
PCB-34	2.92				PCB-79	110			
PCB-35	7.37				PCB-80	ND	0.345		
PCB-36	8.24				PCB-81	11.1			
PCB-37	57.3				PCB-82	409			
PCB-38	47.1				PCB-83	1.42			
PCB-39	1.41				PCB-84/92	1650			
PCB-40	118				PCB-85/116	590			
PCB-41/64/71/72	707				PCB-86	ND	0.345		
PCB-42/59	259				PCB-87/117/125	1350			
PCB-43/49	963				PCB-88/91	682			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP4-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-09	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	Date Analyzed :	17-Jan-15 19:42	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	36.0				PCB-136	629			
PCB-90/101	5610			E	PCB-137	64.4			
PCB-93	ND	0.335			PCB-138/163/164	5060			E
PCB-94	44.3				PCB-139/149	4700			E
PCB-95/98/102	3020				PCB-140	38.3			
PCB-96	39.0				PCB-141	62.0			
PCB-97	1370				PCB-144	276			
PCB-99	3050			E	PCB-145	1.92			
PCB-100	124				PCB-146/165	1090			
PCB-103	142				PCB-147	264			
PCB-104	15.7				PCB-148	18.4			
PCB-105	1250				PCB-150	41.6			
PCB-106/118	4270			E	PCB-151	1490			E
PCB-107/109	374				PCB-152	15.5			
PCB-108/112	197				PCB-153	6440			E
PCB-110	4050			E	PCB-154	320			
PCB-111/115	47.2				PCB-155	6.38			
PCB-113	9.88				PCB-156	284			
PCB-114	61.9				PCB-157	80.0			
PCB-119	180				PCB-158/160	475			
PCB-120	28.6				PCB-159	ND	0.463		
PCB-121	ND	0.202			PCB-166	10.3			
PCB-122	40.6				PCB-167	205			
PCB-123	78.8				PCB-168	7.79			
PCB-124	198				PCB-169	0.958			
PCB-126	26.3				PCB-170	87.7			
PCB-127	ND	1.60			PCB-171	281			
PCB-128/162	686				PCB-172	10.7			
PCB-129	20.9				PCB-173	ND		0.418	
PCB-130	377				PCB-174	9.54			
PCB-131	ND	0.743			PCB-175	51.1			
PCB-132/161	1030				PCB-176	154			
PCB-133/142	177				PCB-177	682			
PCB-134/143	248				PCB-178	333			
PCB-135	793				PCB-179	595			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP4-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-09
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 19:42
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	564				Total octaCB	291			
PCB-181	ND	0.413			Total nonaCB	2.82		3.11	
PCB-182/187	2090				DecaCB	3.32			
PCB-183	781				Total PCB	70500			B
PCB-184	4.20								
PCB-185	7.08								
PCB-186	ND	0.304							
PCB-188	14.9								
PCB-189	24.6								
PCB-190	68.8								
PCB-191	9.46								
PCB-192	ND	0.320							
PCB-193	26.0								
PCB-194	18.4								
PCB-195	2.96								
PCB-196/203	32.2								
PCB-197	20.9								
PCB-198	0.352			J					
PCB-199	5.41								
PCB-200	0.420			J					
PCB-201	64.0								
PCB-202	145								
PCB-204	ND	0.265							
PCB-205	1.91								
PCB-206	2.13								
PCB-207	ND		0.285						
PCB-208	0.687								
PCB-209	3.32								
Total monoCB	1.39								
Total diCB	113			B					
Total triCB	1210								
Total tetraCB	9190			B					
Total pentaCB	28900								
Total hexaCB	24900								
Total heptaCB	5800								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP4-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-09
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	QC Batch:	B5A0043
				Date Analyzed:	17-Jan-15 19:42
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	71.6	5 -145		13C-PCB-170	94.3	10 -145	
13C-PCB-3	79.4	5 -145		13C-PCB-180	89.8	10 -145	
13C-PCB-4	74.8	5 -145		13C-PCB-188	83.0	10 -145	
13C-PCB-11	83.7	5 -145		13C-PCB-189	32.4	10 -145	
13C-PCB-9	80.5	5 -145		13C-PCB-194	87.7	10 -145	
13C-PCB-19	63.9	5 -145		13C-PCB-202	85.0	10 -145	
13C-PCB-28	80.2	5 -145		13C-PCB-206	104	10 -145	
13C-PCB-32	68.4	5 -145		13C-PCB-208	102	10 -145	
13C-PCB-37	83.6	5 -145		13C-PCB-209	113	10 -145	
13C-PCB-47	78.1	5 -145		CRS 13C-PCB-79	89.0	10 -145	
13C-PCB-52	84.9	5 -145		13C-PCB-178	93.7	10 -145	
13C-PCB-54	76.5	5 -145					
13C-PCB-70	81.7	5 -145					
13C-PCB-77	87.2	10 -145					
13C-PCB-80	85.8	10 -145					
13C-PCB-81	85.3	10 -145					
13C-PCB-95	86.7	10 -145					
13C-PCB-97	93.0	10 -145					
13C-PCB-101	88.0	10 -145					
13C-PCB-104	85.8	10 -145					
13C-PCB-105	63.7	10 -145					
13C-PCB-114	69.8	10 -145					
13C-PCB-118	86.2	10 -145					
13C-PCB-123	96.2	10 -145					
13C-PCB-126	65.7	10 -145					
13C-PCB-127	64.0	10 -145					
13C-PCB-138	85.6	10 -145					
13C-PCB-141	86.2	10 -145					
13C-PCB-153	83.8	10 -145					
13C-PCB-155	88.3	10 -145					
13C-PCB-156	89.2	10 -145					
13C-PCB-157	89.4	10 -145					
13C-PCB-159	85.7	10 -145					
13C-PCB-167	82.9	10 -145					
13C-PCB-169	89.7	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP5-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-10
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.03	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 20:47
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.700				PCB-44	586			
PCB-2	1.15				PCB-45	56.7			
PCB-3	0.979				PCB-46	33.9			
PCB-4/10	5.16				PCB-47	400			
PCB-5/8	11.9				PCB-48/75	111			
PCB-6	2.39				PCB-50	3.00			
PCB-7/9	0.872			J	PCB-51	74.4			
PCB-11	48.4			B	PCB-52/69	1130			B
PCB-12/13	ND		0.956		PCB-53	159			
PCB-14	ND	0.746			PCB-54	15.5			
PCB-15	15.7				PCB-55	31.0			
PCB-16/32	99.9				PCB-56/60	433			
PCB-17	51.8				PCB-57	12.1			
PCB-18	107				PCB-58	5.64			
PCB-19	15.1				PCB-61/70	906			
PCB-20/21/33	60.9				PCB-62	ND	0.479		
PCB-22	41.5				PCB-63	33.4			
PCB-23	ND	0.321			PCB-65	ND	0.494		
PCB-24/27	16.5				PCB-66/76	896			
PCB-25	19.9				PCB-67	39.0			
PCB-26	36.2				PCB-68	10.2			
PCB-28	225				PCB-73	5.98			
PCB-29	ND		0.423		PCB-74	378			
PCB-30	ND	0.136			PCB-77	107			
PCB-31	117				PCB-78	ND	0.446		
PCB-34	2.21				PCB-79	95.5			
PCB-35	4.74				PCB-80	ND	0.378		
PCB-36	5.23				PCB-81	12.6			
PCB-37	37.4				PCB-82	343			
PCB-38	33.9				PCB-83	0.972			
PCB-39	0.998				PCB-84/92	1310			
PCB-40	80.0				PCB-85/116	497			
PCB-41/64/71/72	525				PCB-86	ND	0.298		
PCB-42/59	231				PCB-87/117/125	1060			
PCB-43/49	884				PCB-88/91	565			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP5-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-10	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.03	Date Analyzed :	17-Jan-15 20:47	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	28.0				PCB-136	505			
PCB-90/101	4450			E	PCB-137	49.4			
PCB-93	ND	0.314			PCB-138/163/164	4170			
PCB-94	34.7				PCB-139/149	3770			E
PCB-95/98/102	2400				PCB-140	30.5			
PCB-96	30.4				PCB-141	50.0			
PCB-97	1090				PCB-144	197			
PCB-99	2420			E	PCB-145	1.54			
PCB-100	104				PCB-146/165	931			
PCB-103	117				PCB-147	228			
PCB-104	12.5				PCB-148	12.3			
PCB-105	980				PCB-150	33.2			
PCB-106/118	3460			E	PCB-151	1200			
PCB-107/109	297				PCB-152	12.3			
PCB-108/112	160				PCB-153	5340			E
PCB-110	3310			E	PCB-154	257			
PCB-111/115	42.1				PCB-155	5.39			
PCB-113	8.98				PCB-156	233			
PCB-114	53.3				PCB-157	62.3			
PCB-119	146				PCB-158/160	363			
PCB-120	21.9				PCB-159	ND	0.634		
PCB-121	ND	0.189			PCB-166	8.36			
PCB-122	32.8				PCB-167	169			
PCB-123	61.5				PCB-168	4.68			
PCB-124	159				PCB-169	0.825			
PCB-126	21.0				PCB-170	66.1			
PCB-127	ND	0.495			PCB-171	237			
PCB-128/162	568				PCB-172	9.77			
PCB-129	15.1				PCB-173	ND	0.298		
PCB-130	301				PCB-174	9.25			
PCB-131	ND	1.00			PCB-175	49.3			
PCB-132/161	773				PCB-176	127			
PCB-133/142	149				PCB-177	570			
PCB-134/143	202				PCB-178	281			
PCB-135	664				PCB-179	492			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP5-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-10
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.03	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 20:47
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	399				Total octaCB	255			
PCB-181	ND	0.244			Total nonaCB	2.37			
PCB-182/187	1780				DecaCB	1.50			
PCB-183	670				Total PCB	56800			B
PCB-184	3.60								
PCB-185	5.76								
PCB-186	ND	0.183							
PCB-188	12.6								
PCB-189	14.9								
PCB-190	50.0								
PCB-191	6.41								
PCB-192	ND	0.190							
PCB-193	18.4								
PCB-194	14.5								
PCB-195	2.85								
PCB-196/203	26.1								
PCB-197	18.0								
PCB-198	0.481			J					
PCB-199	6.50								
PCB-200	0.466			J					
PCB-201	60.7								
PCB-202	124								
PCB-204	ND	0.177							
PCB-205	1.38								
PCB-206	1.65								
PCB-207	0.252			J					
PCB-208	0.465			J					
PCB-209	1.50								
Total monoCB	2.83								
Total diCB	84.3		85.3	B					
Total triCB	876								
Total tetraCB	7250			B					
Total pentaCB	23200								
Total hexaCB	20300								
Total heptaCB	4800								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IA-ST-MS-COMP5-02-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-10
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.03	QC Batch:	B5A0043
				Date Analyzed:	17-Jan-15 20:47
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	61.0	5 -145		13C-PCB-170	83.4	10 -145	
13C-PCB-3	65.6	5 -145		13C-PCB-180	79.4	10 -145	
13C-PCB-4	64.6	5 -145		13C-PCB-188	73.0	10 -145	
13C-PCB-11	74.2	5 -145		13C-PCB-189	73.2	10 -145	
13C-PCB-9	71.1	5 -145		13C-PCB-194	82.8	10 -145	
13C-PCB-19	56.7	5 -145		13C-PCB-202	73.3	10 -145	
13C-PCB-28	82.0	5 -145		13C-PCB-206	102	10 -145	
13C-PCB-32	65.2	5 -145		13C-PCB-208	97.2	10 -145	
13C-PCB-37	92.5	5 -145		13C-PCB-209	108	10 -145	
13C-PCB-47	75.6	5 -145		CRS 13C-PCB-79	78.4	10 -145	
13C-PCB-52	75.2	5 -145		13C-PCB-178	83.0	10 -145	
13C-PCB-54	73.2	5 -145					
13C-PCB-70	78.4	5 -145					
13C-PCB-77	83.1	10 -145					
13C-PCB-80	75.6	10 -145					
13C-PCB-81	75.1	10 -145					
13C-PCB-95	76.3	10 -145					
13C-PCB-97	84.8	10 -145					
13C-PCB-101	80.5	10 -145					
13C-PCB-104	74.9	10 -145					
13C-PCB-105	55.1	10 -145					
13C-PCB-114	60.2	10 -145					
13C-PCB-118	79.8	10 -145					
13C-PCB-123	89.5	10 -145					
13C-PCB-126	55.9	10 -145					
13C-PCB-127	55.6	10 -145					
13C-PCB-138	75.2	10 -145					
13C-PCB-141	76.5	10 -145					
13C-PCB-153	73.7	10 -145					
13C-PCB-155	82.8	10 -145					
13C-PCB-156	78.4	10 -145					
13C-PCB-157	79.6	10 -145					
13C-PCB-159	77.2	10 -145					
13C-PCB-167	77.0	10 -145					
13C-PCB-169	80.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP1-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-11	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	11.1 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	Date Analyzed :	17-Jan-15 21:52	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.677				PCB-44	1360			E
PCB-2	0.802				PCB-45	129			
PCB-3	0.566				PCB-46	101			
PCB-4/10	11.7				PCB-47	1500			E
PCB-5/8	28.6				PCB-48/75	285			
PCB-6	6.25				PCB-50	11.2			
PCB-7/9	2.42				PCB-51	1680			E
PCB-11	152			B	PCB-52/69	4980			B, E
PCB-12/13	4.39				PCB-53	1110			
PCB-14	ND	0.922			PCB-54	191			
PCB-15	44.4				PCB-55	95.6			
PCB-16/32	397				PCB-56/60	1040			
PCB-17	164				PCB-57	62.4			
PCB-18	359				PCB-58	28.1			
PCB-19	50.5				PCB-61/70	2130			
PCB-20/21/33	277				PCB-62	ND	1.03		
PCB-22	322				PCB-63	87.1			
PCB-23	13.3				PCB-65	ND	1.06		
PCB-24/27	56.6				PCB-66/76	2090			
PCB-25	56.1				PCB-67	81.5			
PCB-26	156				PCB-68	26.1			
PCB-28	638				PCB-73	63.3			
PCB-29	1.59				PCB-74	1050			
PCB-30	ND		0.275		PCB-77	191			
PCB-31	420				PCB-78	ND	0.912		
PCB-34	12.4				PCB-79	221			
PCB-35	13.6				PCB-80	ND	0.805		
PCB-36	7.74				PCB-81	25.6			
PCB-37	154				PCB-82	471			
PCB-38	141				PCB-83	ND		1.57	
PCB-39	1.56				PCB-84/92	2990			E
PCB-40	188				PCB-85/116	626			
PCB-41/64/71/72	1660				PCB-86	ND	0.341		
PCB-42/59	495				PCB-87/117/125	1860			
PCB-43/49	3750			E	PCB-88/91	1970			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP1-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-11	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	11.1 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	Date Analyzed :	17-Jan-15 21:52	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	56.4				PCB-136	1640			E
PCB-90/101	10500			E	PCB-137	132			
PCB-93	ND	0.335			PCB-138/163/164	6990			E
PCB-94	269				PCB-139/149	11900			E
PCB-95/98/102	7740			E	PCB-140	66.2			
PCB-96	207				PCB-141	484			
PCB-97	1720			E	PCB-144	ND		339	
PCB-99	6760			E	PCB-145	2.80			
PCB-100	1000				PCB-146/165	2190			
PCB-103	878				PCB-147	1360			E
PCB-104	182				PCB-148	96.1			
PCB-105	1450			E	PCB-150	265			
PCB-106/118	5780			E	PCB-151	4430			E
PCB-107/109	501				PCB-152	120			
PCB-108/112	263				PCB-153	14800			E
PCB-110	6180			E	PCB-154	1930			E
PCB-111/115	60.7				PCB-155	40.8			
PCB-113	32.0				PCB-156	189			
PCB-114	87.7				PCB-157	77.2			
PCB-119	660				PCB-158/160	379			
PCB-120	42.1				PCB-159	ND	0.575		
PCB-121	ND	0.202			PCB-166	ND	0.615		
PCB-122	52.8				PCB-167	285			
PCB-123	93.3				PCB-168	45.9			
PCB-124	286				PCB-169	1.27			
PCB-126	36.5				PCB-170	154			
PCB-127	ND	0.886			PCB-171	381			
PCB-128/162	486				PCB-172	35.4			
PCB-129	44.8				PCB-173	ND	0.463		
PCB-130	257				PCB-174	84.3			
PCB-131	ND	1.01			PCB-175	62.8			
PCB-132/161	1780				PCB-176	390			
PCB-133/142	321				PCB-177	1530			E
PCB-134/143	469				PCB-178	1030			
PCB-135	1750			E	PCB-179	1840			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP1-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-11
Project:		Sample Size:	11.1 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	QC Batch:	B5A0043
				Date Analyzed:	17-Jan-15 21:52
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1320				Total octaCB	578			
PCB-181	ND	0.379			Total nonaCB	1.32			
PCB-182/187	6750			E	DecaCB	0.434			
PCB-183	1220				Total PCB	149000			B
PCB-184	9.67								
PCB-185	0.840								
PCB-186	ND	0.312							
PCB-188	71.9								
PCB-189	7.38								
PCB-190	2.71								
PCB-191	24.8								
PCB-192	ND	0.294							
PCB-193	210								
PCB-194	11.7								
PCB-195	0.721								
PCB-196/203	18.9								
PCB-197	37.3								
PCB-198	ND	0.253							
PCB-199	18.3								
PCB-200	0.262			J					
PCB-201	133								
PCB-202	357								
PCB-204	ND	0.178							
PCB-205	ND	0.122							
PCB-206	0.988								
PCB-207	0.127			J					
PCB-208	0.205			J					
PCB-209	0.434			J					
Total monoCB	2.04								
Total diCB	250			B					
Total triCB	3240								
Total tetraCB	24600			B					
Total pentaCB	52700								
Total hexaCB	52500		52800						
Total heptaCB	15100								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP1-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-11
Project:		Sample Size:	11.1 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.23	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 21:52
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	50.9	5 -145		13C-PCB-170	89.2	10 -145	
13C-PCB-3	62.8	5 -145		13C-PCB-180	84.4	10 -145	
13C-PCB-4	64.5	5 -145		13C-PCB-188	71.9	10 -145	
13C-PCB-11	74.5	5 -145		13C-PCB-189	61.0	10 -145	
13C-PCB-9	70.7	5 -145		13C-PCB-194	81.6	10 -145	
13C-PCB-19	57.2	5 -145		13C-PCB-202	77.3	10 -145	
13C-PCB-28	78.9	5 -145		13C-PCB-206	93.4	10 -145	
13C-PCB-32	59.9	5 -145		13C-PCB-208	87.4	10 -145	
13C-PCB-37	78.1	5 -145		13C-PCB-209	107	10 -145	
13C-PCB-47	76.0	5 -145		CRS 13C-PCB-79	82.5	10 -145	
13C-PCB-52	73.3	5 -145		13C-PCB-178	85.7	10 -145	
13C-PCB-54	71.2	5 -145					
13C-PCB-70	76.7	5 -145					
13C-PCB-77	80.3	10 -145					
13C-PCB-80	79.0	10 -145					
13C-PCB-81	79.6	10 -145					
13C-PCB-95	74.9	10 -145					
13C-PCB-97	84.3	10 -145					
13C-PCB-101	76.0	10 -145					
13C-PCB-104	74.4	10 -145					
13C-PCB-105	58.3	10 -145					
13C-PCB-114	57.0	10 -145					
13C-PCB-118	76.1	10 -145					
13C-PCB-123	87.4	10 -145					
13C-PCB-126	55.3	10 -145					
13C-PCB-127	58.8	10 -145					
13C-PCB-138	75.8	10 -145					
13C-PCB-141	76.7	10 -145					
13C-PCB-153	72.0	10 -145					
13C-PCB-155	79.7	10 -145					
13C-PCB-156	82.0	10 -145					
13C-PCB-157	84.4	10 -145					
13C-PCB-159	77.7	10 -145					
13C-PCB-167	74.2	10 -145					
13C-PCB-169	82.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP2-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-12	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.21	Date Analyzed :	17-Jan-15 22:56	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.672				PCB-44	1180			
PCB-2	0.756				PCB-45	155			
PCB-3	0.524				PCB-46	113			
PCB-4/10	13.1				PCB-47	1570			E
PCB-5/8	30.5				PCB-48/75	248			
PCB-6	6.60				PCB-50	11.8			
PCB-7/9	2.66				PCB-51	1600			E
PCB-11	156			B	PCB-52/69	5090			B, E
PCB-12/13	4.49				PCB-53	1220			
PCB-14	ND	0.858			PCB-54	196			
PCB-15	44.6				PCB-55	98.3			
PCB-16/32	416				PCB-56/60	1140			
PCB-17	175				PCB-57	62.0			
PCB-18	376				PCB-58	29.5			
PCB-19	53.2				PCB-61/70	2230			
PCB-20/21/33	328				PCB-62	ND	0.333		
PCB-22	360				PCB-63	84.5			
PCB-23	ND	0.200			PCB-65	ND	0.344		
PCB-24/27	61.5				PCB-66/76	2200			
PCB-25	58.4				PCB-67	87.6			
PCB-26	164				PCB-68	28.3			
PCB-28	645				PCB-73	61.5			
PCB-29	2.06				PCB-74	1110			
PCB-30	0.339			J	PCB-77	233			
PCB-31	445				PCB-78	ND	0.312		
PCB-34	15.7				PCB-79	231			
PCB-35	11.7				PCB-80	ND	0.267		
PCB-36	9.76				PCB-81	25.6			
PCB-37	165				PCB-82	531			
PCB-38	156				PCB-83	1.67			
PCB-39	1.88				PCB-84/92	3170			E
PCB-40	199				PCB-85/116	712			
PCB-41/64/71/72	1780				PCB-86	ND	0.477		
PCB-42/59	472				PCB-87/117/125	1920			
PCB-43/49	4010			E	PCB-88/91	2030			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP2-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-12	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.21	Date Analyzed :	17-Jan-15 22:56	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	53.8				PCB-136	1780			E
PCB-90/101	10900			E	PCB-137	127			
PCB-93	ND	0.483			PCB-138/163/164	7870			E
PCB-94	292				PCB-139/149	13100			E
PCB-95/98/102	8050			E	PCB-140	68.4			
PCB-96	226				PCB-141	467			
PCB-97	1800			E	PCB-144	474			
PCB-99	6920			E	PCB-145	3.35			
PCB-100	1110				PCB-146/165	2350			
PCB-103	943				PCB-147	1480			
PCB-104	188				PCB-148	111			
PCB-105	1560			E	PCB-150	288			
PCB-106/118	6100			E	PCB-151	4920			E
PCB-107/109	527				PCB-152	134			
PCB-108/112	275				PCB-153	15700			E
PCB-110	6500			E	PCB-154	2130			E
PCB-111/115	60.3				PCB-155	44.1			
PCB-113	31.6				PCB-156	203			
PCB-114	90.3				PCB-157	82.9			
PCB-119	701				PCB-158/160	500			
PCB-120	50.3				PCB-159	ND	0.329		
PCB-121	ND	0.291			PCB-166	ND	0.352		
PCB-122	54.5				PCB-167	323			
PCB-123	112				PCB-168	47.0			
PCB-124	308				PCB-169	1.55			
PCB-126	36.5				PCB-170	185			
PCB-127	ND	3.50			PCB-171	458			
PCB-128/162	593				PCB-172	40.3			
PCB-129	50.5				PCB-173	ND	0.391		
PCB-130	320				PCB-174	77.5			
PCB-131	ND	0.645			PCB-175	68.4			
PCB-132/161	1960				PCB-176	421			
PCB-133/142	344				PCB-177	1660			E
PCB-134/143	506				PCB-178	1090			
PCB-135	1920			E	PCB-179	1910			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP2-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-12
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.21	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 22:56
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1410				Total octaCB	629			
PCB-181	ND	0.320			Total nonaCB	1.00			
PCB-182/187	7080			E	DecaCB	0.407			
PCB-183	1420				Total PCB	159000			B
PCB-184	10.5								
PCB-185	0.840								
PCB-186	ND	0.253							
PCB-188	74.0								
PCB-189	8.22								
PCB-190	2.07								
PCB-191	39.1								
PCB-192	ND	0.248							
PCB-193	214								
PCB-194	14.0								
PCB-195	0.794								
PCB-196/203	19.0								
PCB-197	47.4								
PCB-198	ND	0.278							
PCB-199	18.7								
PCB-200	0.381			J					
PCB-201	160								
PCB-202	369								
PCB-204	ND	0.195							
PCB-205	0.103			J					
PCB-206	0.732								
PCB-207	0.133			J					
PCB-208	0.137			J					
PCB-209	0.407			J					
Total monoCB	1.95								
Total diCB	258			B					
Total triCB	3450								
Total tetraCB	25500			B					
Total pentaCB	55200								
Total hexaCB	58000								
Total heptaCB	16200								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP2-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-12
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.21	QC Batch:	B5A0043
				Date Analyzed :	17-Jan-15 22:56
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	55.3	5 -145		13C-PCB-170	92.4	10 -145	
13C-PCB-3	62.1	5 -145		13C-PCB-180	86.4	10 -145	
13C-PCB-4	65.9	5 -145		13C-PCB-188	74.2	10 -145	
13C-PCB-11	79.6	5 -145		13C-PCB-189	81.8	10 -145	
13C-PCB-9	73.8	5 -145		13C-PCB-194	85.0	10 -145	
13C-PCB-19	59.0	5 -145		13C-PCB-202	77.9	10 -145	
13C-PCB-28	80.2	5 -145		13C-PCB-206	94.5	10 -145	
13C-PCB-32	64.7	5 -145		13C-PCB-208	89.2	10 -145	
13C-PCB-37	94.0	5 -145		13C-PCB-209	107	10 -145	
13C-PCB-47	82.2	5 -145		CRS 13C-PCB-79	84.4	10 -145	
13C-PCB-52	73.9	5 -145		13C-PCB-178	88.5	10 -145	
13C-PCB-54	71.0	5 -145					
13C-PCB-70	82.1	5 -145					
13C-PCB-77	79.5	10 -145					
13C-PCB-80	80.4	10 -145					
13C-PCB-81	78.7	10 -145					
13C-PCB-95	82.6	10 -145					
13C-PCB-97	89.8	10 -145					
13C-PCB-101	83.2	10 -145					
13C-PCB-104	78.7	10 -145					
13C-PCB-105	60.6	10 -145					
13C-PCB-114	63.3	10 -145					
13C-PCB-118	79.9	10 -145					
13C-PCB-123	92.2	10 -145					
13C-PCB-126	62.4	10 -145					
13C-PCB-127	58.6	10 -145					
13C-PCB-138	77.8	10 -145					
13C-PCB-141	78.7	10 -145					
13C-PCB-153	71.5	10 -145					
13C-PCB-155	82.7	10 -145					
13C-PCB-156	84.4	10 -145					
13C-PCB-157	85.2	10 -145					
13C-PCB-159	82.5	10 -145					
13C-PCB-167	80.3	10 -145					
13C-PCB-169	88.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP3-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-13
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.956	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 00:01
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.458			J	PCB-44	1080			
PCB-2	0.500				PCB-45	104			
PCB-3	0.353			J	PCB-46	82.4			
PCB-4/10	9.81				PCB-47	1160			
PCB-5/8	23.5				PCB-48/75	235			
PCB-6	5.13				PCB-50	8.77			
PCB-7/9	2.08				PCB-51	1270			
PCB-11	119			B	PCB-52/69	3860			B, E
PCB-12/13	3.22				PCB-53	856			
PCB-14	ND	0.741			PCB-54	166			
PCB-15	34.0				PCB-55	74.3			
PCB-16/32	316				PCB-56/60	792			
PCB-17	129				PCB-57	54.3			
PCB-18	287				PCB-58	22.7			
PCB-19	39.1				PCB-61/70	1620			
PCB-20/21/33	230				PCB-62	ND	0.432		
PCB-22	287				PCB-63	68.6			
PCB-23	ND	0.129			PCB-65	0.233			J
PCB-24/27	44.6				PCB-66/76	1590			
PCB-25	61.9				PCB-67	69.5			
PCB-26	133				PCB-68	17.7			
PCB-28	575				PCB-73	57.0			
PCB-29	1.43				PCB-74	839			
PCB-30	0.245			J	PCB-77	188			
PCB-31	335				PCB-78	ND	0.409		
PCB-34	12.5				PCB-79	176			
PCB-35	9.42				PCB-80	ND	0.339		
PCB-36	6.83				PCB-81	20.0			
PCB-37	126				PCB-82	371			
PCB-38	106				PCB-83	1.63			
PCB-39	1.57				PCB-84/92	2280			
PCB-40	143				PCB-85/116	516			
PCB-41/64/71/72	1450				PCB-86	13.4			
PCB-42/59	413				PCB-87/117/125	1440			
PCB-43/49	2800				PCB-88/91	1640			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP3-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-13	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.0 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.956	Date Analyzed :	18-Jan-15 00:01	Column:	ZB-1
				Analyst:	DMS		

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	37.2				PCB-136	1380			
PCB-90/101	8280			E	PCB-137	86.3			
PCB-93	ND	0.320			PCB-138/163/164	5580			E
PCB-94	220				PCB-139/149	10400			E
PCB-95/98/102	6280			E	PCB-140	53.1			
PCB-96	165				PCB-141	319			
PCB-97	1400				PCB-144	288			
PCB-99	5400			E	PCB-145	2.54			
PCB-100	810				PCB-146/165	1850			
PCB-103	730				PCB-147	1170			
PCB-104	143				PCB-148	93.5			
PCB-105	1120				PCB-150	224			
PCB-106/118	4760			E	PCB-151	3790			E
PCB-107/109	401				PCB-152	102			
PCB-108/112	207				PCB-153	12700			E
PCB-110	4950			E	PCB-154	1640			E
PCB-111/115	42.5				PCB-155	33.6			
PCB-113	33.3				PCB-156	146			
PCB-114	74.3				PCB-157	64.6			
PCB-119	550				PCB-158/160	289			
PCB-120	40.9				PCB-159	ND	0.152		
PCB-121	ND	0.193			PCB-166	ND	0.163		
PCB-122	39.6				PCB-167	249			
PCB-123	85.6				PCB-168	37.1			
PCB-124	217				PCB-169	0.974			
PCB-126	28.4				PCB-170	92.0			
PCB-127	ND	2.18			PCB-171	313			
PCB-128/162	397				PCB-172	21.4			
PCB-129	27.6				PCB-173	ND	0.449		
PCB-130	212				PCB-174	59.7			
PCB-131	ND	0.269			PCB-175	49.5			
PCB-132/161	1400				PCB-176	315			
PCB-133/142	262				PCB-177	1320			
PCB-134/143	364				PCB-178	854			
PCB-135	1500			E	PCB-179	1530			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP3-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-13
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.956	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 00:01
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	895				Total octaCB	488			
PCB-181	ND	0.368			Total nonaCB	1.80			
PCB-182/187	5630			E	DecaCB	0.461			
PCB-183	1030				Total PCB	122000			B
PCB-184	8.18								
PCB-185	0.808								
PCB-186	ND	0.290							
PCB-188	60.7								
PCB-189	4.28								
PCB-190	2.09								
PCB-191	25.5								
PCB-192	ND	0.285							
PCB-193	155								
PCB-194	8.02								
PCB-195	0.717								
PCB-196/203	15.3								
PCB-197	29.6								
PCB-198	0.135			J					
PCB-199	16.4								
PCB-200	0.410			J					
PCB-201	121								
PCB-202	297								
PCB-204	ND	0.164							
PCB-205	0.132			J					
PCB-206	1.34								
PCB-207	0.173			J					
PCB-208	0.290			J					
PCB-209	0.461			J					
Total monoCB	1.31								
Total diCB	196			B					
Total triCB	2700								
Total tetraCB	19200			B					
Total pentaCB	42300								
Total hexaCB	44700								
Total heptaCB	12400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP3-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-13
Project:		Sample Size:	10.0 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.956	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 00:01
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	59.4	5 -145		13C-PCB-170	92.2	10 -145	
13C-PCB-3	68.6	5 -145		13C-PCB-180	86.1	10 -145	
13C-PCB-4	66.7	5 -145		13C-PCB-188	75.8	10 -145	
13C-PCB-11	81.8	5 -145		13C-PCB-189	96.2	10 -145	
13C-PCB-9	75.2	5 -145		13C-PCB-194	97.2	10 -145	
13C-PCB-19	62.4	5 -145		13C-PCB-202	78.8	10 -145	
13C-PCB-28	73.0	5 -145		13C-PCB-206	111	10 -145	
13C-PCB-32	64.9	5 -145		13C-PCB-208	102	10 -145	
13C-PCB-37	88.7	5 -145		13C-PCB-209	124	10 -145	
13C-PCB-47	84.1	5 -145		CRS 13C-PCB-79	91.5	10 -145	
13C-PCB-52	86.0	5 -145		13C-PCB-178	88.8	10 -145	
13C-PCB-54	82.1	5 -145					
13C-PCB-70	84.0	5 -145					
13C-PCB-77	88.7	10 -145					
13C-PCB-80	89.2	10 -145					
13C-PCB-81	86.8	10 -145					
13C-PCB-95	80.0	10 -145					
13C-PCB-97	91.1	10 -145					
13C-PCB-101	82.1	10 -145					
13C-PCB-104	80.8	10 -145					
13C-PCB-105	64.9	10 -145					
13C-PCB-114	60.8	10 -145					
13C-PCB-118	85.5	10 -145					
13C-PCB-123	98.9	10 -145					
13C-PCB-126	65.8	10 -145					
13C-PCB-127	62.0	10 -145					
13C-PCB-138	81.1	10 -145					
13C-PCB-141	80.2	10 -145					
13C-PCB-153	75.7	10 -145					
13C-PCB-155	84.0	10 -145					
13C-PCB-156	85.3	10 -145					
13C-PCB-157	86.3	10 -145					
13C-PCB-159	83.9	10 -145					
13C-PCB-167	84.3	10 -145					
13C-PCB-169	87.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP4-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-14	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.9 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.588	Date Analyzed :	18-Jan-15 01:06	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.471				PCB-44	915			
PCB-2	0.509				PCB-45	99.4			
PCB-3	0.359			J	PCB-46	76.5			
PCB-4/10	7.73				PCB-47	986			
PCB-5/8	18.5				PCB-48/75	172			
PCB-6	4.08				PCB-50	7.95			
PCB-7/9	1.58			J	PCB-51	1320			
PCB-11	82.8			B	PCB-52/69	3150			B, E
PCB-12/13	2.50				PCB-53	917			
PCB-14	ND	0.817			PCB-54	140			
PCB-15	27.4				PCB-55	59.8			
PCB-16/32	255				PCB-56/60	620			
PCB-17	94.2				PCB-57	46.3			
PCB-18	212				PCB-58	23.2			
PCB-19	34.7				PCB-61/70	1310			
PCB-20/21/33	179				PCB-62	ND	1.38		
PCB-22	210				PCB-63	53.6			
PCB-23	ND	0.414			PCB-65	ND	1.42		
PCB-24/27	37.3				PCB-66/76	1430			
PCB-25	35.8				PCB-67	52.9			
PCB-26	71.8				PCB-68	18.6			
PCB-28	417				PCB-73	46.6			
PCB-29	0.778				PCB-74	603			
PCB-30	0.294			J	PCB-77	145			
PCB-31	235				PCB-78	ND	1.20		
PCB-34	8.01				PCB-79	155			
PCB-35	7.50				PCB-80	ND	1.01		
PCB-36	7.30				PCB-81	8.98			
PCB-37	87.9				PCB-82	307			
PCB-38	83.3				PCB-83	1.01			
PCB-39	1.50				PCB-84/92	1950			
PCB-40	131				PCB-85/116	463			
PCB-41/64/71/72	1050				PCB-86	ND	0.369		
PCB-42/59	299				PCB-87/117/125	1200			
PCB-43/49	2260				PCB-88/91	1280			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP4-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-14	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.9 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.588	Date Analyzed :	18-Jan-15 01:06	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	29.9				PCB-136	1200			
PCB-90/101	7090			E	PCB-137	74.4			
PCB-93	ND	0.360			PCB-138/163/164	5190			E
PCB-94	183				PCB-139/149	9350			E
PCB-95/98/102	5180			E	PCB-140	49.1			
PCB-96	139				PCB-141	326			
PCB-97	1120				PCB-144	250			
PCB-99	4760			E	PCB-145	1.98			
PCB-100	743				PCB-146/165	1650			
PCB-103	638				PCB-147	1020			
PCB-104	126				PCB-148	81.6			
PCB-105	958				PCB-150	197			
PCB-106/118	3920			E	PCB-151	3350			E
PCB-107/109	346				PCB-152	89.1			
PCB-108/112	167				PCB-153	11300			E
PCB-110	4120			E	PCB-154	1500			E
PCB-111/115	45.2				PCB-155	29.6			
PCB-113	30.3				PCB-156	121			
PCB-114	55.8				PCB-157	58.4			
PCB-119	465				PCB-158/160	274			
PCB-120	38.3				PCB-159	ND	0.541		
PCB-121	ND	0.217			PCB-166	ND	0.579		
PCB-122	32.3				PCB-167	226			
PCB-123	61.4				PCB-168	32.3			
PCB-124	188				PCB-169	0.900			
PCB-126	24.1				PCB-170	136			
PCB-127	ND	2.77			PCB-171	278			
PCB-128/162	349				PCB-172	29.8			
PCB-129	31.2				PCB-173	ND	0.543		
PCB-130	193				PCB-174	79.6			
PCB-131	ND	0.936			PCB-175	46.3			
PCB-132/161	1190				PCB-176	289			
PCB-133/142	225				PCB-177	1160			
PCB-134/143	320				PCB-178	767			
PCB-135	1320				PCB-179	1370			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP4-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-14
Project:		Sample Size:	10.9 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.588	QC Batch:	B5A0043
				Date Analyzed:	18-Jan-15 01:06
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	917				Total octaCB	477			
PCB-181	ND	0.444			Total nonaCB	1.71		2.01	
PCB-182/187	5190			E	DecaCB	0.493			
PCB-183	910				Total PCB	106000			B
PCB-184	6.61								
PCB-185	1.42								
PCB-186	ND	0.358							
PCB-188	54.4								
PCB-189	5.18								
PCB-190	3.01								
PCB-191	26.0								
PCB-192	ND	0.345							
PCB-193	145								
PCB-194	14.5								
PCB-195	1.58								
PCB-196/203	18.6								
PCB-197	29.8								
PCB-198	ND		0.193						
PCB-199	22.2								
PCB-200	0.530								
PCB-201	118								
PCB-202	271								
PCB-204	ND	0.104							
PCB-205	0.218			J					
PCB-206	1.49								
PCB-207	0.219			J					
PCB-208	ND		0.303						
PCB-209	0.493								
Total monoCB	1.34								
Total diCB	145			B					
Total triCB	1980								
Total tetraCB	16100			B					
Total pentaCB	35700								
Total hexaCB	40000								
Total heptaCB	11400								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP4-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-14
Project:		Sample Size:	10.9 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	0.588	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 01:06
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	51.8	5 -145		13C-PCB-170	89.7	10 -145	
13C-PCB-3	62.3	5 -145		13C-PCB-180	91.5	10 -145	
13C-PCB-4	62.3	5 -145		13C-PCB-188	78.1	10 -145	
13C-PCB-11	77.5	5 -145		13C-PCB-189	92.1	10 -145	
13C-PCB-9	70.7	5 -145		13C-PCB-194	84.6	10 -145	
13C-PCB-19	53.6	5 -145		13C-PCB-202	78.6	10 -145	
13C-PCB-28	92.0	5 -145		13C-PCB-206	101	10 -145	
13C-PCB-32	65.1	5 -145		13C-PCB-208	93.9	10 -145	
13C-PCB-37	88.3	5 -145		13C-PCB-209	107	10 -145	
13C-PCB-47	80.6	5 -145		CRS 13C-PCB-79	96.1	10 -145	
13C-PCB-52	81.9	5 -145		13C-PCB-178	89.0	10 -145	
13C-PCB-54	80.0	5 -145					
13C-PCB-70	83.9	5 -145					
13C-PCB-77	92.3	10 -145					
13C-PCB-80	88.8	10 -145					
13C-PCB-81	86.2	10 -145					
13C-PCB-95	79.6	10 -145					
13C-PCB-97	87.9	10 -145					
13C-PCB-101	80.6	10 -145					
13C-PCB-104	76.8	10 -145					
13C-PCB-105	58.6	10 -145					
13C-PCB-114	63.1	10 -145					
13C-PCB-118	86.8	10 -145					
13C-PCB-123	96.1	10 -145					
13C-PCB-126	63.2	10 -145					
13C-PCB-127	59.0	10 -145					
13C-PCB-138	82.6	10 -145					
13C-PCB-141	80.4	10 -145					
13C-PCB-153	76.9	10 -145					
13C-PCB-155	83.9	10 -145					
13C-PCB-156	87.7	10 -145					
13C-PCB-157	86.9	10 -145					
13C-PCB-159	85.3	10 -145					
13C-PCB-167	85.1	10 -145					
13C-PCB-169	87.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP5-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-15	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.9 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.08	Date Analyzed :	18-Jan-15 02:10	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.634				PCB-44	1130			
PCB-2	0.674				PCB-45	131			
PCB-3	0.527				PCB-46	103			
PCB-4/10	11.4				PCB-47	1550			E
PCB-5/8	27.0				PCB-48/75	250			
PCB-6	5.93				PCB-50	12.6			
PCB-7/9	2.28				PCB-51	1890			E
PCB-11	117			B	PCB-52/69	4600			B, E
PCB-12/13	3.76				PCB-53	1340			
PCB-14	ND	0.738			PCB-54	210			
PCB-15	39.2				PCB-55	90.4			
PCB-16/32	372				PCB-56/60	1020			
PCB-17	148				PCB-57	58.8			
PCB-18	345				PCB-58	25.3			
PCB-19	50.7				PCB-61/70	1970			
PCB-20/21/33	299				PCB-62	ND	0.629		
PCB-22	329				PCB-63	78.4			
PCB-23	ND	0.366			PCB-65	ND	0.648		
PCB-24/27	55.8				PCB-66/76	1970			
PCB-25	54.7				PCB-67	71.6			
PCB-26	150				PCB-68	25.3			
PCB-28	555				PCB-73	56.4			
PCB-29	1.33				PCB-74	998			
PCB-30	0.307			J	PCB-77	215			
PCB-31	356				PCB-78	ND	0.564		
PCB-34	13.6				PCB-79	234			
PCB-35	12.2				PCB-80	ND	0.527		
PCB-36	9.88				PCB-81	17.3			
PCB-37	144				PCB-82	454			
PCB-38	164				PCB-83	0.844			
PCB-39	2.04				PCB-84/92	2830			E
PCB-40	186				PCB-85/116	642			
PCB-41/64/71/72	1700				PCB-86	14.6			
PCB-42/59	430				PCB-87/117/125	1770			
PCB-43/49	3410			E	PCB-88/91	1920			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP5-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-15	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.9 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.08	Date Analyzed :	18-Jan-15 02:10	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	44.1				PCB-136	1690			E
PCB-90/101	10300			E	PCB-137	115			
PCB-93	ND	0.353			PCB-138/163/164	7030			E
PCB-94	293				PCB-139/149	12900			E
PCB-95/98/102	7530			E	PCB-140	63.5			
PCB-96	207				PCB-141	427			
PCB-97	1650			E	PCB-144	360			
PCB-99	6620			E	PCB-145	3.01			
PCB-100	1070				PCB-146/165	2230			
PCB-103	921				PCB-147	1470			E
PCB-104	187				PCB-148	111			
PCB-105	1390			E	PCB-150	285			
PCB-106/118	5520			E	PCB-151	4760			E
PCB-107/109	483				PCB-152	131			
PCB-108/112	240				PCB-153	16000			E
PCB-110	5710			E	PCB-154	2080			E
PCB-111/115	57.3				PCB-155	41.3			
PCB-113	38.0				PCB-156	163			
PCB-114	77.8				PCB-157	75.7			
PCB-119	686				PCB-158/160	382			
PCB-120	51.8				PCB-159	ND	0.217		
PCB-121	ND	0.213			PCB-166	ND	0.232		
PCB-122	45.7				PCB-167	295			
PCB-123	85.3				PCB-168	49.1			
PCB-124	265				PCB-169	1.16			
PCB-126	33.5				PCB-170	180			
PCB-127	ND	1.53			PCB-171	392			
PCB-128/162	485				PCB-172	36.0			
PCB-129	42.9				PCB-173	ND	0.554		
PCB-130	254				PCB-174	84.8			
PCB-131	ND	0.371			PCB-175	67.4			
PCB-132/161	1820				PCB-176	403			
PCB-133/142	312				PCB-177	1610			E
PCB-134/143	459				PCB-178	1110			
PCB-135	1920			E	PCB-179	1960			E

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP5-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-15
Project:		Sample Size:	10.9 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.08	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 02:10
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	1160				Total octaCB	629			
PCB-181	ND	0.453			Total nonaCB	2.66		2.97	
PCB-182/187	7110			E	DecaCB	0.656			
PCB-183	1270				Total PCB	151000			B
PCB-184	9.21								
PCB-185	1.51								
PCB-186	ND	0.375							
PCB-188	74.2								
PCB-189	7.79								
PCB-190	4.85								
PCB-191	33.1								
PCB-192	ND	0.352							
PCB-193	214								
PCB-194	20.6								
PCB-195	2.40								
PCB-196/203	22.3								
PCB-197	40.4								
PCB-198	ND		0.224						
PCB-199	30.9								
PCB-200	0.800								
PCB-201	147								
PCB-202	364								
PCB-204	ND	0.214							
PCB-205	ND		0.276						
PCB-206	2.18								
PCB-207	ND		0.304						
PCB-208	0.480								
PCB-209	0.656								
Total monoCB	1.83								
Total diCB	206			B					
Total triCB	3060								
Total tetraCB	23800			B					
Total pentaCB	51200								
Total hexaCB	55900								
Total heptaCB	15700								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

Sample ID: CS-ST-OY-COMP5-03-2014-10-22

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-15
Project:		Sample Size:	10.9 g	Date Received:	16-Dec-2014 8:50
Date Collected:	22-Oct-2014 0:00	%Lipids:	1.08	QC Batch:	B5A0043
				Date Analyzed :	18-Jan-15 02:10
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	58.0	5 -145		13C-PCB-170	88.3	10 -145	
13C-PCB-3	62.9	5 -145		13C-PCB-180	84.9	10 -145	
13C-PCB-4	64.2	5 -145		13C-PCB-188	72.0	10 -145	
13C-PCB-11	76.3	5 -145		13C-PCB-189	75.7	10 -145	
13C-PCB-9	70.8	5 -145		13C-PCB-194	87.6	10 -145	
13C-PCB-19	56.3	5 -145		13C-PCB-202	77.4	10 -145	
13C-PCB-28	80.3	5 -145		13C-PCB-206	106	10 -145	
13C-PCB-32	59.8	5 -145		13C-PCB-208	95.7	10 -145	
13C-PCB-37	70.0	5 -145		13C-PCB-209	118	10 -145	
13C-PCB-47	81.0	5 -145		CRS 13C-PCB-79	87.4	10 -145	
13C-PCB-52	76.4	5 -145		13C-PCB-178	87.7	10 -145	
13C-PCB-54	76.2	5 -145					
13C-PCB-70	81.5	5 -145					
13C-PCB-77	80.0	10 -145					
13C-PCB-80	76.0	10 -145					
13C-PCB-81	84.0	10 -145					
13C-PCB-95	77.2	10 -145					
13C-PCB-97	84.6	10 -145					
13C-PCB-101	80.2	10 -145					
13C-PCB-104	76.0	10 -145					
13C-PCB-105	60.5	10 -145					
13C-PCB-114	60.6	10 -145					
13C-PCB-118	78.4	10 -145					
13C-PCB-123	90.7	10 -145					
13C-PCB-126	60.7	10 -145					
13C-PCB-127	62.0	10 -145					
13C-PCB-138	76.6	10 -145					
13C-PCB-141	77.6	10 -145					
13C-PCB-153	71.0	10 -145					
13C-PCB-155	79.5	10 -145					
13C-PCB-156	79.1	10 -145					
13C-PCB-157	82.1	10 -145					
13C-PCB-159	77.7	10 -145					
13C-PCB-167	77.2	10 -145					
13C-PCB-169	82.9	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP1-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-16	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.44	Date Analyzed :	21-Jan-15 15:55	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.654				PCB-44	762			
PCB-2	0.420			J	PCB-45	75.3			
PCB-3	0.387			J	PCB-46	45.4			
PCB-4/10	10.6				PCB-47	517			
PCB-5/8	28.0				PCB-48/75	191			
PCB-6	5.00				PCB-50	4.25			
PCB-7/9	2.07				PCB-51	26.5			
PCB-11	84.5			B	PCB-52/69	1250			B
PCB-12/13	2.60				PCB-53	155			
PCB-14	ND	0.236			PCB-54	6.83			
PCB-15	21.9				PCB-55	31.4			
PCB-16/32	151				PCB-56/60	524			
PCB-17	85.0				PCB-57	15.4			
PCB-18	201				PCB-58	9.51			
PCB-19	19.8				PCB-61/70	1100			
PCB-20/21/33	98.4				PCB-62	ND	0.310		
PCB-22	68.9				PCB-63	67.3			
PCB-23	0.170			J	PCB-65	ND	0.320		
PCB-24/27	26.3				PCB-66/76	1580			
PCB-25	37.0				PCB-67	61.8			
PCB-26	52.9				PCB-68	17.1			
PCB-28	427				PCB-73	4.69			
PCB-29	1.05				PCB-74	641			
PCB-30	ND		0.184		PCB-77	102			
PCB-31	233				PCB-78	ND	0.284		
PCB-34	2.46				PCB-79	94.7			
PCB-35	9.26				PCB-80	ND	0.237		
PCB-36	10.6				PCB-81	7.91			
PCB-37	58.6				PCB-82	288			
PCB-38	22.1				PCB-83	0.781			
PCB-39	1.95				PCB-84/92	1170			
PCB-40	127				PCB-85/116	459			
PCB-41/64/71/72	726				PCB-86	ND	0.308		
PCB-42/59	301				PCB-87/117/125	871			
PCB-43/49	1160				PCB-88/91	479			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP1-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-16	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.44	Date Analyzed :	21-Jan-15 15:55	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	22.8				PCB-136	477			
PCB-90/101	4000			E	PCB-137	47.7			
PCB-93	ND	0.291			PCB-138/163/164	4650			E
PCB-94	22.8				PCB-139/149	3570			E
PCB-95/98/102	2040				PCB-140	35.1			
PCB-96	24.2				PCB-141	71.7			
PCB-97	1010				PCB-144	196			
PCB-99	2340			E	PCB-145	2.05			
PCB-100	37.6				PCB-146/165	1080			
PCB-103	71.9				PCB-147	126			
PCB-104	1.62				PCB-148	10.8			
PCB-105	940				PCB-150	19.6			
PCB-106/118	3110			E	PCB-151	1090			
PCB-107/109	320				PCB-152	4.28			
PCB-108/112	146				PCB-153	5990			E
PCB-110	2620			E	PCB-154	165			
PCB-111/115	32.1				PCB-155	3.72			
PCB-113	13.0				PCB-156	244			
PCB-114	47.1				PCB-157	69.2			
PCB-119	128				PCB-158/160	336			
PCB-120	27.7				PCB-159	ND	0.196		
PCB-121	ND	0.175			PCB-166	6.54			
PCB-122	30.5				PCB-167	189			
PCB-123	58.2				PCB-168	7.23			
PCB-124	152				PCB-169	1.41			
PCB-126	25.1				PCB-170	102			
PCB-127	1.82				PCB-171	279			
PCB-128/162	638				PCB-172	15.9			
PCB-129	15.1				PCB-173	1.00			
PCB-130	354				PCB-174	18.1			
PCB-131	ND	0.300			PCB-175	52.8			
PCB-132/161	932				PCB-176	143			
PCB-133/142	162				PCB-177	732			
PCB-134/143	200				PCB-178	319			
PCB-135	650				PCB-179	554			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP1-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-16
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.44	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 15:55
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	586				Total octaCB	349			
PCB-181	0.557				Total nonaCB	5.12			
PCB-182/187	2040				DecaCB	3.18			
PCB-183	742				Total PCB	59200			B
PCB-184	4.29								
PCB-185	9.30								
PCB-186	ND	0.352							
PCB-188	10.7								
PCB-189	20.7								
PCB-190	68.8								
PCB-191	9.55								
PCB-192	ND	0.411							
PCB-193	29.2								
PCB-194	26.2								
PCB-195	4.61								
PCB-196/203	40.4								
PCB-197	22.1								
PCB-198	0.794								
PCB-199	9.75								
PCB-200	0.614								
PCB-201	79.1								
PCB-202	164								
PCB-204	ND	0.177							
PCB-205	2.19								
PCB-206	3.51								
PCB-207	0.556								
PCB-208	1.06								
PCB-209	3.18								
Total monoCB	1.46								
Total diCB	155			B					
Total triCB	1510								
Total tetraCB	9600			B					
Total pentaCB	20500								
Total hexaCB	21300								
Total heptaCB	5740								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP1-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-16
Project:		Sample Size:	10.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.44	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 15:55
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	64.4	5 -145		13C-PCB-170	64.9	10 -145	
13C-PCB-3	72.4	5 -145		13C-PCB-180	66.6	10 -145	
13C-PCB-4	74.5	5 -145		13C-PCB-188	67.7	10 -145	
13C-PCB-11	78.4	5 -145		13C-PCB-189	38.9	10 -145	
13C-PCB-9	78.5	5 -145		13C-PCB-194	86.4	10 -145	
13C-PCB-19	62.2	5 -145		13C-PCB-202	57.6	10 -145	
13C-PCB-28	79.1	5 -145		13C-PCB-206	74.1	10 -145	
13C-PCB-32	66.2	5 -145		13C-PCB-208	75.7	10 -145	
13C-PCB-37	93.1	5 -145		13C-PCB-209	62.5	10 -145	
13C-PCB-47	75.1	5 -145		CRS 13C-PCB-79	85.1	10 -145	
13C-PCB-52	74.5	5 -145		13C-PCB-178	71.6	10 -145	
13C-PCB-54	60.3	5 -145					
13C-PCB-70	59.6	5 -145					
13C-PCB-77	78.5	10 -145					
13C-PCB-80	78.7	10 -145					
13C-PCB-81	77.9	10 -145					
13C-PCB-95	80.1	10 -145					
13C-PCB-97	84.6	10 -145					
13C-PCB-101	82.8	10 -145					
13C-PCB-104	77.0	10 -145					
13C-PCB-105	98.3	10 -145					
13C-PCB-114	92.5	10 -145					
13C-PCB-118	80.5	10 -145					
13C-PCB-123	82.8	10 -145					
13C-PCB-126	95.9	10 -145					
13C-PCB-127	95.2	10 -145					
13C-PCB-138	83.4	10 -145					
13C-PCB-141	80.5	10 -145					
13C-PCB-153	80.3	10 -145					
13C-PCB-155	71.4	10 -145					
13C-PCB-156	80.9	10 -145					
13C-PCB-157	78.8	10 -145					
13C-PCB-159	79.1	10 -145					
13C-PCB-167	79.4	10 -145					
13C-PCB-169	74.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP2-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-17	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.3 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.50	Date Analyzed :	21-Jan-15 17:00	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.725				PCB-44	839			
PCB-2	0.479			J	PCB-45	81.4			
PCB-3	0.404			J	PCB-46	50.3			
PCB-4/10	11.3				PCB-47	560			
PCB-5/8	30.2				PCB-48/75	219			
PCB-6	5.36				PCB-50	4.58			
PCB-7/9	2.16				PCB-51	27.9			
PCB-11	94.2			B	PCB-52/69	1360			B
PCB-12/13	2.79				PCB-53	179			
PCB-14	ND	0.206			PCB-54	7.27			
PCB-15	23.1				PCB-55	34.2			
PCB-16/32	166				PCB-56/60	580			
PCB-17	94.9				PCB-57	13.2			
PCB-18	221				PCB-58	7.73			
PCB-19	21.5				PCB-61/70	1320			
PCB-20/21/33	122				PCB-62	ND	0.152		
PCB-22	85.3				PCB-63	58.0			
PCB-23	0.198			J	PCB-65	0.222			J
PCB-24/27	29.0				PCB-66/76	1360			
PCB-25	47.2				PCB-67	54.2			
PCB-26	56.5				PCB-68	19.3			
PCB-28	478				PCB-73	4.46			
PCB-29	1.28				PCB-74	535			
PCB-30	0.196			J	PCB-77	120			
PCB-31	259				PCB-78	ND	0.437		
PCB-34	2.99				PCB-79	108			
PCB-35	10.7				PCB-80	ND	0.348		
PCB-36	13.2				PCB-81	11.7			
PCB-37	68.1				PCB-82	341			
PCB-38	26.9				PCB-83	1.15			
PCB-39	2.14				PCB-84/92	1340			
PCB-40	138				PCB-85/116	502			
PCB-41/64/71/72	793				PCB-86	ND	0.272		
PCB-42/59	326				PCB-87/117/125	993			
PCB-43/49	1260				PCB-88/91	543			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP2-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-17	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	10.3 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.50	Date Analyzed :	21-Jan-15 17:00	Column:	ZB-1 Analyst: MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	31.1				PCB-136	532			
PCB-90/101	4540			E	PCB-137	38.4			
PCB-93	ND	0.266			PCB-138/163/164	5300			E
PCB-94	25.7				PCB-139/149	4000			E
PCB-95/98/102	2340				PCB-140	39.3			
PCB-96	25.3				PCB-141	79.8			
PCB-97	1140				PCB-144	215			
PCB-99	2650			E	PCB-145	2.10			
PCB-100	41.0				PCB-146/165	1260			
PCB-103	78.7				PCB-147	138			
PCB-104	1.82				PCB-148	10.3			
PCB-105	1070				PCB-150	22.8			
PCB-106/118	3600			E	PCB-151	1240			
PCB-107/109	357				PCB-152	4.79			
PCB-108/112	163				PCB-153	6860			E
PCB-110	2930			E	PCB-154	186			
PCB-111/115	38.6				PCB-155	4.17			
PCB-113	17.9				PCB-156	275			
PCB-114	54.3				PCB-157	77.9			
PCB-119	146				PCB-158/160	384			
PCB-120	32.9				PCB-159	ND	3.93		
PCB-121	ND	0.160			PCB-166	7.55			
PCB-122	36.5				PCB-167	207			
PCB-123	66.6				PCB-168	8.49			
PCB-124	178				PCB-169	1.86			
PCB-126	29.4				PCB-170	120			
PCB-127	2.14				PCB-171	318			
PCB-128/162	741				PCB-172	18.8			
PCB-129	18.6				PCB-173	1.13			
PCB-130	412				PCB-174	22.0			
PCB-131	ND	0.549			PCB-175	60.8			
PCB-132/161	1010				PCB-176	160			
PCB-133/142	188				PCB-177	830			
PCB-134/143	225				PCB-178	355			
PCB-135	753				PCB-179	615			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP2-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-17
Project:		Sample Size:	10.3 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.50	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 17:00
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	645				Total octaCB	375			
PCB-181	0.774				Total nonaCB	5.31			
PCB-182/187	2230				DecaCB	3.17			
PCB-183	821				Total PCB	66200			B
PCB-184	4.81								
PCB-185	10.7								
PCB-186	ND	0.194							
PCB-188	12.1								
PCB-189	21.8								
PCB-190	78.0								
PCB-191	9.19								
PCB-192	ND	0.232							
PCB-193	33.1								
PCB-194	29.3								
PCB-195	4.95								
PCB-196/203	42.8								
PCB-197	23.7								
PCB-198	0.972								
PCB-199	11.2								
PCB-200	0.837								
PCB-201	81.6								
PCB-202	177								
PCB-204	ND	0.205							
PCB-205	2.53								
PCB-206	3.56								
PCB-207	0.540								
PCB-208	1.21								
PCB-209	3.17								
Total monoCB	1.61								
Total diCB	169			B					
Total triCB	1710								
Total tetraCB	10100			B					
Total pentaCB	23300								
Total hexaCB	24200								
Total heptaCB	6360								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP2-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-17
Project:		Sample Size:	10.3 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.50	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 17:00
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	68.7	5 -145		13C-PCB-170	70.0	10 -145	
13C-PCB-3	74.8	5 -145		13C-PCB-180	71.9	10 -145	
13C-PCB-4	79.3	5 -145		13C-PCB-188	75.1	10 -145	
13C-PCB-11	84.9	5 -145		13C-PCB-189	14.9	10 -145	
13C-PCB-9	84.6	5 -145		13C-PCB-194	95.1	10 -145	
13C-PCB-19	68.8	5 -145		13C-PCB-202	64.6	10 -145	
13C-PCB-28	75.9	5 -145		13C-PCB-206	83.4	10 -145	
13C-PCB-32	71.2	5 -145		13C-PCB-208	84.0	10 -145	
13C-PCB-37	89.0	5 -145		13C-PCB-209	71.7	10 -145	
13C-PCB-47	79.4	5 -145		CRS 13C-PCB-79	89.7	10 -145	
13C-PCB-52	79.2	5 -145		13C-PCB-178	78.3	10 -145	
13C-PCB-54	67.4	5 -145					
13C-PCB-70	82.2	5 -145					
13C-PCB-77	82.8	10 -145					
13C-PCB-80	85.4	10 -145					
13C-PCB-81	82.6	10 -145					
13C-PCB-95	88.7	10 -145					
13C-PCB-97	94.4	10 -145					
13C-PCB-101	92.9	10 -145					
13C-PCB-104	90.0	10 -145					
13C-PCB-105	103	10 -145					
13C-PCB-114	95.0	10 -145					
13C-PCB-118	87.0	10 -145					
13C-PCB-123	93.7	10 -145					
13C-PCB-126	101	10 -145					
13C-PCB-127	102	10 -145					
13C-PCB-138	89.9	10 -145					
13C-PCB-141	89.4	10 -145					
13C-PCB-153	84.7	10 -145					
13C-PCB-155	81.2	10 -145					
13C-PCB-156	86.1	10 -145					
13C-PCB-157	84.8	10 -145					
13C-PCB-159	83.4	10 -145					
13C-PCB-167	81.0	10 -145					
13C-PCB-169	79.3	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP3-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-18
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.81	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 18:04
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.727				PCB-44	939			
PCB-2	0.469			J	PCB-45	87.4			
PCB-3	0.448			J	PCB-46	54.6			
PCB-4/10	12.9				PCB-47	615			
PCB-5/8	35.4				PCB-48/75	236			
PCB-6	6.48				PCB-50	5.89			
PCB-7/9	2.66				PCB-51	29.1			
PCB-11	109			B	PCB-52/69	1520			B
PCB-12/13	3.32				PCB-53	189			
PCB-14	ND	0.325			PCB-54	7.86			
PCB-15	26.1				PCB-55	38.3			
PCB-16/32	174				PCB-56/60	631			
PCB-17	100				PCB-57	14.6			
PCB-18	245				PCB-58	8.23			
PCB-19	23.2				PCB-61/70	1500			
PCB-20/21/33	135				PCB-62	ND	0.400		
PCB-22	88.3				PCB-63	61.6			
PCB-23	0.165			J	PCB-65	0.373			J
PCB-24/27	31.6				PCB-66/76	1580			
PCB-25	50.9				PCB-67	60.1			
PCB-26	70.4				PCB-68	20.9			
PCB-28	597				PCB-73	4.66			
PCB-29	1.57				PCB-74	580			
PCB-30	0.241			J	PCB-77	136			
PCB-31	272				PCB-78	ND	0.407		
PCB-34	3.40				PCB-79	120			
PCB-35	12.0				PCB-80	ND	0.319		
PCB-36	16.2				PCB-81	12.0			
PCB-37	75.9				PCB-82	361			
PCB-38	26.8				PCB-83	1.19			
PCB-39	2.47				PCB-84/92	1430			
PCB-40	148				PCB-85/116	610			
PCB-41/64/71/72	869				PCB-86	ND	0.636		
PCB-42/59	363				PCB-87/117/125	1060			
PCB-43/49	1370				PCB-88/91	547			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP3-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-18	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	10.4 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.81	Date Analyzed :	21-Jan-15 18:04	Column:	ZB-1	Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	28.0				PCB-136	570			
PCB-90/101	4940			E	PCB-137	56.2			
PCB-93	ND	0.429			PCB-138/163/164	5890			E
PCB-94	26.6				PCB-139/149	4480			E
PCB-95/98/102	2530				PCB-140	41.7			
PCB-96	28.2				PCB-141	101			
PCB-97	1240				PCB-144	243			
PCB-99	2890			E	PCB-145	2.56			
PCB-100	44.5				PCB-146/165	1310			
PCB-103	84.6				PCB-147	157			
PCB-104	1.95				PCB-148	13.1			
PCB-105	1180				PCB-150	24.3			
PCB-106/118	3900			E	PCB-151	1340			
PCB-107/109	402				PCB-152	4.98			
PCB-108/112	185				PCB-153	7520			E
PCB-110	3240			E	PCB-154	201			
PCB-111/115	42.4				PCB-155	4.37			
PCB-113	8.52				PCB-156	309			
PCB-114	59.4				PCB-157	86.1			
PCB-119	158				PCB-158/160	429			
PCB-120	35.4				PCB-159	ND	0.150		
PCB-121	ND	0.353			PCB-166	8.90			
PCB-122	39.2				PCB-167	246			
PCB-123	73.0				PCB-168	8.44			
PCB-124	197				PCB-169	1.89			
PCB-126	31.3				PCB-170	142			
PCB-127	2.20				PCB-171	333			
PCB-128/162	811				PCB-172	23.6			
PCB-129	23.0				PCB-173	1.46			
PCB-130	456				PCB-174	26.4			
PCB-131	ND	0.240			PCB-175	72.4			
PCB-132/161	1050				PCB-176	171			
PCB-133/142	195				PCB-177	882			
PCB-134/143	237				PCB-178	388			
PCB-135	803				PCB-179	667			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP3-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-18
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.81	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 18:04
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	772				Total octaCB	447			
PCB-181	0.982				Total nonaCB	7.02			
PCB-182/187	2520				DecaCB	4.04			
PCB-183	908				Total PCB	72900			B
PCB-184	4.89								
PCB-185	13.2								
PCB-186	ND	0.199							
PCB-188	13.1								
PCB-189	23.9								
PCB-190	84.6								
PCB-191	13.0								
PCB-192	ND	0.230							
PCB-193	39.9								
PCB-194	38.1								
PCB-195	7.03								
PCB-196/203	59.4								
PCB-197	26.8								
PCB-198	1.31								
PCB-199	15.2								
PCB-200	0.932								
PCB-201	96.6								
PCB-202	199								
PCB-204	ND	0.234							
PCB-205	3.25								
PCB-206	4.90								
PCB-207	0.683								
PCB-208	1.44								
PCB-209	4.04								
Total monoCB	1.64								
Total diCB	196			B					
Total triCB	1930								
Total tetraCB	11200			B					
Total pentaCB	25400								
Total hexaCB	26600								
Total heptaCB	7100								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP3-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-18
Project:		Sample Size:	10.4 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.81	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 18:04
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	48.0	5 -145		13C-PCB-170	53.4	10 -145	
13C-PCB-3	50.6	5 -145		13C-PCB-180	53.7	10 -145	
13C-PCB-4	51.5	5 -145		13C-PCB-188	53.2	10 -145	
13C-PCB-11	59.7	5 -145		13C-PCB-189	44.6	10 -145	
13C-PCB-9	56.9	5 -145		13C-PCB-194	63.3	10 -145	
13C-PCB-19	48.2	5 -145		13C-PCB-202	46.0	10 -145	
13C-PCB-28	56.6	5 -145		13C-PCB-206	56.2	10 -145	
13C-PCB-32	51.7	5 -145		13C-PCB-208	57.2	10 -145	
13C-PCB-37	64.3	5 -145		13C-PCB-209	47.6	10 -145	
13C-PCB-47	62.3	5 -145		CRS 13C-PCB-79	65.9	10 -145	
13C-PCB-52	63.5	5 -145		13C-PCB-178	56.5	10 -145	
13C-PCB-54	51.5	5 -145					
13C-PCB-70	63.5	5 -145					
13C-PCB-77	60.7	10 -145					
13C-PCB-80	63.5	10 -145					
13C-PCB-81	59.5	10 -145					
13C-PCB-95	63.1	10 -145					
13C-PCB-97	62.8	10 -145					
13C-PCB-101	62.7	10 -145					
13C-PCB-104	61.6	10 -145					
13C-PCB-105	73.6	10 -145					
13C-PCB-114	73.3	10 -145					
13C-PCB-118	62.5	10 -145					
13C-PCB-123	61.6	10 -145					
13C-PCB-126	79.6	10 -145					
13C-PCB-127	75.9	10 -145					
13C-PCB-138	65.6	10 -145					
13C-PCB-141	61.9	10 -145					
13C-PCB-153	62.3	10 -145					
13C-PCB-155	53.0	10 -145					
13C-PCB-156	63.5	10 -145					
13C-PCB-157	63.3	10 -145					
13C-PCB-159	61.3	10 -145					
13C-PCB-167	63.0	10 -145					
13C-PCB-169	61.0	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP4-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-19
Project:		Sample Size:	9.98 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.78	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 19:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.689				PCB-44	955			
PCB-2	0.475			J	PCB-45	94.8			
PCB-3	0.408			J	PCB-46	56.7			
PCB-4/10	12.8				PCB-47	635			
PCB-5/8	34.1				PCB-48/75	240			
PCB-6	6.08				PCB-50	5.59			
PCB-7/9	2.44				PCB-51	35.6			
PCB-11	108			B	PCB-52/69	1480			B
PCB-12/13	3.09				PCB-53	197			
PCB-14	ND	0.320			PCB-54	8.00			
PCB-15	25.2				PCB-55	38.3			
PCB-16/32	178				PCB-56/60	622			
PCB-17	101				PCB-57	15.3			
PCB-18	238				PCB-58	8.60			
PCB-19	23.3				PCB-61/70	1510			
PCB-20/21/33	142				PCB-62	ND	0.195		
PCB-22	93.8				PCB-63	65.6			
PCB-23	0.296			J	PCB-65	ND	0.385		
PCB-24/27	30.3				PCB-66/76	1550			
PCB-25	58.1				PCB-67	63.4			
PCB-26	73.0				PCB-68	22.0			
PCB-28	596				PCB-73	4.47			
PCB-29	1.67				PCB-74	599			
PCB-30	0.253			J	PCB-77	139			
PCB-31	288				PCB-78	ND	0.407		
PCB-34	3.38				PCB-79	119			
PCB-35	12.8				PCB-80	ND	0.330		
PCB-36	16.4				PCB-81	8.47			
PCB-37	71.2				PCB-82	373			
PCB-38	27.3				PCB-83	1.24			
PCB-39	2.46				PCB-84/92	1430			
PCB-40	156				PCB-85/116	596			
PCB-41/64/71/72	900				PCB-86	ND	0.447		
PCB-42/59	373				PCB-87/117/125	1100			
PCB-43/49	1440				PCB-88/91	560			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP4-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-19
Project:		Sample Size:	9.98 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.78	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 19:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	26.0				PCB-136	569			
PCB-90/101	4870			E	PCB-137	58.2			
PCB-93	ND	0.417			PCB-138/163/164	5580			E
PCB-94	27.9				PCB-139/149	4320			E
PCB-95/98/102	2550				PCB-140	41.6			
PCB-96	28.3				PCB-141	89.9			
PCB-97	1260				PCB-144	228			
PCB-99	2820			E	PCB-145	2.34			
PCB-100	44.6				PCB-146/165	1260			
PCB-103	83.0				PCB-147	146			
PCB-104	1.89				PCB-148	11.7			
PCB-105	1140				PCB-150	23.7			
PCB-106/118	3810			E	PCB-151	1290			
PCB-107/109	393				PCB-152	4.53			
PCB-108/112	180				PCB-153	7240			E
PCB-110	3360			E	PCB-154	194			
PCB-111/115	43.1				PCB-155	4.49			
PCB-113	6.72				PCB-156	291			
PCB-114	59.2				PCB-157	84.0			
PCB-119	157				PCB-158/160	399			
PCB-120	36.9				PCB-159	ND	0.479		
PCB-121	ND	0.252			PCB-166	8.70			
PCB-122	38.2				PCB-167	235			
PCB-123	72.1				PCB-168	8.23			
PCB-124	192				PCB-169	2.16			
PCB-126	32.0				PCB-170	127			
PCB-127	2.67				PCB-171	319			
PCB-128/162	767				PCB-172	18.8			
PCB-129	19.5				PCB-173	1.03			
PCB-130	438				PCB-174	20.2			
PCB-131	ND	0.767			PCB-175	64.3			
PCB-132/161	1090				PCB-176	171			
PCB-133/142	193				PCB-177	852			
PCB-134/143	231				PCB-178	390			
PCB-135	769				PCB-179	652			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP4-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-19
Project:		Sample Size:	9.98 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.78	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 19:09
				Column:	ZB-1
				Analyst:	MAS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	672				Total octaCB	399			
PCB-181	0.701				Total nonaCB	5.09			
PCB-182/187	2510				DecaCB	2.51			
PCB-183	902				Total PCB	71700			B
PCB-184	4.93								
PCB-185	11.0								
PCB-186	ND	0.135							
PCB-188	12.5								
PCB-189	23.4								
PCB-190	80.5								
PCB-191	11.4								
PCB-192	ND	0.266							
PCB-193	34.6								
PCB-194	31.6								
PCB-195	5.02								
PCB-196/203	46.3								
PCB-197	25.4								
PCB-198	0.835								
PCB-199	11.3								
PCB-200	0.665								
PCB-201	88.4								
PCB-202	186								
PCB-204	ND	0.297							
PCB-205	2.94								
PCB-206	3.37								
PCB-207	0.621								
PCB-208	1.10								
PCB-209	2.51								
Total monoCB	1.57								
Total diCB	192			B					
Total triCB	1960								
Total tetraCB	11300			B					
Total pentaCB	25300								
Total hexaCB	25600								
Total heptaCB	6870								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP4-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-19
Project:		Sample Size:	9.98 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	1.78	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 19:09
				Column:	ZB-1
				Analyst:	MAS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	77.6	5 -145		13C-PCB-170	69.5	10 -145	
13C-PCB-3	76.4	5 -145		13C-PCB-180	70.7	10 -145	
13C-PCB-4	76.3	5 -145		13C-PCB-188	67.5	10 -145	
13C-PCB-11	81.2	5 -145		13C-PCB-189	51.8	10 -145	
13C-PCB-9	80.7	5 -145		13C-PCB-194	84.6	10 -145	
13C-PCB-19	68.9	5 -145		13C-PCB-202	61.6	10 -145	
13C-PCB-28	71.5	5 -145		13C-PCB-206	73.4	10 -145	
13C-PCB-32	73.2	5 -145		13C-PCB-208	72.9	10 -145	
13C-PCB-37	88.3	5 -145		13C-PCB-209	62.9	10 -145	
13C-PCB-47	80.4	5 -145		CRS 13C-PCB-79	84.9	10 -145	
13C-PCB-52	78.7	5 -145		13C-PCB-178	74.0	10 -145	
13C-PCB-54	65.9	5 -145					
13C-PCB-70	82.0	5 -145					
13C-PCB-77	83.9	10 -145					
13C-PCB-80	83.0	10 -145					
13C-PCB-81	80.6	10 -145					
13C-PCB-95	82.2	10 -145					
13C-PCB-97	82.1	10 -145					
13C-PCB-101	82.8	10 -145					
13C-PCB-104	83.7	10 -145					
13C-PCB-105	97.9	10 -145					
13C-PCB-114	93.9	10 -145					
13C-PCB-118	82.5	10 -145					
13C-PCB-123	82.9	10 -145					
13C-PCB-126	101	10 -145					
13C-PCB-127	97.4	10 -145					
13C-PCB-138	82.8	10 -145					
13C-PCB-141	78.7	10 -145					
13C-PCB-153	81.6	10 -145					
13C-PCB-155	72.3	10 -145					
13C-PCB-156	86.3	10 -145					
13C-PCB-157	83.0	10 -145					
13C-PCB-159	81.8	10 -145					
13C-PCB-167	83.8	10 -145					
13C-PCB-169	78.8	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

Results are reported in wet weight.

EMPC - Estimated maximum possible concentration

Sample ID: IB-ST-MS-COMP5-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-20
Project:		Sample Size:	11.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	0.808	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 20:13
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	0.494				PCB-44	596			
PCB-2	0.310			J	PCB-45	56.9			
PCB-3	0.273			J	PCB-46	34.2			
PCB-4/10	7.80				PCB-47	388			
PCB-5/8	21.0				PCB-48/75	142			
PCB-6	3.87				PCB-50	3.32			
PCB-7/9	1.49			J	PCB-51	20.3			
PCB-11	65.5			B	PCB-52/69	950			B
PCB-12/13	1.75				PCB-53	118			
PCB-14	ND	0.346			PCB-54	5.05			
PCB-15	16.2				PCB-55	24.4			
PCB-16/32	109				PCB-56/60	412			
PCB-17	63.5				PCB-57	8.72			
PCB-18	147				PCB-58	5.04			
PCB-19	14.2				PCB-61/70	905			
PCB-20/21/33	89.3				PCB-62	ND	0.268		
PCB-22	60.5				PCB-63	38.4			
PCB-23	0.165			J	PCB-65	ND	0.277		
PCB-24/27	19.3				PCB-66/76	945			
PCB-25	30.3				PCB-67	39.4			
PCB-26	42.8				PCB-68	13.4			
PCB-28	364				PCB-73	2.97			
PCB-29	0.892				PCB-74	374			
PCB-30	ND	0.0573			PCB-77	90.0			
PCB-31	179				PCB-78	ND	0.252		
PCB-34	2.42				PCB-79	76.4			
PCB-35	7.58				PCB-80	ND	0.205		
PCB-36	10.4				PCB-81	5.37			
PCB-37	48.2				PCB-82	228			
PCB-38	17.8				PCB-83	0.561			
PCB-39	1.56				PCB-84/92	901			
PCB-40	93.8				PCB-85/116	372			
PCB-41/64/71/72	553				PCB-86	ND	0.387		
PCB-42/59	229				PCB-87/117/125	646			
PCB-43/49	850				PCB-88/91	347			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP5-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-20	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	11.5 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	27-Oct-2014 0:00	%Lipids:	0.808	Date Analyzed :	21-Jan-15 20:13	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	20.2				PCB-136	353			
PCB-90/101	3050			E	PCB-137	30.0			
PCB-93	ND	0.371			PCB-138/163/164	3530			
PCB-94	16.1				PCB-139/149	2770			E
PCB-95/98/102	1530				PCB-140	26.1			
PCB-96	17.1				PCB-141	48.5			
PCB-97	750				PCB-144	138			
PCB-99	1760			E	PCB-145	1.72			
PCB-100	27.3				PCB-146/165	729			
PCB-103	50.8				PCB-147	90.6			
PCB-104	ND		0.902		PCB-148	6.96			
PCB-105	702				PCB-150	15.0			
PCB-106/118	2330				PCB-151	802			
PCB-107/109	241				PCB-152	3.21			
PCB-108/112	111				PCB-153	4420			E
PCB-110	2000			E	PCB-154	121			
PCB-111/115	26.3				PCB-155	2.85			
PCB-113	13.5				PCB-156	175			
PCB-114	33.9				PCB-157	46.3			
PCB-119	95.8				PCB-158/160	245			
PCB-120	23.2				PCB-159	ND	0.897		
PCB-121	ND	0.224			PCB-166	4.87			
PCB-122	22.4				PCB-167	136			
PCB-123	43.4				PCB-168	3.94			
PCB-124	118				PCB-169	1.31			
PCB-126	19.7				PCB-170	72.3			
PCB-127	1.50				PCB-171	191			
PCB-128/162	450				PCB-172	11.4			
PCB-129	11.8				PCB-173	ND		0.680	
PCB-130	268				PCB-174	12.2			
PCB-131	ND	1.28			PCB-175	39.1			
PCB-132/161	650				PCB-176	104			
PCB-133/142	110				PCB-177	500			
PCB-134/143	134				PCB-178	235			
PCB-135	489				PCB-179	404			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP5-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-20
Project:		Sample Size:	11.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	0.808	QC Batch:	B5A0043
				Date Analyzed:	21-Jan-15 20:13
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	401				Total octaCB	242			
PCB-181	ND	0.705			Total nonaCB	3.11			
PCB-182/187	1530				DecaCB	1.90			
PCB-183	534				Total PCB	44000			B
PCB-184	3.10								
PCB-185	6.63								
PCB-186	ND	0.347							
PCB-188	7.70								
PCB-189	15.1								
PCB-190	48.1								
PCB-191	5.53								
PCB-192	ND	0.384							
PCB-193	19.8								
PCB-194	17.9								
PCB-195	2.88								
PCB-196/203	26.9								
PCB-197	15.4								
PCB-198	ND		0.451						
PCB-199	6.86								
PCB-200	0.491								
PCB-201	54.9								
PCB-202	115								
PCB-204	ND	0.408							
PCB-205	1.73								
PCB-206	1.97								
PCB-207	0.347			J					
PCB-208	0.787								
PCB-209	1.90								
Total monoCB	1.08								
Total diCB	118			B					
Total triCB	1210								
Total tetraCB	6980			B					
Total pentaCB	15500								
Total hexaCB	15800								
Total heptaCB	4140								

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: IB-ST-MS-COMP5-04-2014-10-27

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-20
Project:		Sample Size:	11.5 g	Date Received:	16-Dec-2014 8:50
Date Collected:	27-Oct-2014 0:00	%Lipids:	0.808	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 20:13
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	67.0	5 -145		13C-PCB-170	61.2	10 -145	
13C-PCB-3	69.3	5 -145		13C-PCB-180	64.1	10 -145	
13C-PCB-4	65.6	5 -145		13C-PCB-188	62.4	10 -145	
13C-PCB-11	71.0	5 -145		13C-PCB-189	32.6	10 -145	
13C-PCB-9	70.2	5 -145		13C-PCB-194	74.6	10 -145	
13C-PCB-19	59.0	5 -145		13C-PCB-202	54.7	10 -145	
13C-PCB-28	61.3	5 -145		13C-PCB-206	64.0	10 -145	
13C-PCB-32	62.1	5 -145		13C-PCB-208	63.2	10 -145	
13C-PCB-37	74.1	5 -145		13C-PCB-209	53.2	10 -145	
13C-PCB-47	68.6	5 -145		CRS 13C-PCB-79	72.7	10 -145	
13C-PCB-52	71.2	5 -145		13C-PCB-178	66.1	10 -145	
13C-PCB-54	60.4	5 -145					
13C-PCB-70	70.0	5 -145					
13C-PCB-77	71.0	10 -145					
13C-PCB-80	70.0	10 -145					
13C-PCB-81	69.1	10 -145					
13C-PCB-95	72.6	10 -145					
13C-PCB-97	75.0	10 -145					
13C-PCB-101	73.4	10 -145					
13C-PCB-104	72.6	10 -145					
13C-PCB-105	92.9	10 -145					
13C-PCB-114	86.1	10 -145					
13C-PCB-118	76.2	10 -145					
13C-PCB-123	71.8	10 -145					
13C-PCB-126	90.2	10 -145					
13C-PCB-127	91.7	10 -145					
13C-PCB-138	78.1	10 -145					
13C-PCB-141	75.0	10 -145					
13C-PCB-153	78.2	10 -145					
13C-PCB-155	62.3	10 -145					
13C-PCB-156	75.6	10 -145					
13C-PCB-157	74.0	10 -145					
13C-PCB-159	75.4	10 -145					
13C-PCB-167	77.0	10 -145					
13C-PCB-169	70.6	10 -145					

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-21	Date Received:	16-Dec-2014 8:50
Project:		Sample Size:	1.06 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53
Date Collected:	25-Dec-2014 0:00	%Lipids:	9.06	Date Analyzed :	21-Jan-15 21:18	Column:	ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-1	1.89			J	PCB-44	3690			
PCB-2	ND	2.08			PCB-45	123			
PCB-3	ND		0.981		PCB-46	56.5			
PCB-4/10	10.6			J	PCB-47	1970			
PCB-5/8	11.8			J	PCB-48/75	331			
PCB-6	ND	6.32			PCB-50	4.00			J
PCB-7/9	ND	6.24			PCB-51	32.4			
PCB-11	26.0			B	PCB-52/69	5880			B
PCB-12/13	ND	6.07			PCB-53	227			
PCB-14	ND	5.23			PCB-54	ND		1.27	
PCB-15	ND	5.34			PCB-55	126			
PCB-16/32	59.7				PCB-56/60	2400			
PCB-17	94.7				PCB-57	77.1			
PCB-18	367				PCB-58	48.8			
PCB-19	19.1				PCB-61/70	11500			
PCB-20/21/33	63.5				PCB-62	ND	4.20		
PCB-22	255				PCB-63	571			
PCB-23	ND		2.15		PCB-65	ND		3.75	
PCB-24/27	20.7				PCB-66/76	7950			
PCB-25	80.5				PCB-67	212			
PCB-26	166				PCB-68	284			
PCB-28	1540				PCB-73	11.5			
PCB-29	1.29			J	PCB-74	4200			
PCB-30	ND	0.885			PCB-77	281			
PCB-31	1090				PCB-78	ND	3.72		
PCB-34	3.98			J	PCB-79	976			
PCB-35	ND	2.63			PCB-80	ND	3.26		
PCB-36	ND	2.54			PCB-81	36.0			
PCB-37	9.44				PCB-82	158			
PCB-38	86.6				PCB-83	11.9			
PCB-39	10.4				PCB-84/92	8640			
PCB-40	179				PCB-85/116	10000			
PCB-41/64/71/72	3150				PCB-86	ND	3.54		
PCB-42/59	574				PCB-87/117/125	7860			
PCB-43/49	3120				PCB-88/91	1850			

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Results are reported in wet weight.

Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-21
Project:		Sample Size:	1.06 g	Date Received:	16-Dec-2014 8:50
Date Collected:	25-Dec-2014 0:00	%Lipids:	9.06	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 21:18
				Column:	ZB-1
				Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-89	37.8				PCB-136	1590			
PCB-90/101	33400			E	PCB-137	4660			
PCB-93	ND	3.22			PCB-138/163/164	121000			E
PCB-94	74.3				PCB-139/149	27200			
PCB-95/98/102	10800				PCB-140	738			
PCB-96	16.9				PCB-141	10200			
PCB-97	4580				PCB-144	1570			
PCB-99	23900			E	PCB-145	1.97			J
PCB-100	126				PCB-146/165	26800			
PCB-103	154				PCB-147	1970			
PCB-104	ND	1.95			PCB-148	175			
PCB-105	16700			E	PCB-150	51.8			
PCB-106/118	48100			E	PCB-151	8540			
PCB-107/109	6430				PCB-152	29.3			
PCB-108/112	1090				PCB-153	150000			E
PCB-110	23700			E	PCB-154	1250			
PCB-111/115	845				PCB-155	105			
PCB-113	77.8				PCB-156	8100			
PCB-114	1190				PCB-157	2060			
PCB-119	1030				PCB-158/160	6510			
PCB-120	500				PCB-159	ND	131		
PCB-121	91.4				PCB-166	495			
PCB-122	83.2				PCB-167	4930			
PCB-123	978				PCB-168	265			
PCB-124	2280				PCB-169	89.2			
PCB-126	345				PCB-170	21700			E
PCB-127	27.8				PCB-171	5980			
PCB-128/162	17000				PCB-172	6370			
PCB-129	508				PCB-173	ND		10.4	
PCB-130	6570				PCB-174	8370			
PCB-131	19.9				PCB-175	1320			
PCB-132/161	4660				PCB-176	508			
PCB-133/142	3530				PCB-177	12800			
PCB-134/143	1340				PCB-178	9070			
PCB-135	7880				PCB-179	4510			

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

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Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data					
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-21	Date Received:	16-Dec-2014 8:50		
Project:		Sample Size:	1.06 g	QC Batch:	B5A0043	Date Extracted:	14-Jan-2015 10:53		
Date Collected:	25-Dec-2014 0:00	%Lipids:	9.06	Date Analyzed :	21-Jan-15 21:18	Column:	ZB-1	Analyst:	DMS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
PCB-180	70800			E	Total octaCB	64200			
PCB-181	168				Total nonaCB	7330			
PCB-182/187	54100			E	DecaCB	886			
PCB-183	18000			E	Total PCB	977000			B
PCB-184	376								
PCB-185	1570								
PCB-186	5.30								
PCB-188	315								
PCB-189	1280								
PCB-190	5620								
PCB-191	772								
PCB-192	28.9								
PCB-193	4270								
PCB-194	11600								
PCB-195	4170								
PCB-196/203	20200								
PCB-197	1130								
PCB-198	931								
PCB-199	17700			E					
PCB-200	201								
PCB-201	2610								
PCB-202	4670								
PCB-204	124								
PCB-205	719								
PCB-206	4810								
PCB-207	1100								
PCB-208	1420								
PCB-209	886								
Total monoCB	1.89		2.87						
Total diCB	48.3			B					
Total triCB	3870								
Total tetraCB	48000			B					
Total pentaCB	205000								
Total hexaCB	420000								
Total heptaCB	228000								

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Sample ID: SRM 1946

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	AMEC Earth & Environmental	Matrix:	Tissue	Lab Sample:	1400960-21
Project:		Sample Size:	1.06 g	Date Received:	16-Dec-2014 8:50
Date Collected:	25-Dec-2014 0:00	%Lipids:	9.06	QC Batch:	B5A0043
				Date Analyzed :	21-Jan-15 21:18
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.8	5 -145		13C-PCB-170	69.6	10 -145	
13C-PCB-3	69.7	5 -145		13C-PCB-180	71.8	10 -145	
13C-PCB-4	64.4	5 -145		13C-PCB-188	67.6	10 -145	
13C-PCB-11	74.4	5 -145		13C-PCB-189	65.4	10 -145	
13C-PCB-9	67.9	5 -145		13C-PCB-194	79.1	10 -145	
13C-PCB-19	57.2	5 -145		13C-PCB-202	57.6	10 -145	
13C-PCB-28	68.1	5 -145		13C-PCB-206	71.8	10 -145	
13C-PCB-32	62.8	5 -145		13C-PCB-208	63.3	10 -145	
13C-PCB-37	84.6	5 -145		13C-PCB-209	59.2	10 -145	
13C-PCB-47	74.3	5 -145		CRS 13C-PCB-79	80.4	10 -145	
13C-PCB-52	74.3	5 -145		13C-PCB-178	71.5	10 -145	
13C-PCB-54	63.7	5 -145					
13C-PCB-70	77.0	5 -145					
13C-PCB-77	81.7	10 -145					
13C-PCB-80	76.8	10 -145					
13C-PCB-81	75.7	10 -145					
13C-PCB-95	73.7	10 -145					
13C-PCB-97	75.8	10 -145					
13C-PCB-101	75.2	10 -145					
13C-PCB-104	72.1	10 -145					
13C-PCB-105	93.4	10 -145					
13C-PCB-114	91.4	10 -145					
13C-PCB-118	81.5	10 -145					
13C-PCB-123	79.6	10 -145					
13C-PCB-126	103	10 -145					
13C-PCB-127	93.5	10 -145					
13C-PCB-138	82.5	10 -145					
13C-PCB-141	78.2	10 -145					
13C-PCB-153	77.3	10 -145					
13C-PCB-155	64.8	10 -145					
13C-PCB-156	81.8	10 -145					
13C-PCB-157	80.1	10 -145					
13C-PCB-159	82.8	10 -145					
13C-PCB-167	78.7	10 -145					
13C-PCB-169	80.4	10 -145					

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Results are reported in wet weight.

Table 1. Certified Mass Fractions (Wet-Mass Basis) for Selected PCB Congeners in SRM 1946

PCB Congener ^(a)	Mass Fraction ^(b) (µg/kg)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	4.66 ± 0.86
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g)	3.80 ± 0.39
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl) ^(c,d,e,f,g,h)	8.1 ± 1.0
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl) ^(f,g,h,i)	10.8 ± 1.9
PCB 70 (2,3',4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	14.9 ± 0.6
PCB 74 (2,4,4',5-Tetrachlorobiphenyl) ^(c,e,f,i)	4.83 ± 0.51
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl) ^(j,k,l)	0.327 ± 0.025 ^(m)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl) ^(c,d,f,g,i)	9.4 ± 1.4
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl) ^(e,f,g,h)	11.4 ± 1.3
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,i)	25.6 ± 2.3
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl) ^(c,d,f,g,h,i)	34.6 ± 2.6
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	19.9 ± 0.9
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl) ^(e,f,g,i)	22.8 ± 2.0
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl) ^(c,d,e,f,g,h,i)	52.1 ± 1.0
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl) ^(j,k,l)	0.380 ± 0.017 ^(m)
PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl) ^(c,e,f,g,h,i)	22.8 ± 1.9
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(d,f,g)	115 ± 13
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,i)	30.1 ± 3.5
PCB 149 (2,2',3,4',5,6-Hexachlorobiphenyl) ^(c,d,e,f,g,i)	26.3 ± 1.3
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) ^(c,d,e,f,g,h,i)	170 ± 9
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl) ^(c,e,f,g,i)	9.52 ± 0.51
PCB 169 (2,2',3,4,4',5'-Hexachlorobiphenyl) ^(j,k,l)	0.106 ± 0.014 ^(m)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	25.2 ± 2.2
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) ^(c,d,e,f,g,h,i)	74.4 ± 4.0
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl) ^(c,d,f,g,i)	21.9 ± 2.5
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) ^(c,d,f,g,h,i)	55.2 ± 2.1
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) ^(c,d,e,f,i)	13.0 ± 1.3
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.30 ± 0.45
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) ^(c,d,e,f,g,h,i)	5.40 ± 0.43
PCB 209 (Decachlorobiphenyl) ^(c,d,e,f,g,h,i)	1.30 ± 0.21

(a) PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [21] and later revised by Schulte and Malisch [22] to conform with IUPAC rules; for the specific congeners listed in this table the Ballschmiter-Zell numbers correspond to those of Schulte and Malisch.

(b) The certified value is a weighted mean of the results from four to seven analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [23] incorporating inter-method bias with a pooled, within-method variance following the ISO Guide [24,25].

(c) GC-ECD (I) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(d) GC-ECD (IIB) on a proprietary nonpolar phase; same extracts analyzed as GC-ECD (IIA).

(e) GC-ECD (IIA) on 5 % phenyl methylpolysiloxane phase after PFE with DCM.

(f) GC/MS (I) on a proprietary nonpolar phase after Soxhlet extraction with hexane/acetone mixture.

(g) GC/MS (III) on a proprietary nonpolar phase after Soxhlet extraction with DCM.

(h) Results from up to 30 laboratories participating in an interlaboratory comparison exercise.

(i) GC/MS (II) on a 5 % phenyl methylpolysiloxane phase; same extracts analyzed as GC/MS (I).

(j) GC/MS (IV) with NICI on 5 % diphenyl dimethylpolysiloxane phase.

(k) GC/HRMS (V) with EI on a 5 % phenyl methylpolysiloxane phase.

(l) GC/MS (VI) with NICI on a 5 % phenyl methylpolysiloxane phase.

(m) The certified value is an unweighted mean of the results from three analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance [26] with a pooled, within-method variance following the ISO Guide [24,25].

Percent Solids



LabNumber	SampleName	% Solids	Date Analyzed	Batch
1400960-01	OA-ST-MS-COMP1-01-2014-10-22	13.5	15-Jan-2015	B5A0041
1400960-02	OA-ST-MS-COMP2-01-2014-10-22	14.1	15-Jan-2015	B5A0041
1400960-03	OA-ST-MS-COMP3-01-2014-10-22	14.7	15-Jan-2015	B5A0041
1400960-04	OA-ST-MS-COMP4-01-2014-10-22	13.2	15-Jan-2015	B5A0041
1400960-05	OA-ST-MS-COMP5-01-2014-10-22	11.4	15-Jan-2015	B5A0041
1400960-06	IA-ST-MS-COMP1-02-2014-10-22	11.1	15-Jan-2015	B5A0041
1400960-07	IA-ST-MS-COMP2-02-2014-10-22	13.3	15-Jan-2015	B5A0041
1400960-08	IA-ST-MS-COMP3-02-2014-10-22	13.2	15-Jan-2015	B5A0041
1400960-09	IA-ST-MS-COMP4-02-2014-10-22	13.0	15-Jan-2015	B5A0041
1400960-10	IA-ST-MS-COMP5-02-2014-10-22	12.3	15-Jan-2015	B5A0041
1400960-11	CS-ST-OY-COMP1-03-2014-10-22	13.0	15-Jan-2015	B5A0041
1400960-12	CS-ST-OY-COMP2-03-2014-10-22	12.5	15-Jan-2015	B5A0041
1400960-13	CS-ST-OY-COMP3-03-2014-10-22	12.3	15-Jan-2015	B5A0041
1400960-14	CS-ST-OY-COMP4-03-2014-10-22	13.2	15-Jan-2015	B5A0041
1400960-15	CS-ST-OY-COMP5-03-2014-10-22	12.6	15-Jan-2015	B5A0041
1400960-16	IB-ST-MS-COMP1-04-2014-10-27	14.6	15-Jan-2015	B5A0041
1400960-17	IB-ST-MS-COMP2-04-2014-10-27	14.0	15-Jan-2015	B5A0041
1400960-18	IB-ST-MS-COMP3-04-2014-10-27	15.5	15-Jan-2015	B5A0041
1400960-19	IB-ST-MS-COMP4-04-2014-10-27	16.1	15-Jan-2015	B5A0041
1400960-20	IB-ST-MS-COMP5-04-2014-10-27	12.9	15-Jan-2015	B5A0041

Sample ID	Lab ID	No. of Organisms	Mass (g)
OA-ST-MS-COMP1-01-2014-10-22	1400960-01	70	154.4
OA-ST-MS-COMP2-01-2014-10-22	1400960-02	59	223.0
OA-ST-MS-COMP3-01-2014-10-22	1400960-03	60	268.2
OA-ST-MS-COMP4-01-2014-10-22	1400960-04	66	216.7
OA-ST-MS-COMP5-01-2014-10-22	1400960-05	62	152.8
IA-ST-MS-COMP1-02-2014-10-22	1400960-06	50	137.7
IA-ST-MS-COMP2-02-2014-10-22	1400960-07	31	126.9
IA-ST-MS-COMP3-02-2014-10-22	1400960-08	49	186.7
IA-ST-MS-COMP4-02-2014-10-22	1400960-09	50	167.1
IA-ST-MS-COMP5-02-2014-10-22	1400960-10	41	215.4
CS-ST-OY-COMP1-03-2014-10-22	1400960-11	12	191.0
CS-ST-OY-COMP2-03-2014-10-22	1400960-12	11	190.1
CS-ST-OY-COMP3-03-2014-10-22	1400960-13	12	179.5
CS-ST-OY-COMP4-03-2014-10-22	1400960-14	12	233.1
CS-ST-OY-COMP5-03-2014-10-22	1400960-15	12	226.7
IB-ST-MS-COMP1-04-2014-10-27	1400960-16	61	258.6
IB-ST-MS-COMP2-04-2014-10-27	1400960-17	60	209.5
IB-ST-MS-COMP3-04-2014-10-27	1400960-18	60	250.9
IB-ST-MS-COMP4-04-2014-10-27	1400960-19	60	244.6
IB-ST-MS-COMP5-04-2014-10-27	1400960-20	60	354.2

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista 1104 Windfield Way El Dorado Hills, CA 95762 Date: 12/15/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method: FedEx Overnight				Vista Test Parameters (Sub's noted in Bold)											Comments/Preservation							
Track #	Field Sample ID	Collection Date	Bivalve Type	No. of Bivalves in Replicate	PCBs (high res) epa 1668C	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Mussel Prep	Oyster Prep	Prep Sample aliquot to ship to Physics (C/N Stable Isotope)											
1	OA-ST-MS-COMP1-01-2014-10-22	10/22/14	Mussel	70	x	x	x	x	x		x											
2	OA-ST-MS-COMP2-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
3	OA-ST-MS-COMP3-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
4	OA-ST-MS-COMP4-01-2014-10-22	10/22/14	Mussel	68	x	x	x	x	x		x											
5	OA-ST-MS-COMP5-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
6	IA-ST-MS-COMP1-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x											
7	IA-ST-MS-COMP2-02-2014-10-22	10/22/14	Mussel	32	x	x	x	x	x		x											
8	IA-ST-MS-COMP3-02-2014-10-22	10/22/14	Mussel	49	x	x	x	x	x		x											
9	IA-ST-MS-COMP4-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x											
10	IA-ST-MS-COMP5-02-2014-10-22	10/22/14	Mussel	42	x	x	x	x	x		x											
11	CS-ST-OY-COMP1-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
12	CS-ST-OY-COMP2-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
13	CS-ST-OY-COMP3-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
14	CS-ST-OY-COMP4-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
15	CS-ST-OY-COMP5-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
16	IB-ST-MS-COMP1-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
17	IB-ST-MS-COMP2-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
18	IB-ST-MS-COMP3-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
19	IB-ST-MS-COMP4-04-2014-10-27	10/27/14	Mussel	61	x	x	x	x	x		x											
20	IB-ST-MS-COMP5-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											

1400960

Relinquished By: Michelle Bowman Company: AMEC
Signature/Printed Name: Michelle Bowman Date/Time: 12/15/2014 1547

Received By: Bella Bruchit B. Benedict Company: Vista
Signature/Printed Name: Bella Bruchit B. Benedict Date/Time: 12/16/14 0909

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time <u>12/16/14 0844</u>		Initials: <u>BBB</u>		Location: <u>WF-2</u>	
	Shelf/Rack: <u>NA</u>					
Logged In:	Date/Time <u>12/17/14 0957</u>		Initials: <u>BBB</u>		Location: <u>WF-2</u>	
	Shelf/Rack: <u>B 4</u>					
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C: <u>-0.2</u> (uncorrected)	Time: <u>0910</u>			Thermometer ID: IR-1		
Temp °C: <u>-0.2</u> (corrected)						

	YES	NO	NA		
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Airbill <u>1 of 5</u> Trk # <u>77 22 4546 7835</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain	<input checked="" type="checkbox"/> Return	Dispose

Comments:

Sample Label ID: IA-ST-MS-Comp1-02-2014-10-22
 ↓
 Comp 3
 Comp 4
 Comp 2 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT std

Samples Arrival:	Date/Time: <u>12/16/14 0844</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time: <u>12/17/14 0957</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>B4</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
			DHL
			Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: <u>-1.4</u> (uncorrected)	Time: <u>0915</u>		Thermometer ID: <u>IR-1</u>
Temp °C: <u>-1.4</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>2 of 5</u> Trk # <u>772245467950</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	<u>None</u>
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

Sample label/ID: IB-ST-MS-Comp3-04-2014-10-27
 ↓
 Comp 4-04
 Comp 1
 Comp 2
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: YB/B	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957	Initials: YB/B	Location: WF2
			Shelf/Rack: B4
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: -0.4 (uncorrected)	Time: 0920		Thermometer ID: IR-1
Temp °C: 0.4 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>3 of 5</u> Trk # <u>772245467754</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample Label ID: CS-ST-04-Comp 4-03-2014-10-22
 ↓
 Comp 1-03
 Comp 3-03
 Comp 2-03
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: YBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957	Initials: YBSB	Location: WF 2
			Shelf/Rack: B4
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: 0.7 (uncorrected)	Time: 0935		Thermometer ID: IR-1
Temp °C: 0.7 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill 4 of 5 Trk # 7722 4546 7489	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

Sample label ID: OA-ST-MS-Comp 3-01-2014-10-22
 ↓ Comp 4
 ↓ Comp 2
 ↓ Comp 1

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: UBB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957 0944 UBB 12/17/14	Initials: UBB	Location: WF-2
			Shelf/Rack: B4
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: -1.8 (uncorrected)	Time: 0930		Thermometer ID: IR-1
Temp °C: -1.8 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 5 of 5 Trk # 7722 45468393	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA			
	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

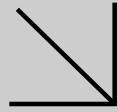
Comments:

Sample ID Labels : IB-ST-MS-COMP05-04-~~1027-2014~~*
 CS-ST-OY-COMP5-03-2014-10-22
 OA-ST-MS-comp5-01-2014-10-22
 IA-ST-MS-COMP5-02-2014-10-22

*date wasn't listed in ID. UBB 12/17/14



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WORK ORDER NUMBER: 15-01-0708

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400893

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/12/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



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Contents

Client Project Name: 1400893
Work Order Number: 15-01-0708

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5	Quality Control Sample Data.	23
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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-0708
Project ID: 1400893

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Fifteen tissue samples were received for this project on January 14th, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was 2.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample CS-WO-WS-02-03-20141010 was used for matrix spiking and any parameters outside the control limits have been flagged with the appropriate qualifiers.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

Pesticide surrogates 2,4,5,6-Tetrachloro-m-Xylene and/or Dibutylchlorendate were outside the control limits in several samples due to matrix interference and/or necessary sample dilutions. The samples were re-analyzed for confirmation and the results have been flagged with the appropriate qualifiers.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/14/15. They were assigned to Work Order 15-01-0708.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-0708
9210 Sky Park Court, Suite 200	Project Name:	1400893
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/14/15 10:40
	Number of Containers:	15

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-WO-SS-04-05-20141012	15-01-0708-1	10/12/14 00:00	1	Tissue
IB-WO-SS-05-05-20141012	15-01-0708-2	10/12/14 00:00	1	Tissue
IB-WO-SS-06-05-20141012	15-01-0708-3	10/12/14 00:00	1	Tissue
IB-WO-WS-07-05-20141012	15-01-0708-4	10/12/14 00:00	1	Tissue
IB-WO-WS-08-05-20141012	15-01-0708-5	10/12/14 00:00	1	Tissue
IB-WO-WS-09-05-20141012	15-01-0708-6	10/12/14 00:00	1	Tissue
CS-WO-WS-01-03-20141010	15-01-0708-7	10/10/14 00:00	1	Tissue
CS-WO-WS-02-03-20141010	15-01-0708-8	10/10/14 00:00	1	Tissue
CS-WO-WS-03-03-20141010	15-01-0708-9	10/10/14 00:00	1	Tissue
CS-WO-WS-05-03-20141010	15-01-0708-10	10/10/14 00:00	1	Tissue
CS-WO-WS-06-03-20141010	15-01-0708-11	10/10/14 00:00	1	Tissue
CS-WO-WS-07-03-20141010	15-01-0708-12	10/10/14 00:00	1	Tissue
CS-WO-WS-08-03-20141010	15-01-0708-13	10/10/14 00:00	1	Tissue
CS-WO-WS-09-03-20141010	15-01-0708-14	10/10/14 00:00	1	Tissue
CS-WO-WS-10-03-20141010	15-01-0708-15	10/10/14 00:00	1	Tissue


 Return to Contents



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

Page 1 of 16

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-04-05-20141012	15-01-0708-1-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	01/31/15 23:16	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	17	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.8	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	27	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	208	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	153	10-150	1,2,7

IB-WO-SS-04-05-20141012	15-01-0708-1-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 12:32	150126L14A
-------------------------	-----------------	-------------------	--------	-----------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	460	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	105	10-150	
2,4,5,6-Tetrachloro-m-Xylene	168	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-05-05-20141012	15-01-0708-2-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	01/31/15 23:34	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	21	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.2	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	46	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	267	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	182	10-150	1,2,7

IB-WO-SS-05-05-20141012	15-01-0708-2-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 12:50	150126L14A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	600	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	136	10-150	
2,4,5,6-Tetrachloro-m-Xylene	234	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-06-05-20141012	15-01-0708-3-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	01/31/15 23:52	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	18	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	6.4	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	35	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	145	10-150	
2,4,5,6-Tetrachloro-m-Xylene	161	10-150	1,2,7

IB-WO-SS-06-05-20141012	15-01-0708-3-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 13:08	150126L14A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	520	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	170	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	172	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-WS-07-05-20141012	15-01-0708-4-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 00:09	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	10	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	6.1	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	23	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	239	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	179	10-150	1,2,7

IB-WO-WS-07-05-20141012	15-01-0708-4-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 13:26	150126L14A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	380	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	165	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	210	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-WS-08-05-20141012	15-01-0708-5-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 00:27	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	8.3	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	6.1	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	21	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	109	10-150	
2,4,5,6-Tetrachloro-m-Xylene	141	10-150	

IB-WO-WS-08-05-20141012	15-01-0708-5-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 13:43	150126L14A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	470	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	116	10-150	
2,4,5,6-Tetrachloro-m-Xylene	174	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-WS-09-05-20141012	15-01-0708-6-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 00:45	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	9.9	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	5.9	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	27	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	127	10-150	
2,4,5,6-Tetrachloro-m-Xylene	164	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-WS-09-05-20141012	15-01-0708-6-AA	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 14:01	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	690	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	191	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	219	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
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San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-01-03-20141010	15-01-0708-7-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 01:03	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.3	2.0	1.2	10.0	
2,4'-DDE	3.8	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	26	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	8.7	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	93	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-01-03-20141010	15-01-0708-7-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 14:19	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	160	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	88	10-150	
2,4,5,6-Tetrachloro-m-Xylene	114	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-02-03-20141010	15-01-0708-8-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 18:42	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.5	2.0	1.2	10.0	
2,4'-DDE	5.6	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	68	2.0	0.44	10.0	
4,4'-DDT	8.1	2.0	1.6	10.0	
4,4'-DDMU	25	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	108	10-150	
2,4,5,6-Tetrachloro-m-Xylene	137	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-02-03-20141010	15-01-0708-8-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 14:37	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	540	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	100	10-150	
2,4,5,6-Tetrachloro-m-Xylene	166	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-03-03-20141010	15-01-0708-9-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 19:00	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.9	2.0	1.2	10.0	
2,4'-DDE	3.6	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	40	2.0	0.44	10.0	
4,4'-DDT	1.6	2.0	1.5	10.0	J
4,4'-DDMU	11	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	46	10-150	
2,4,5,6-Tetrachloro-m-Xylene	73	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-03-03-20141010	15-01-0708-9-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 14:55	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	170	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	0	10-150	1,2,6

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-05-03-20141010	15-01-0708-10-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 19:18	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.5	2.0	1.2	10.0	J
2,4'-DDE	3.2	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	33	2.0	0.44	10.0	
4,4'-DDT	1.7	2.0	1.6	10.0	J
4,4'-DDMU	7.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	57	10-150	
2,4,5,6-Tetrachloro-m-Xylene	63	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-05-03-20141010	15-01-0708-10-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 15:12	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	160	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	132	10-150	
2,4,5,6-Tetrachloro-m-Xylene	86	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-06-03-20141010	15-01-0708-11-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 19:36	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.5	2.0	1.2	10.0	J
2,4'-DDE	2.7	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	26	2.0	0.44	10.0	
4,4'-DDT	1.7	2.0	1.6	10.0	J
4,4'-DDMU	7.4	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	61	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-06-03-20141010	15-01-0708-11-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 16:24	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	130	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	72	10-150	
2,4,5,6-Tetrachloro-m-Xylene	72	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-07-03-20141010	15-01-0708-12-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 19:54	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.3	2.0	1.2	10.0	J
2,4'-DDE	2.3	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	19	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.4	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	48	10-150	
2,4,5,6-Tetrachloro-m-Xylene	59	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-07-03-20141010	15-01-0708-12-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 16:42	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	100	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	72	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-08-03-20141010	15-01-0708-13-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 20:12	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	14	2.0	1.2	10.0	
2,4'-DDE	3.0	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	48	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	14	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	109	10-150	
2,4,5,6-Tetrachloro-m-Xylene	128	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-08-03-20141010	15-01-0708-13-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 16:59	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	260	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	160	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	177	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

Page 14 of 16

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-09-03-20141010	15-01-0708-14-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 20:30	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.7	2.0	1.2	10.0	
2,4'-DDE	2.0	2.0	1.6	10.0	J
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	48	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.1	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	61	10-150	
2,4,5,6-Tetrachloro-m-Xylene	48	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-09-03-20141010	15-01-0708-14-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 17:17	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	81	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	59	10-150	
2,4,5,6-Tetrachloro-m-Xylene	60	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

Page 15 of 16

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-10-03-20141010	15-01-0708-15-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/11/15 20:48	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.4	2.0	1.2	10.0	
2,4'-DDE	2.4	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	36	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	9.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	62	10-150	
2,4,5,6-Tetrachloro-m-Xylene	64	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-WO-WS-10-03-20141010	15-01-0708-15-AA	10/10/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 17:35	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	150	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	73	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0708
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400893

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-4	N/A	Tissue	GC/MS NNN	01/26/15	01/31/15 15:44	150126L14A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibutylchloroendate	47	10-150	
2,4,5,6-Tetrachloro-m-Xylene	103	10-150	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400893

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CS-WO-WS-02-03-20141010	Sample	Tissue	GC/MS NNN	01/26/15	02/11/15 18:42	150126S14
CS-WO-WS-02-03-20141010	Matrix Spike	Tissue	GC/MS NNN	01/26/15	02/01/15 17:53	150126S14
CS-WO-WS-02-03-20141010	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/26/15	02/01/15 18:11	150126S14

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	67.97	5.000	39.19	0	46.29	0	10-150	17	0-30	3
4,4'-DDE	544.7	5.000	346.4	0	503.2	0	10-150	37	0-30	3,4
4,4'-DDT	8.118	5.000	8.792	13	8.358	5	10-150	5	0-30	3

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0708
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400893

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-4	LCS	Tissue	GC/MS NNN	01/26/15	01/31/15 14:51	150126L14A			
099-16-578-4	LCSD	Tissue	GC/MS NNN	01/26/15	01/31/15 15:08	150126L14A			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.845	77	4.487	90	10-150	15	0-30	
4,4'-DDE	5.000	3.839	77	4.773	95	10-150	22	0-30	
4,4'-DDT	5.000	3.381	68	4.078	82	10-150	19	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-0708

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record



Report to:
AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350
Project Manager: Chris Stransky
Project Number: 1400893
Requested TAT: Standard

Samples sent to:
Danielle Gonsman
Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0708

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400893-01	IB-WO-SS-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-02	IB-WO-SS-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-03	IB-WO-SS-06-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-04	IB-WO-WS-07-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-05	IB-WO-WS-08-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-06	IB-WO-WS-09-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-07	CS-WO-WS-01-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-08	CS-WO-WS-02-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-09	CS-WO-WS-03-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-10	CS-WO-WS-05-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-11	CS-WO-WS-06-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-12	CS-WO-WS-07-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-13	CS-WO-WS-08-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-14	CS-WO-WS-09-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-15	CS-WO-WS-10-03-20141010	10-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time)
Bettina Benedict
Jan. 13, 2015

Relinquished (Printed Name/Signature/Date/Time)
Bettina Benedict 1307 1/13/15

Received (Printed Name/Signature/Date/Time)
FedEx
Jan. 13, 2015 1530

Received (Printed Name/Signature/Date/Time)
7. PATEL 1/14/15 1040 *[Signature]*

Cal. Science	
Aliquot Weights	
1400893	
I.D.	Weight (g)
1400893-01	20.6
1400893-02	21.7
1400893-03	25.2
1400893-04	39.5
1400893-05	51.2
1400893-06	50.7
1400893-07	34.7
1400893-08	68.0
1400893-09	47.1
1400893-10	54.3
1400893-11	34.7
1400893-12	34.1
1400893-13	35.4
1400893-14	29.3
1400893-15	59.2

0708

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J142214082303uv

El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 40.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



Ref # 1400892/1400893
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494

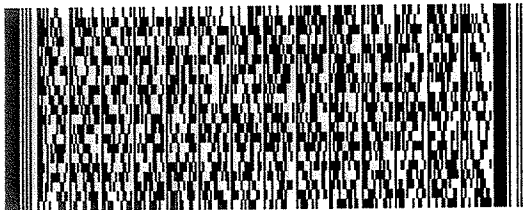
BILL SENDER

Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

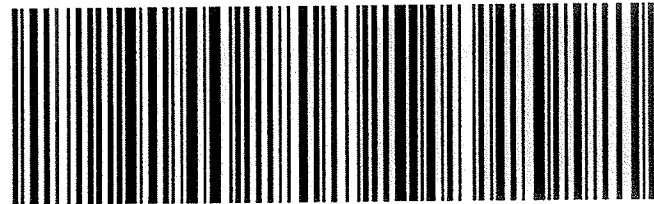
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6715 7920
0201



92 APVA

92841
CA-US
SNA



522G1/8F15/8AC9

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Calscience

WORK ORDER #: 15-01-0708

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.5 °C + 0.2 °C (CF) = 2.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBn₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBn₂ 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJn₂ _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 972

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 659

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** 659

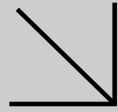
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Calscience

Supplemental Report 1

The original report has been revised/corrected.



WORK ORDER NUMBER: 15-01-0709

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400892

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 04/06/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Calscience

Contents

Client Project Name: 1400892
Work Order Number: 15-01-0709

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-0709
Project ID: 1400892

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 14th, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was 2.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing with the following exceptions.

Trace levels of 4,4'-DDD, 4,4'-DDE and 4,4'-DDT were detected in the Method Blank. Results have been flagged with the appropriate qualifiers.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample FH-WO-WS-10-08-20141013 was used for matrix spiking and any parameters outside the control limits have been flagged with the appropriate qualifiers.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

Pesticide surrogates 2,4,5,6-Tetrachloro-m-Xylene and/or Dibutylchloroendate were above the control limits in several samples due to matrix interference and/or necessary sample dilutions. The samples were re-analyzed for confirmation and the results have been flagged with the appropriate qualifiers.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/14/15. They were assigned to Work Order 15-01-0709.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-0709
9210 Sky Park Court, Suite 200	Project Name:	1400892
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/14/15 10:40
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
FH-WO-WS-02-08-20141013	15-01-0709-1	10/13/14 00:00	1	Tissue
FH-WO-WS-03-08-20141013	15-01-0709-2	10/13/14 00:00	1	Tissue
FH-WO-WS-04-08-20141013	15-01-0709-3	10/13/14 00:00	1	Tissue
FH-WO-WS-05-08-20141013	15-01-0709-4	10/13/14 00:00	1	Tissue
FH-WO-WS-06-08-20141013	15-01-0709-5	10/13/14 00:00	1	Tissue
FH-WO-WS-07-08-20141013	15-01-0709-6	10/13/14 00:00	1	Tissue
FH-WO-WS-08-08-20141013	15-01-0709-7	10/13/14 00:00	1	Tissue
FH-WO-WS-10-08-20141013	15-01-0709-8	10/13/14 00:00	1	Tissue
OA-WO-WS-01-06-20141011	15-01-0709-9	10/11/14 00:00	1	Tissue
OA-WO-WS-02-06-20141011	15-01-0709-10	10/11/14 00:00	1	Tissue
OA-WO-WS-03-06-20141011	15-01-0709-11	10/11/14 00:00	1	Tissue
OA-WO-WS-04-06-20141011	15-01-0709-12	10/11/14 00:00	1	Tissue
OA-WO-WS-05-06-20141011	15-01-0709-13	10/11/14 00:00	1	Tissue
OA-WO-WS-06-06-20141013	15-01-0709-14	10/13/14 00:00	1	Tissue
OA-WO-SS-08-06-20141013	15-01-0709-15	10/13/14 00:00	1	Tissue
OA-WO-SS-09-06-20141011	15-01-0709-16	10/11/14 00:00	1	Tissue
OA-WO-SS-10-06-20141011	15-01-0709-17	10/11/14 00:00	1	Tissue
IB-WO-SS-01-05-20141012	15-01-0709-18	10/12/14 00:00	1	Tissue
IB-WO-SS-02-05-20141012	15-01-0709-19	10/12/14 00:00	1	Tissue
IB-WO-SS-03-05-20141012	15-01-0709-20	10/12/14 00:00	1	Tissue

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-02-08-20141013	15-01-0709-1-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 23:36	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	10	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.2	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	19	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	148	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-02-08-20141013	15-01-0709-1-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 12:56	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	420	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	58	10-150	
2,4,5,6-Tetrachloro-m-Xylene	152	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-03-08-20141013	15-01-0709-2-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/01/15 23:54	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	5.8	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.1	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	15	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	121	10-150	
2,4,5,6-Tetrachloro-m-Xylene	137	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-03-08-20141013	15-01-0709-2-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 13:13	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	420	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	95	10-150	
2,4,5,6-Tetrachloro-m-Xylene	138	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-04-08-20141013	15-01-0709-3-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 00:12	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	3.7	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.6	2.0	1.3	10.0	B,J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	7.0	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	32	10-150	
2,4,5,6-Tetrachloro-m-Xylene	240	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-04-08-20141013	15-01-0709-3-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 13:31	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	290	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	46	10-150	
2,4,5,6-Tetrachloro-m-Xylene	268	10-150	1,2,7

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-05-08-20141013	15-01-0709-4-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 00:30	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	5.5	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.5	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	11	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-05-08-20141013	15-01-0709-4-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 13:49	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	320	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	43	10-150	
2,4,5,6-Tetrachloro-m-Xylene	122	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-06-08-20141013	15-01-0709-5-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 00:48	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	7.5	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.0	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	17	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	18	10-150	
2,4,5,6-Tetrachloro-m-Xylene	138	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-06-08-20141013	15-01-0709-5-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 14:07	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	520	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	47	10-150	
2,4,5,6-Tetrachloro-m-Xylene	143	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-07-08-20141013	15-01-0709-6-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 01:05	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	6.9	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.7	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	9.4	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	70	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-07-08-20141013	15-01-0709-6-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 14:25	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	250	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	33	10-150	
2,4,5,6-Tetrachloro-m-Xylene	85	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-08-08-20141013	15-01-0709-7-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 01:23	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	5.4	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.3	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	9.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	37	10-150	
2,4,5,6-Tetrachloro-m-Xylene	53	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-08-08-20141013	15-01-0709-7-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 14:43	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	300	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	60	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-10-08-20141013	15-01-0709-8-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 02:53	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	7.8	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.2	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	13	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	23	10-150	
2,4,5,6-Tetrachloro-m-Xylene	211	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-WO-WS-10-08-20141013	15-01-0709-8-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 15:43	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	390	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	189	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-01-06-20141011	15-01-0709-9-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 03:11	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	3.0	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.2	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	11	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	29	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-01-06-20141011	15-01-0709-9-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 16:01	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	210	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	31	10-150	
2,4,5,6-Tetrachloro-m-Xylene	112	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-02-06-20141011	15-01-0709-10-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 03:29	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	1.9	2.0	1.6	10.0	J
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.6	2.0	1.3	10.0	B,J
4,4'-DDT	2.6	2.0	1.6	10.0	B
4,4'-DDMU	4.5	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	32	10-150	
2,4,5,6-Tetrachloro-m-Xylene	116	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-02-06-20141011	15-01-0709-10-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 16:19	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	150	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	105	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-03-06-20141011	15-01-0709-11-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 03:47	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	2.5	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.9	2.0	1.3	10.0	B,J
4,4'-DDT	2.7	2.0	1.5	10.0	B
4,4'-DDMU	4.9	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	30	10-150	
2,4,5,6-Tetrachloro-m-Xylene	116	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-03-06-20141011	15-01-0709-11-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 16:37	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	170	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	137	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-04-06-20141011	15-01-0709-12-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 04:04	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	4.1	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.2	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	7.9	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	152	10-150	1,2,7

OA-WO-WS-04-06-20141011	15-01-0709-12-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 16:55	150126L15A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	210	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	58	10-150	
2,4,5,6-Tetrachloro-m-Xylene	147	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-05-06-20141011	15-01-0709-13-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 04:22	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	ND	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.4	2.0	1.3	10.0	B,J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	3.2	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	27	10-150	
2,4,5,6-Tetrachloro-m-Xylene	181	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-05-06-20141011	15-01-0709-13-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 17:12	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	210	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	112	10-150	
2,4,5,6-Tetrachloro-m-Xylene	222	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-06-06-20141013	15-01-0709-14-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 04:40	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	9.6	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	9.7	2.0	1.3	10.0	B
4,4'-DDT	5.3	2.0	1.6	10.0	B
4,4'-DDMU	15	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	34	10-150	
2,4,5,6-Tetrachloro-m-Xylene	76	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-WS-06-06-20141013	15-01-0709-14-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 17:30	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	290	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	43	10-150	
2,4,5,6-Tetrachloro-m-Xylene	85	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-08-06-20141013	15-01-0709-15-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 04:58	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	4.8	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.5	2.0	1.3	10.0	B,J
4,4'-DDT	3.1	2.0	1.5	10.0	B
4,4'-DDMU	4.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	94	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-08-06-20141013	15-01-0709-15-A	10/13/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 17:48	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	120	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	31	10-150	
2,4,5,6-Tetrachloro-m-Xylene	106	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-09-06-20141011	15-01-0709-16-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 05:16	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	6.1	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.0	2.0	1.3	10.0	B,J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	7.5	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	23	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-09-06-20141011	15-01-0709-16-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 18:06	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	190	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	120	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-10-06-20141011	15-01-0709-17-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 05:34	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	5.3	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.5	2.0	1.3	10.0	B,J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.4	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	109	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-WO-SS-10-06-20141011	15-01-0709-17-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 18:24	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	170	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	107	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-01-05-20141012	15-01-0709-18-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 12:02	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	8.9	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.4	2.0	1.3	10.0	B
4,4'-DDT	1.7	2.0	1.6	10.0	B,J
4,4'-DDMU	15	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	36	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

IB-WO-SS-01-05-20141012	15-01-0709-18-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 20:55	150126L15A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	210	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	36	10-150	
2,4,5,6-Tetrachloro-m-Xylene	97	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-02-05-20141012	15-01-0709-19-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 12:20	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	13	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.0	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	20	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	131	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-02-05-20141012	15-01-0709-19-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 21:13	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	280	20	56	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	48	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-WO-SS-03-05-20141012	15-01-0709-20-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 12:38	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	9.4	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.1	2.0	1.3	10.0	B
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	17	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	27	10-150	
2,4,5,6-Tetrachloro-m-Xylene	100	10-150	

IB-WO-SS-03-05-20141012	15-01-0709-20-A	10/12/14 00:00	Tissue	GC/MS NNN	01/26/15	02/02/15 21:31	150126L15A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	260	20	57	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	41	10-150	
2,4,5,6-Tetrachloro-m-Xylene	74	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0709
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400892

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-5	N/A	Tissue	GC/MS NNN	01/26/15	02/01/15 23:18	150126L15A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.18	0.20	0.13	1.00	J
4,4'-DDE	0.80	0.20	0.56	1.00	
4,4'-DDT	1.2	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	113	10-150	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400892

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
FH-WO-WS-10-08-20141013	Sample	Tissue	GC/MS NNN	01/26/15	02/02/15 02:53	150126S15
FH-WO-WS-10-08-20141013	Matrix Spike	Tissue	GC/MS NNN	01/26/15	02/01/15 18:29	150126S15
FH-WO-WS-10-08-20141013	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/26/15	02/01/15 18:46	150126S15

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
4,4'-DDD	4.200	5.000	11.59	148	13.51	186	10-150	15	0-30	3
4,4'-DDE	391.0	5.000	458.9	1358	606.8	4317	10-150	28	0-30	3
4,4'-DDT	ND	5.000	5.732	115	7.249	145	10-150	23	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0709
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400892

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-5	LCS	Tissue	GC/MS NNN	01/26/15	02/01/15 22:25	150126L15A			
099-16-578-5	LCSD	Tissue	GC/MS NNN	01/26/15	02/01/15 22:43	150126L15A			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.752	75	3.784	76	10-150	1	0-30	
4,4'-DDE	5.000	3.945	79	3.913	78	10-150	1	0-30	
4,4'-DDT	5.000	4.241	85	4.075	81	10-150	4	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-0709

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record



Report to:

AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky
Project Number: 1400892
Requested TAT: Standard

Ship to:
Danielle Gonsman
Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0709

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400892-01	FH-WO-WS-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-02	FH-WO-WS-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-03	FH-WO-WS-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-04	FH-WO-WS-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-05	FH-WO-WS-06-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-06	FH-WO-WS-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-07	FH-WO-WS-08-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-08	FH-WO-WS-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-09	OA-WO-WS-01-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-10	OA-WO-WS-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-11	OA-WO-WS-03-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-12	OA-WO-WS-04-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-13	OA-WO-WS-05-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-14	OA-WO-WS-06-06-20141013	13-Oct-14 00:00	Tissue	1		
1400892-15	OA-WO-SS-08-06-20141013	13-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

Received (Printed Name/Signature/Date/Time)
FedEx Jan.13,2015 1530

Relinquished (Printed Name/Signature/Date/Time)
Betina Benedict Jan.13,2015

Betina Benedict 1306 1/13/15

Received (Printed Name/Signature/Date/Time)

Relinquished (Printed Name/Signature/Date/Time)

BATEL *[Signature]* 1/14/15 1040

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400892
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

0709

Sample Information

Vista Number	Sample Name	Sampled	Matrix	#Containers	
1400892-16	OA-WO-SS-09-06-20141011	11-Oct-14 00:00	Tissue	1	
1400892-17	OA-WO-SS-10-06-20141011	11-Oct-14 00:00	Tissue	1	
1400892-18	IB-WO-SS-01-05-20141012	12-Oct-14 00:00	Tissue	1	
1400892-19	IB-WO-SS-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400892-20	IB-WO-SS-03-05-20141012	12-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1307 1/13/15</p>	<p>Received (Printed Name/Signature/Date/Time) Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) <i>F. PATEL</i> 1/14/15 10:40</p>

Aliquot Weight 1400892

ID Number	C.S. (grams)
1400892-02A	25.10
1400892-03A	21.00
1400892-04A	23.30
1400892-05A	23.90
1400892-06A	54.70
1400892-07A	57.50
1400892-08A	61.30
1400892-09A	26.40
1400892-10A	27.20
1400892-11A	30.50
1400892-12A	31.40
1400892-13A	36.10
1400892-14A	50.10
1400892-15A	27.60
1400892-16A	20.10
1400892-17A	29.50
1400892-18A	29.60
1400892-19A	29.70
1400892-20A	27.00

0709

0709

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 40.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



Ref # 1400892/1400893
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494

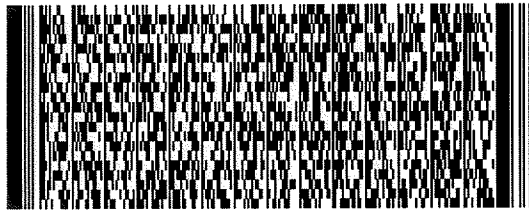
BILL SENDER

Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

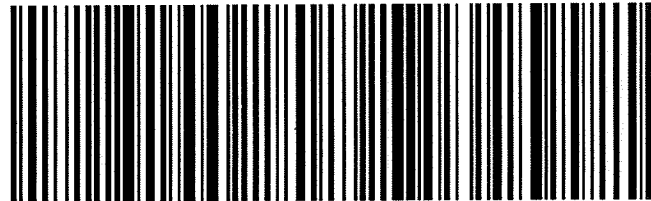
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6715 7920
0201



92 APVA

92841
CA-US
SNA



522G18F158AC9

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Calscience

WORK ORDER #: **15-01-0709**

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMBC

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.5 °C + 0.2°C (CF) = 2.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Collection date/time, matrix, and/or # of containers logged in based on sample labels.

No analysis requested. Not relinquished. No date/time relinquished.

Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------------------	--------------------------	--------------------------	-------------------------------------

Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------

Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	-------------------------------------

Aqueous samples received within 15-minute holding time

<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Unpreserved vials received for Volatiles analysis

Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 972

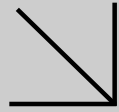
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 679

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure zna: ZnAc₂+NaOH f: Filtered Scanned by: 679

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Calscience



WORK ORDER NUMBER: 15-01-0710

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400901

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/20/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: 1400901
Work Order Number: 15-01-0710

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-0710
Project ID: 1400901

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 14th, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was 2.3°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

The dilution analysis for 4, 4'-DDE was performed outside the recommended extract holding time due an initial over dilution. The original analysis was performed within holding time, but since the 4,4-DDE detection was over the calibration range, the past holding time dilution run has been reported.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met with the following exceptions.

The EPA 8270C SIM OCP analyte, 4,4'-DDE, was present in the QC fish matrix used for the laboratory method detection limit studies (associated with GC/MS instrument BBB only) at a level greater than the historical reporting limit of 0.2 µg/kg. This caused a slightly elevated RL/MDL for this QC sample batch, but all samples had 4,4'-DDE detections above the RL.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample FH-FF-CH-01-08-20141013 was used for matrix spiking and all parameters for the project were within the control limits.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

One or both of the pesticide surrogates, 2,4,5,6-Tetrachloro-m-Xylene and Dibutylchloroendate, were above the control limits in several samples due to necessary sample dilutions and/or matrix interference. The samples were re-analyzed for confirmation and the results are released with the appropriate qualifiers.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/19/15. They were assigned to Work Order 15-01-0710.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-0710
9210 Sky Park Court, Suite 200	Project Name:	1400901
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/19/15 10:40
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
OA-FF-CH-03-06-20141011	15-01-0710-1	10/11/14 00:00	1	Tissue
OA-FF-CH-04-06-20141011	15-01-0710-2	10/11/14 00:00	1	Tissue
OA-FF-CH-05-06-20141011	15-01-0710-3	10/11/14 00:00	1	Tissue
OA-FF-CH-07-06-20141011	15-01-0710-4	10/11/14 00:00	1	Tissue
OA-FF-CH-08-06-20141011	15-01-0710-5	10/11/14 00:00	1	Tissue
OA-FF-CH-09-06-20141011	15-01-0710-6	10/11/14 00:00	1	Tissue
OA-FF-CH-10-06-20141011	15-01-0710-7	10/11/14 00:00	1	Tissue
OA-FF-WC-01-06-20141011	15-01-0710-8	10/11/14 00:00	1	Tissue
OA-FF-WC-03-06-20141011	15-01-0710-9	10/11/14 00:00	1	Tissue
OA-FF-WC-04-06-20141011	15-01-0710-10	10/11/14 00:00	1	Tissue
OA-FF-WC-05-06-20141011	15-01-0710-11	10/11/14 00:00	1	Tissue
OA-FF-WC-06-06-20141011	15-01-0710-12	10/11/14 00:00	1	Tissue
OA-FF-WC-07-06-20141011	15-01-0710-13	10/11/14 00:00	1	Tissue
OA-FF-WC-08-06-20141011	15-01-0710-14	10/11/14 00:00	1	Tissue
OA-FF-WC-09-06-20141011	15-01-0710-15	10/11/14 00:00	1	Tissue
OA-FF-WC-10-06-20141011	15-01-0710-16	10/11/14 00:00	1	Tissue
OA-FF-LF-01-06-20141011	15-01-0710-17	10/11/14 00:00	1	Tissue
OA-FF-LF-02-06-20141011	15-01-0710-18	10/11/14 00:00	1	Tissue
IB-FF-CH-02-05-20141012	15-01-0710-19	10/12/14 00:00	1	Tissue
IB-FF-WC-01-05-20141012	15-01-0710-20	10/12/14 00:00	1	Tissue



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-03-06-20141011	15-01-0710-1-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 13:27	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	1.4	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	146	10-150	
2,4,5,6-Tetrachloro-m-Xylene	133	10-150	

OA-FF-CH-04-06-20141011	15-01-0710-2-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 13:44	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	2.4	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.16	0.20	0.12	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	138	10-150	
2,4,5,6-Tetrachloro-m-Xylene	124	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-05-06-20141011	15-01-0710-3-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 14:01	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	3.3	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.19	0.20	0.12	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	149	10-150	
2,4,5,6-Tetrachloro-m-Xylene	126	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-07-06-20141011	15-01-0710-4-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 14:19	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.38	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	4.5	1.0	0.57	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.27	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	141	10-150	
2,4,5,6-Tetrachloro-m-Xylene	123	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/19/15
 Work Order: 15-01-0710
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-08-06-20141011	15-01-0710-5-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 16:28	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.31	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	5.0	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	0.40	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	141	10-150	
2,4,5,6-Tetrachloro-m-Xylene	122	10-150	

OA-FF-CH-09-06-20141011	15-01-0710-6-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 14:53	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.35	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	6.3	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.52	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	148	10-150	
2,4,5,6-Tetrachloro-m-Xylene	117	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-10-06-20141011	15-01-0710-7-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 15:10	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.29	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	5.7	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.33	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	149	10-150	
2,4,5,6-Tetrachloro-m-Xylene	124	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-01-06-20141011	15-01-0710-8-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 16:46	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	5.6	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.71	0.20	0.13	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	5.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	115	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/19/15
 Work Order: 15-01-0710
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-01-06-20141011	15-01-0710-8-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/01/15 11:01	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	110	100	56	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	126	10-150			
2,4,5,6-Tetrachloro-m-Xylene	180	10-150	1,2,7		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-03-06-20141011	15-01-0710-9-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/04/15 12:08	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	1.0	0.62	5.00	
2,4'-DDE	1.8	1.0	0.84	5.00	
2,4'-DDT	ND	1.0	0.64	5.00	
4,4'-DDD	ND	1.0	0.68	5.00	
4,4'-DDE	32	5.1	2.9	5.00	
4,4'-DDT	ND	1.0	0.80	5.00	
4,4'-DDMU	1.6	1.0	0.61	5.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	187	10-150	1,2,7		
2,4,5,6-Tetrachloro-m-Xylene	111	10-150			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-04-06-20141011	15-01-0710-10-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 17:39	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	1.6	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.53	0.20	0.13	1.00	
4,4'-DDT	0.38	0.20	0.15	1.00	
4,4'-DDMU	1.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	70	10-150	
2,4,5,6-Tetrachloro-m-Xylene	90	10-150	

OA-FF-WC-04-06-20141011	15-01-0710-10-A	10/11/14 00:00	Tissue	GC/MS NNN	01/26/15	03/19/15 13:56	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.
- Dilution analysis was performed outside the recommended holding time.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	17	9.9	5.6	9.90	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	85	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-05-06-20141011	15-01-0710-11-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 19:28	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.20	0.20	0.12	0.990	
2,4'-DDE	7.1	0.20	0.16	0.990	
2,4'-DDT	ND	0.20	0.12	0.990	
4,4'-DDD	1.3	0.20	0.13	0.990	
4,4'-DDT	ND	0.20	0.15	0.990	
4,4'-DDMU	5.4	0.20	0.12	0.990	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	106	10-150	
2,4,5,6-Tetrachloro-m-Xylene	146	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-05-06-20141011	15-01-0710-11-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 17:56	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	79	9.9	5.6	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	62	10-150	
2,4,5,6-Tetrachloro-m-Xylene	127	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-06-06-20141011	15-01-0710-12-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/04/15 13:46	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	6.2	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	ND	2.0	1.3	10.0	
4,4'-DDE	57	10	5.6	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.5	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	85	10-150	
2,4,5,6-Tetrachloro-m-Xylene	84	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-07-06-20141011	15-01-0710-13-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 20:03	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.37	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	3.7	0.20	0.13	1.00	
4,4'-DDT	0.54	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	95	10-150	
2,4,5,6-Tetrachloro-m-Xylene	132	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-07-06-20141011	15-01-0710-13-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/02/15 19:57	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	30	20	16	100	
4,4'-DDE	460	100	56	100	
4,4'-DDMU	35	20	12	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	101	10-150	
2,4,5,6-Tetrachloro-m-Xylene	181	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-08-06-20141011	15-01-0710-14-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 13:02	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	4.9	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	ND	2.0	1.3	10.0	
4,4'-DDE	70	10	5.7	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	106	10-150	
2,4,5,6-Tetrachloro-m-Xylene	126	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-09-06-20141011	15-01-0710-15-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 13:20	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	6.6	2.0	1.7	10.0	
2,4'-DDT	ND	2.0	1.3	10.0	
4,4'-DDD	1.4	2.0	1.3	10.0	J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	7.3	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	133	10-150	
2,4,5,6-Tetrachloro-m-Xylene	176	10-150	1,2,7

OA-FF-WC-09-06-20141011	15-01-0710-15-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 10:42	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	150	100	57	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	195	10-150	1,2,7
2,4,5,6-Tetrachloro-m-Xylene	285	10-150	1,2,7

OA-FF-WC-10-06-20141011	15-01-0710-16-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 20:55	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.18	0.20	0.12	1.00	J
2,4'-DDE	7.5	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.7	0.20	0.13	1.00	
4,4'-DDT	0.28	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	97	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-10-06-20141011	15-01-0710-16-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 11:00	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	130	100	56	100	
4,4'-DDMU	13	20	12	100	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	52	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-LF-01-06-20141011	15-01-0710-17-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 21:13	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	0.995	
2,4'-DDE	0.76	0.20	0.16	0.995	
2,4'-DDT	ND	0.20	0.12	0.995	
4,4'-DDD	ND	0.20	0.13	0.995	
4,4'-DDT	ND	0.20	0.15	0.995	
4,4'-DDMU	0.87	0.20	0.12	0.995	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	188	10-150	2,7
2,4,5,6-Tetrachloro-m-Xylene	147	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-LF-01-06-20141011	15-01-0710-17-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 14:30	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	12	10	5.6	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	123	10-150	
2,4,5,6-Tetrachloro-m-Xylene	138	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/19/15
 Work Order: 15-01-0710
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-LF-02-06-20141011	15-01-0710-18-A	10/11/14 00:00	Tissue	GC/MS BBB	01/26/15	02/04/15 14:38	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	ND	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	ND	2.0	1.3	10.0	
4,4'-DDE	5.8	10	5.7	10.0	J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	ND	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	125	10-150	
2,4,5,6-Tetrachloro-m-Xylene	102	10-150	

IB-FF-CH-02-05-20141012	15-01-0710-19-A	10/12/14 00:00	Tissue	GC/MS BBB	01/26/15	02/04/15 14:55	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	1.0	0.60	5.00	
2,4'-DDE	ND	1.0	0.82	5.00	
2,4'-DDT	ND	1.0	0.62	5.00	
4,4'-DDD	ND	1.0	0.66	5.00	
4,4'-DDE	3.2	5.0	2.8	5.00	J
4,4'-DDT	ND	1.0	0.77	5.00	
4,4'-DDMU	ND	1.0	0.59	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	89	10-150	
2,4,5,6-Tetrachloro-m-Xylene	76	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/19/15
 Work Order: 15-01-0710
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-01-05-20141012	15-01-0710-20-A	10/12/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 21:47	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.26	0.20	0.12	1.00	
2,4'-DDE	5.8	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.8	0.20	0.13	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	5.7	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	111	10-150	

IB-FF-WC-01-05-20141012	15-01-0710-20-A	10/12/14 00:00	Tissue	GC/MS BBB	01/26/15	02/03/15 11:52	150126L22*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	70	100	56	100	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	117	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/19/15
 Work Order: 15-01-0710
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400901

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-9	N/A	Tissue	GC/MS BBB	01/26/15	02/02/15 19:05	150126L22*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	ND	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	75	10-150	
2,4,5,6-Tetrachloro-m-Xylene	135	10-150	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400901

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OA-FF-CH-04-06-20141011	Sample	Tissue	GC/MS BBB	01/26/15	02/02/15 13:44	150126S22*
OA-FF-CH-04-06-20141011	Matrix Spike	Tissue	GC/MS BBB	01/26/15	02/04/15 10:58	150126S22*
OA-FF-CH-04-06-20141011	Matrix Spike Duplicate	Tissue	GC/MS BBB	01/26/15	02/04/15 11:16	150126S22*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	ND	5.000	5.467	109	5.446	109	10-150	0	0-30	
4,4'-DDE	2.388	5.000	7.958	111	7.973	112	10-150	0	0-30	
4,4'-DDT	ND	5.000	5.208	104	5.330	107	10-150	2	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/19/15
Work Order: 15-01-0710
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400901

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-9	LCS	Tissue	GC/MS BBB	01/26/15	02/04/15 11:33	150126L22*			
099-16-578-9	LCSD	Tissue	GC/MS BBB	01/26/15	02/04/15 11:50	150126L22*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.919	78	3.834	77	10-150	2	0-30	
4,4'-DDE	5.000	3.897	78	3.715	74	10-150	5	0-30	
4,4'-DDT	5.000	3.564	71	3.152	63	10-150	12	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-0710

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record



Report to:

AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky
Project Number: 1400901
Requested TAT: Standard

Ship To:
Danielle Gonsman
Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0710

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400901-01	OA-FF-CH-03-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-02	OA-FF-CH-04-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-03	OA-FF-CH-05-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-04	OA-FF-CH-07-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-05	OA-FF-CH-08-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-06	OA-FF-CH-09-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-07	OA-FF-CH-10-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-08	OA-FF-WC-01-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-09	OA-FF-WC-03-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-10	OA-FF-WC-04-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-11	OA-FF-WC-05-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-12	OA-FF-WC-06-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-13	OA-FF-WC-07-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-14	OA-FF-WC-08-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-15	OA-FF-WC-09-06-20141011	11-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1300 1/13/15</p>	<p>Received FedEx (Printed Name/Signature/Date/Time) Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) <i>[Signature]</i> 1/14/15 1040 J. PATEL</p>

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400901
 Requested TAT: Standard

Ship To:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400901-16	OA-FF-WC-10-06-20141011	11-Oct-14 00:00	Tissue	1
1400901-17	OA-FF-LF-01-06-20141011	11-Oct-14 00:00	Tissue	1
1400901-18	OA-FF-LF-02-06-20141011	11-Oct-14 00:00	Tissue	1
1400901-19	IB-FF-CH-02-05-20141012	12-Oct-14 00:00	Tissue	1
1400901-20	IB-FF-WC-01-05-20141012	12-Oct-14 00:00	Tissue	1

Special Requests: See Original Chain of Custody

Relinquished Bettina Benedict <i>Bettina Benedict</i> 1308 1/13/15 (Printed Name/Signature/Date/Time Jan.13, 2015	Received FedEx Jan.13, 2015 1530 (Printed Name/Signature/Date/Time	Page 25 of 28
Relinquished (Printed Name/Signature/Date/Time)	Received <i>[Signature]</i> 1/14/15 1040 J. PATEL (Printed Name/Signature/Date/Time)	28

Aliquot Weights	
1400901	
I.D.	Weight (g)
1400901-01	105.9
1400901-02	130.8
1400901-03	124.3
1400901-04	80.5
1400901-05	45.9
1400901-06	124.4
1400901-07	85.6
1400901-08	22.2
1400901-09	19.0
1400901-10	17.4
1400901-11	18.0
1400901-12	25.6
1400901-13	15.6
1400901-14	21.1
1400901-15	12.6
1400901-16	17.2
1400901-17	45.8
1400901-18	61.0
1400901-19	56.6
1400901-20	18.6

0710

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 43.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

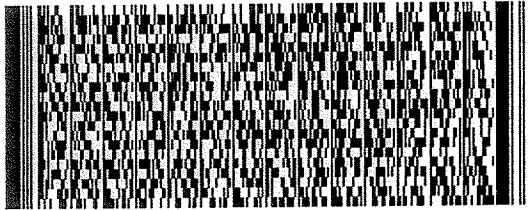
BILL SENDER

Ref # 1400900/1400901
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

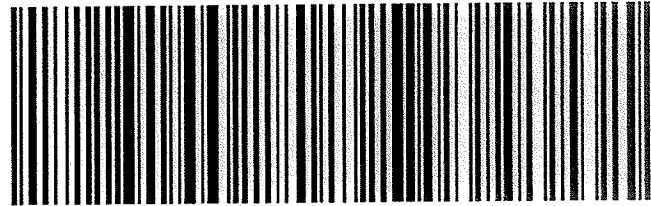
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6713 7220
0201



92 APVA

92841
CA-US
SNA



522G1/8F15/8AC9

After printing this label:

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Calscience

WORK ORDER #: 15-01-0710

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Amec

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.1 °C + 0.2°C (CF) = 2.3 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CONTAINER TYPE:			
Solid: <input checked="" type="checkbox"/> 4ozCGJ <input checked="" type="checkbox"/> 8ozCGJ <input type="checkbox"/> 16ozCGJ <input type="checkbox"/> Sleeve (____) <input type="checkbox"/> EnCores® <input type="checkbox"/> TerraCores® <input type="checkbox"/> _____			
Aqueous: <input type="checkbox"/> VOA <input type="checkbox"/> VOA _h <input type="checkbox"/> VOA _{na2} <input type="checkbox"/> 125AGB <input type="checkbox"/> 125AGB _h <input type="checkbox"/> 125AGB _p <input type="checkbox"/> 1AGB <input type="checkbox"/> 1AGB _{na2} <input type="checkbox"/> 1AGB _s			
<input type="checkbox"/> 500AGB <input type="checkbox"/> 500AGJ <input type="checkbox"/> 500AGJ _s <input type="checkbox"/> 250AGB <input type="checkbox"/> 250CGB <input type="checkbox"/> 250CGB _s <input type="checkbox"/> 1PB <input type="checkbox"/> 1PB _{na} <input type="checkbox"/> 500PB			
<input type="checkbox"/> 250PB <input type="checkbox"/> 250PB _n <input type="checkbox"/> 125PB <input type="checkbox"/> 125PB _{znna} <input type="checkbox"/> 100PJ <input type="checkbox"/> 100PJ _{na2} <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____			
Air: <input type="checkbox"/> Tedlar® <input type="checkbox"/> Canister Other: <input type="checkbox"/> _____ Trip Blank Lot#: _____ Labeled/Checked by: <u>972</u>			
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: <u>687</u>			
Preservative: h: HCL n: HNO ₃ na ₂ : Na ₂ S ₂ O ₃ na: NaOH p: H ₃ PO ₄ s: H ₂ SO ₄ u: Ultra-pure znna: ZnAc ₂ +NaOH f: Filtered Scanned by: <u>687</u>			

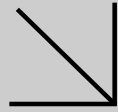
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Calscience

Supplemental Report 1

The original report has been revised/corrected.



WORK ORDER NUMBER: 15-01-0711

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400900

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 04/06/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Client Project Name: 1400900
Work Order Number: 15-01-0711

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-0711
Project ID: 1400900

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 14th, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was 2.3°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met with the following exceptions.

The EPA 8270C SIM OCP analyte, 4,4'-DDE, was present in the QC fish matrix used for the laboratory method detection limit studies (associated with GC/MS instrument BBB only) at a level greater than the historical reporting limit of 0.2 µg/kg. This caused a slightly elevated RL/MDL for this QC sample batch.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample OA-FF-CH-04-06-20141011 was used for matrix spiking and all parameters for the project were within the control limits.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

One or both of the pesticide surrogates, 2,4,5,6-Tetrachloro-m-Xylene and Dibutylchlorodate, were above the control limits in several samples due to necessary sample dilutions and/or matrix interference. The samples were re-analyzed for confirmation and are released with the appropriate qualifiers.

Work Order Narrative

Work Order: 15-01-0711Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/14/15. They were assigned to Work Order 15-01-0711.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-0711
9210 Sky Park Court, Suite 200	Project Name:	1400900
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/14/15 10:40
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
FH-FF-CH-01-08-20141013	15-01-0711-1	10/13/14 00:00	1	Tissue
FH-FF-CH-02-08-20141013	15-01-0711-2	10/13/14 00:00	1	Tissue
FH-FF-CH-03-08-20141013	15-01-0711-3	10/13/14 00:00	1	Tissue
FH-FF-CH-04-08-20141013	15-01-0711-4	10/13/14 00:00	1	Tissue
FH-FF-CH-05-08-20141013	15-01-0711-5	10/13/14 00:00	1	Tissue
FH-FF-CH-06-08-20141013	15-01-0711-6	10/13/14 00:00	1	Tissue
FH-FF-CH-08-08-20141013	15-01-0711-7	10/13/14 00:00	1	Tissue
FH-FF-CH-09-08-20141013	15-01-0711-8	10/13/14 00:00	1	Tissue
FH-FF-CH-10-08-20141013	15-01-0711-9	10/13/14 00:00	1	Tissue
FH-FF-WC-01-08-20141013	15-01-0711-10	10/13/14 00:00	1	Tissue
FH-FF-WC-02-08-20141013	15-01-0711-11	10/13/14 00:00	1	Tissue
FH-FF-WC-03-08-20141013	15-01-0711-12	10/13/14 00:00	1	Tissue
FH-FF-WC-04-08-20141013	15-01-0711-13	10/13/14 00:00	1	Tissue
FH-FF-WC-05-08-20141013	15-01-0711-14	10/13/14 00:00	1	Tissue
FH-FF-WC-06-08-20141013	15-01-0711-15	10/13/14 00:00	1	Tissue
FH-FF-WC-07-08-20141013	15-01-0711-16	10/13/14 00:00	1	Tissue
FH-FF-WC-08-08-20141013	15-01-0711-17	10/13/14 00:00	1	Tissue
FH-FF-WC-09-08-20141013	15-01-0711-18	10/13/14 00:00	1	Tissue
OA-FF-CH-01-06-20141011	15-01-0711-19	10/11/14 00:00	1	Tissue
OA-FF-CH-02-06-20141011	15-01-0711-20	10/11/14 00:00	1	Tissue


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Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0711
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400900

Page 1 of 14

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-01-08-20141013	15-01-0711-1-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 19:35	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	1.5	1.0	0.57	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	97	10-150	
2,4,5,6-Tetrachloro-m-Xylene	120	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-02-08-20141013	15-01-0711-2-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 19:52	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.43	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	7.9	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	0.46	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	90	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-03-08-20141013	15-01-0711-3-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 20:09	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	1.1	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	78	10-150	
2,4,5,6-Tetrachloro-m-Xylene	108	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-04-08-20141013	15-01-0711-4-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 20:27	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	1.8	1.0	0.57	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	72	10-150	
2,4,5,6-Tetrachloro-m-Xylene	100	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-05-08-20141013	15-01-0711-5-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 20:44	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	0.79	1.0	0.56	1.00	J
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	67	10-150	
2,4,5,6-Tetrachloro-m-Xylene	99	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-06-08-20141013	15-01-0711-6-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 21:01	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.24	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	4.4	1.0	0.57	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.22	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	67	10-150	
2,4,5,6-Tetrachloro-m-Xylene	97	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-08-08-20141013	15-01-0711-7-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 21:18	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	1.5	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	84	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-09-08-20141013	15-01-0711-8-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 21:35	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.34	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	7.9	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.28	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	108	10-150	
2,4,5,6-Tetrachloro-m-Xylene	132	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/14/15
 Work Order: 15-01-0711
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-10-08-20141013	15-01-0711-9-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/30/15 21:53	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	2.6	1.0	0.57	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	74	10-150	
2,4,5,6-Tetrachloro-m-Xylene	103	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-01-08-20141013	15-01-0711-10-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 12:49	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	1.9	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.30	0.20	0.13	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	2.8	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	84	10-150	
2,4,5,6-Tetrachloro-m-Xylene	114	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-01-08-20141013	15-01-0711-10-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 20:41	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	27	10	5.6	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	74	10-150			
2,4,5,6-Tetrachloro-m-Xylene	118	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-02-08-20141013	15-01-0711-11-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 13:06	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	3.5	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.48	0.20	0.13	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	2.2	0.20	0.12	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	48	10-150			
2,4,5,6-Tetrachloro-m-Xylene	103	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-02-08-20141013	15-01-0711-11-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 17:23	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	46	20	11	20.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	49	10-150			
2,4,5,6-Tetrachloro-m-Xylene	119	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-03-08-20141013	15-01-0711-12-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 13:23	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.21	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.9	0.20	0.13	1.00	
4,4'-DDT	0.23	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	29	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-03-08-20141013	15-01-0711-12-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 20:58	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	9.2	2.0	1.6	10.0	
4,4'-DDMU	10	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	26	10-150	
2,4,5,6-Tetrachloro-m-Xylene	124	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-03-08-20141013	15-01-0711-12-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 17:49	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	180	100	56	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	196	10-150	1,2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-04-08-20141013	15-01-0711-13-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 13:40	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.18	0.20	0.12	1.00	J
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.5	0.20	0.13	1.00	
4,4'-DDT	0.22	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	44	10-150	
2,4,5,6-Tetrachloro-m-Xylene	123	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-04-08-20141013	15-01-0711-13-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 19:32	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	8.6	4.0	3.3	20.0	
4,4'-DDE	96	20	11	20.0	
4,4'-DDMU	11	4.0	2.4	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	133	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-05-08-20141013	15-01-0711-14-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 13:57	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.34	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	3.1	0.20	0.13	1.00	
4,4'-DDT	0.26	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	42	10-150	
2,4,5,6-Tetrachloro-m-Xylene	134	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-05-08-20141013	15-01-0711-14-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 21:15	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	21	2.0	1.6	10.0	
4,4'-DDMU	21	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	34	10-150	
2,4,5,6-Tetrachloro-m-Xylene	154	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-05-08-20141013	15-01-0711-14-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 18:06	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	350	100	57	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	221	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-06-08-20141013	15-01-0711-15-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 15:02	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.34	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	4.3	0.20	0.13	1.00	
4,4'-DDT	0.53	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	28	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-06-08-20141013	15-01-0711-15-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 21:32	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	23	2.0	1.6	10.0	
4,4'-DDMU	38	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	26	10-150	
2,4,5,6-Tetrachloro-m-Xylene	143	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-06-08-20141013	15-01-0711-15-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 18:23	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	420	200	110	200	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	52	10-150	
2,4,5,6-Tetrachloro-m-Xylene	149	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-07-08-20141013	15-01-0711-16-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 15:19	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.36	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	3.1	0.20	0.13	1.00	
4,4'-DDT	0.44	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	133	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-07-08-20141013	15-01-0711-16-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 21:49	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	27	2.0	1.6	10.0	
4,4'-DDMU	21	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	37	10-150	
2,4,5,6-Tetrachloro-m-Xylene	157	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-07-08-20141013	15-01-0711-16-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 18:40	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	410	100	57	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	179	10-150	1,2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-08-08-20141013	15-01-0711-17-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 15:36	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.39	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	2.8	0.20	0.13	1.00	
4,4'-DDT	0.28	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	19	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-08-08-20141013	15-01-0711-17-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 22:07	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	17	2.0	1.6	10.0	
4,4'-DDMU	17	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	16	10-150	
2,4,5,6-Tetrachloro-m-Xylene	132	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-08-08-20141013	15-01-0711-17-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 18:57	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	180	100	56	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	26	10-150	
2,4,5,6-Tetrachloro-m-Xylene	108	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-09-08-20141013	15-01-0711-18-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 15:54	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.19	0.20	0.12	1.00	J
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	3.0	0.20	0.13	1.00	
4,4'-DDT	0.21	0.20	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	17	10-150	
2,4,5,6-Tetrachloro-m-Xylene	105	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-09-08-20141013	15-01-0711-18-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 22:24	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	11	2.0	1.6	10.0	
4,4'-DDMU	17	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	14	10-150	
2,4,5,6-Tetrachloro-m-Xylene	113	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-09-08-20141013	15-01-0711-18-A	10/13/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 19:15	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	250	100	56	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	21	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-01-06-20141011	15-01-0711-19-A	10/11/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 16:28	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	2.5	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.17	0.20	0.12	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	74	10-150	
2,4,5,6-Tetrachloro-m-Xylene	102	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400900

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-02-06-20141011	15-01-0711-20-A	10/11/14 00:00	Tissue	GC/MS BBB	01/27/15	01/31/15 17:02	150127L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	3.0	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	0.19	0.20	0.12	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	88	10-150	
2,4,5,6-Tetrachloro-m-Xylene	137	10-150	

Method Blank	099-16-578-10	N/A	Tissue	GC/MS BBB	01/27/15	01/31/15 12:31	150127L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.13	1.00	
4,4'-DDE	ND	1.0	0.56	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	44	10-150	
2,4,5,6-Tetrachloro-m-Xylene	116	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400900

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
FH-FF-CH-01-08-20141013	Sample	Tissue	GC/MS BBB	01/27/15	01/30/15 19:35	150127S16*
FH-FF-CH-01-08-20141013	Matrix Spike	Tissue	GC/MS BBB	01/27/15	02/01/15 10:27	150127S16*
FH-FF-CH-01-08-20141013	Matrix Spike Duplicate	Tissue	GC/MS BBB	01/27/15	02/01/15 10:44	150127S16*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	ND	5.000	4.617	92	3.796	76	10-150	20	0-30	
4,4'-DDE	1.508	5.000	5.976	89	4.889	68	10-150	20	0-30	
4,4'-DDT	ND	5.000	3.914	78	3.176	64	10-150	21	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/14/15
Work Order: 15-01-0711
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400900

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-10	LCS	Tissue	GC/MS BBB	01/27/15	01/31/15 20:06	150127L16*			
099-16-578-10	LCSD	Tissue	GC/MS BBB	01/27/15	01/31/15 20:23	150127L16*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.315	66	3.706	74	10-150	11	0-30	
4,4'-DDE	5.000	3.382	68	3.726	75	10-150	10	0-30	
4,4'-DDT	5.000	2.895	58	3.160	63	10-150	9	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-0711

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400900
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-0711

Sample Information

VistaIDNumber	SampleName	Sampled	Matrix	#Containers		
1400900-01	FH-FF-CH-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-02	FH-FF-CH-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-03	FH-FF-CH-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-04	FH-FF-CH-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-05	FH-FF-CH-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-06	FH-FF-CH-06-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-07	FH-FF-CH-08-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-08	FH-FF-CH-09-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-09	FH-FF-CH-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-10	FH-FF-WC-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-11	FH-FF-WC-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-12	FH-FF-WC-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-13	FH-FF-WC-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-14	FH-FF-WC-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-15	FH-FF-WC-06-08-20141013	13-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict</i> 1307 1/13/15</p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530 Received (Printed Name/Signature/Date/Time) T. PATEL <i>[Signature]</i> 1/14/15 1040</p>
---	---

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400900
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

0711

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400900-16	FH-FF-WC-07-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-17	FH-FF-WC-08-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-18	FH-FF-WC-09-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-19	OA-FF-CH-01-06-20141011	11-Oct-14 00:00	Tissue	1
1400900-20	OA-FF-CH-02-06-20141011	11-Oct-14 00:00	Tissue	1

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1307 1/13/15</i></p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530</p>	<p>Page 25 of 28</p>
<p>Relinquished (Printed Name/Signature/Date/Time) <i>[Signature]</i></p>	<p>Received (Printed Name/Signature/Date/Time) J. PATEL <i>[Signature]</i> 1/14/15 1040</p>	

0711

Aliquot Weight 1400900

ID Number	C.S. (grams)
1400900-01A	170.80
1400900-02A	93.40
1400900-03A	89.10
1400900-04A	89.40
1400900-05A	71.50
1400900-06A	85.00
1400900-07A	33.80
1400900-08A	37.50
1400900-09A	31.20
1400900-10A	23.90
1400900-11A	32.20
1400900-12A	32.20
1400900-13A	21.60
1400900-14A	22.70
1400900-15A	39.70
1400900-16A	45.80
1400900-17A	14.70
1400900-18A	17.40
1400900-19A	108.80
1400900-20A	145.90

0711

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 43.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

BILL SENDER

Ref # 1400900/1400901
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

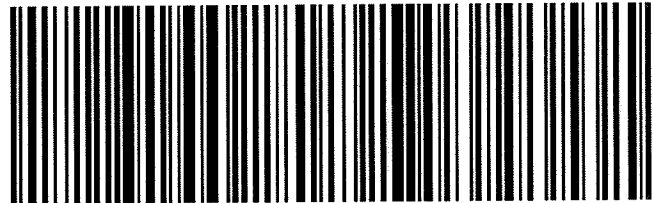
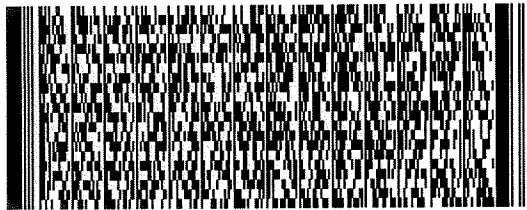
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6713 7220

0201

92841
CA-US
SNA

92 APVA



522G18F158AC9

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Calscience

WORK ORDER #: 15-01-0711

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Amec

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.1 °C + 0.2°C (CF) = 2.3 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....			
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{znna} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 972

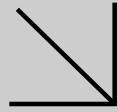
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 619

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure znna: ZnAc₂+NaOH f: Filtered Scanned by: 619

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Calscience



WORK ORDER NUMBER: 15-01-1415

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400905

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/13/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Contents

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Work Order Number: 15-01-1415

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-1415
Project ID: 1400905

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Four tissue samples were received for this project on January 23rd, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -0.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM
PCB Congeners by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides and PCBs. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project samples were used for matrix spiking and all parameters for the project were within the control limits.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/23/15. They were assigned to Work Order 15-01-1415.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-1415
9210 Sky Park Court, Suite 200	Project Name:	1400905
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/23/15 09:45
	Number of Containers:	4

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CS-FF-CH-08-03-20141010	15-01-1415-1	10/10/14 00:00	1	Tissue
CS-OF-CH-08-03-20141010	15-01-1415-2	10/10/14 00:00	1	Tissue
CS-FF-WS-04-03-20141010	15-01-1415-3	10/10/14 00:00	1	Tissue
CS-OF-WS-04-03-20141010	15-01-1415-4	10/10/14 00:00	1	Tissue



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Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400905

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-08-03-20141010	15-01-1415-1-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 18:43	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.28	0.20	0.12	1.00	
2,4'-DDE	2.2	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.9	0.20	0.044	1.00	
4,4'-DDT	0.18	0.20	0.16	1.00	J
4,4'-DDMU	2.0	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	110	10-150	
2,4,5,6-Tetrachloro-m-Xylene	104	10-150	

CS-FF-CH-08-03-20141010	15-01-1415-1-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 04:26	150131L16*
-------------------------	----------------	-------------------	--------	-----------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	47	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	68	10-150	
2,4,5,6-Tetrachloro-m-Xylene	93	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1415
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400905

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-OF-CH-08-03-20141010	15-01-1415-2-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 04:44	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.2	2.0	1.2	10.0	J
2,4'-DDE	10	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	11	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	11	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	74	10-150	
2,4,5,6-Tetrachloro-m-Xylene	86	10-150	

CS-OF-CH-08-03-20141010	15-01-1415-2-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 13:35	150131L16*
-------------------------	----------------	-------------------	--------	-----------	----------	-------------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	220	10	5.4	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	70	10-150	
2,4,5,6-Tetrachloro-m-Xylene	65	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1415
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400905

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-WS-04-03-20141010	15-01-1415-3-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 19:01	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.13	0.20	0.12	1.00	J
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.74	0.20	0.044	1.00	
4,4'-DDE	5.0	0.20	0.11	1.00	
4,4'-DDT	0.17	0.20	0.16	1.00	J
4,4'-DDMU	0.20	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	89	10-150	
2,4,5,6-Tetrachloro-m-Xylene	74	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-OF-WS-04-03-20141010	15-01-1415-4-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 05:20	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.3	2.0	1.2	10.0	
2,4'-DDE	6.6	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	53	2.0	0.44	10.0	
4,4'-DDT	3.8	2.0	1.6	10.0	
4,4'-DDMU	33	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	78	10-150	
2,4,5,6-Tetrachloro-m-Xylene	136	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400905

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-OF-WS-04-03-20141010	15-01-1415-4-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 13:53	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	430	20	11	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	71	10-150			
2,4,5,6-Tetrachloro-m-Xylene	131	10-150			

Method Blank	099-16-578-3	N/A	Tissue	GC/MS NNN	01/31/15	02/08/15 15:54	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	55	10-150			
2,4,5,6-Tetrachloro-m-Xylene	109	10-150			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400905

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-08-03-20141010	15-01-1415-1-A	10/10/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 11:35	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.24	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.13	1.00	
PCB028	0.18	0.20	0.095	1.00	J
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	2.0	0.20	0.084	1.00	
PCB052	4.0	0.20	0.12	1.00	
PCB056	ND	0.20	0.18	1.00	
PCB060	0.83	0.20	0.19	1.00	
PCB066	1.4	0.20	0.083	1.00	
PCB070	0.35	0.20	0.11	1.00	
PCB074	0.69	0.20	0.088	1.00	
PCB077	0.74	0.20	0.048	1.00	
PCB081	ND	0.20	0.080	1.00	
PCB087	2.0	0.20	0.075	1.00	
PCB095	0.80	0.20	0.11	1.00	
PCB097	1.9	0.20	0.15	1.00	
PCB099	8.1	0.20	0.099	1.00	
PCB101	11	0.20	0.082	1.00	
PCB105	2.6	0.20	0.094	1.00	
PCB110	4.0	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	7.4	0.20	0.073	1.00	
PCB119	0.82	0.20	0.075	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	1.6	0.20	0.065	1.00	
PCB132/153	33	0.40	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1415
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400905

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.59	0.20	0.096	1.00	
PCB138/158	15	0.40	0.13	1.00	
PCB141	2.4	0.20	0.15	1.00	
PCB149	6.1	0.20	0.070	1.00	
PCB151	3.5	0.20	0.053	1.00	
PCB156	0.87	0.20	0.087	1.00	
PCB157	0.15	0.20	0.059	1.00	J
PCB167	0.49	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	0.33	0.20	0.079	1.00	
PCB170	4.5	0.20	0.081	1.00	
PCB174	1.1	0.20	0.083	1.00	
PCB177	1.1	0.20	0.069	1.00	
PCB180	9.8	0.20	0.062	1.00	
PCB183	3.0	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	8.6	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	1.6	0.20	0.064	1.00	
PCB195	0.83	0.20	0.19	1.00	
PCB200	0.12	0.20	0.092	1.00	J
PCB201	0.32	0.20	0.091	1.00	
PCB203	2.4	0.20	0.13	1.00	
PCB206	0.63	0.20	0.074	1.00	
PCB209	0.19	0.20	0.16	1.00	J
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	93	10-150			
p-Terphenyl-d14	76	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400905

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-WS-04-03-20141010	15-01-1415-3-A	10/10/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 12:00	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.40	0.32	1.00	
PCB005/008	ND	0.80	0.49	1.00	
PCB015	ND	0.40	0.29	1.00	
PCB018	ND	0.40	0.19	1.00	
PCB027	ND	0.40	0.27	1.00	
PCB028	ND	0.40	0.19	1.00	
PCB029	ND	0.40	0.31	1.00	
PCB031	ND	0.40	0.26	1.00	
PCB033	ND	0.40	0.24	1.00	
PCB037	ND	0.40	0.23	1.00	
PCB044	ND	0.40	0.22	1.00	
PCB049	0.63	0.40	0.17	1.00	
PCB052	1.4	0.40	0.24	1.00	
PCB056	ND	0.40	0.37	1.00	
PCB060	ND	0.40	0.39	1.00	
PCB066	0.57	0.40	0.17	1.00	
PCB070	0.38	0.40	0.21	1.00	J
PCB074	0.48	0.40	0.18	1.00	
PCB077	0.21	0.40	0.097	1.00	J
PCB081	ND	0.40	0.16	1.00	
PCB087	0.42	0.40	0.15	1.00	
PCB095	0.51	0.40	0.22	1.00	
PCB097	0.48	0.40	0.30	1.00	
PCB099	1.4	0.40	0.20	1.00	
PCB101	1.5	0.40	0.17	1.00	
PCB105	0.53	0.40	0.19	1.00	
PCB110	0.28	0.40	0.17	1.00	J
PCB114	ND	0.40	0.12	1.00	
PCB118	1.5	0.40	0.15	1.00	
PCB119	ND	0.40	0.15	1.00	
PCB123	ND	0.40	0.11	1.00	
PCB126	ND	0.40	0.16	1.00	
PCB128	0.21	0.40	0.13	1.00	J
PCB132/153	3.9	0.80	0.39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1415
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400905

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.40	0.19	1.00	
PCB138/158	2.0	0.80	0.26	1.00	
PCB141	ND	0.40	0.31	1.00	
PCB149	0.37	0.40	0.14	1.00	J
PCB151	0.55	0.40	0.11	1.00	
PCB156	0.19	0.40	0.17	1.00	J
PCB157	ND	0.40	0.12	1.00	
PCB167	ND	0.40	0.15	1.00	
PCB168	ND	0.40	0.11	1.00	
PCB169	ND	0.40	0.16	1.00	
PCB170	0.50	0.40	0.16	1.00	
PCB174	ND	0.40	0.17	1.00	
PCB177	0.14	0.40	0.14	1.00	J
PCB180	1.3	0.40	0.12	1.00	
PCB183	0.30	0.40	0.12	1.00	J
PCB184	ND	0.40	0.25	1.00	
PCB187	1.1	0.40	0.15	1.00	
PCB189	ND	0.40	0.13	1.00	
PCB194	0.18	0.40	0.13	1.00	J
PCB195	ND	0.40	0.38	1.00	
PCB200	ND	0.40	0.19	1.00	
PCB201	ND	0.40	0.18	1.00	
PCB203	ND	0.40	0.27	1.00	
PCB206	ND	0.40	0.15	1.00	
PCB209	ND	0.40	0.32	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	99	10-150	
p-Terphenyl-d14	109	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400905

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-574-5	N/A	Tissue	GC/MS HHH	01/31/15	02/05/15 00:09	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	ND	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	ND	0.20	0.084	1.00	
PCB052	ND	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.083	1.00	
PCB070	ND	0.20	0.11	1.00	
PCB074	ND	0.20	0.088	1.00	
PCB077	ND	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	ND	0.20	0.076	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.15	1.00	
PCB099	ND	0.20	0.10	1.00	
PCB101	ND	0.20	0.083	1.00	
PCB105	ND	0.20	0.095	1.00	
PCB110	ND	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	ND	0.20	0.073	1.00	
PCB119	ND	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	ND	0.20	0.066	1.00	
PCB132/153	ND	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1415
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400905

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.20	0.097	1.00	
PCB138/158	ND	0.40	0.13	1.00	
PCB141	ND	0.20	0.15	1.00	
PCB149	ND	0.20	0.070	1.00	
PCB151	ND	0.20	0.053	1.00	
PCB156	ND	0.20	0.087	1.00	
PCB157	ND	0.20	0.060	1.00	
PCB167	ND	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	ND	0.20	0.082	1.00	
PCB174	ND	0.20	0.084	1.00	
PCB177	ND	0.20	0.069	1.00	
PCB180	ND	0.20	0.062	1.00	
PCB183	ND	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	ND	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	ND	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	ND	0.20	0.075	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	104	10-150			
p-Terphenyl-d14	105	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400905

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-01-1416-10	Sample	Tissue	GC/MS NNN	01/31/15	02/10/15 17:50	150131S16*
15-01-1416-10	Matrix Spike	Tissue	GC/MS NNN	01/31/15	02/10/15 05:38	150131S16*
15-01-1416-10	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/31/15	02/10/15 05:56	150131S16*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	1.053	5.000	5.667	92	5.263	84	10-150	7	0-30	
4,4'-DDE	15.40	5.000	21.00	112	21.00	112	10-150	0	0-30	
4,4'-DDT	ND	5.000	3.686	74	3.705	74	10-150	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: 1400905

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-01-1419-13	Sample	Tissue	GC/MS HHH	01/31/15	02/05/15 14:58	150131S23
15-01-1419-13	Matrix Spike	Tissue	GC/MS HHH	01/31/15	02/05/15 10:45	150131S23
15-01-1419-13	Matrix Spike Duplicate	Tissue	GC/MS HHH	01/31/15	02/05/15 11:10	150131S23

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	60.20	120	63.33	127	10-150	5	0-30	
PCB028	ND	50.00	64.28	129	68.35	137	10-150	6	0-30	
PCB044	ND	50.00	61.66	123	65.74	131	10-150	6	0-30	
PCB052	0.6842	50.00	53.44	106	56.80	112	10-150	6	0-30	
PCB066	0.5636	50.00	68.48	136	72.39	144	10-150	6	0-30	
PCB077	ND	50.00	68.56	137	71.90	144	10-150	5	0-30	
PCB101	2.158	50.00	61.12	118	64.95	126	10-150	6	0-30	
PCB105	0.6365	50.00	66.24	131	69.97	139	10-150	5	0-30	
PCB118	1.940	50.00	69.14	134	73.46	143	10-150	6	0-30	
PCB126	ND	50.00	63.89	128	67.04	134	10-150	5	0-30	
PCB128	0.4081	50.00	55.96	111	58.05	115	10-150	4	0-30	
PCB170	0.5388	50.00	57.53	114	60.60	120	10-150	5	0-30	
PCB180	1.350	50.00	60.63	119	63.12	124	10-150	4	0-30	
PCB187	1.253	50.00	57.45	112	60.88	119	10-150	6	0-30	
PCB195	ND	50.00	69.43	139	71.41	143	10-150	3	0-30	
PCB206	0.2205	50.00	62.61	125	64.54	129	10-150	3	0-30	
PCB209	ND	50.00	59.59	119	60.67	121	10-150	2	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400905

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-3	LCS	Tissue	GC/MS NNN	01/31/15	02/08/15 17:23	150131L16*			
099-16-578-3	LCSD	Tissue	GC/MS NNN	01/31/15	02/08/15 17:41	150131L16*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	4.203	84	4.124	82	10-150	2	0-30	
4,4'-DDE	5.000	4.206	84	4.091	82	10-150	3	0-30	
4,4'-DDT	5.000	4.969	99	4.663	93	10-150	6	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1415
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: 1400905

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-574-5	LCS	Tissue	GC/MS HHH	01/31/15	02/04/15 23:20	150131L23				
099-16-574-5	LCSD	Tissue	GC/MS HHH	01/31/15	02/04/15 23:45	150131L23				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	56.15	112	49.85	100	10-150	0-173	12	0-30	
PCB028	50.00	62.35	125	54.79	110	10-150	0-173	13	0-30	
PCB044	50.00	60.28	121	53.95	108	10-150	0-173	11	0-30	
PCB052	50.00	52.91	106	47.19	94	10-150	0-173	11	0-30	
PCB066	50.00	65.98	132	58.35	117	10-150	0-173	12	0-30	
PCB077	50.00	64.70	129	56.49	113	10-150	0-173	14	0-30	
PCB101	50.00	59.34	119	52.33	105	10-150	0-173	13	0-30	
PCB105	50.00	64.35	129	56.71	113	10-150	0-173	13	0-30	
PCB118	50.00	66.93	134	59.23	118	10-150	0-173	12	0-30	
PCB126	50.00	65.20	130	56.56	113	10-150	0-173	14	0-30	
PCB128	50.00	52.59	105	46.37	93	10-150	0-173	13	0-30	
PCB170	50.00	53.05	106	48.18	96	10-150	0-173	10	0-30	
PCB180	50.00	62.62	125	54.74	109	10-150	0-173	13	0-30	
PCB187	50.00	59.35	119	51.38	103	10-150	0-173	14	0-30	
PCB195	50.00	65.79	132	60.24	120	10-150	0-173	9	0-30	
PCB206	50.00	59.36	119	54.94	110	10-150	0-173	8	0-30	
PCB209	50.00	58.21	116	53.31	107	10-150	0-173	9	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-1415

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400905
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1415

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400905-01	CS-FF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1		
1400905-02	CS-OF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1		
1400905-03	CS-FF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1		
1400905-04	CS-OF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

<p>Relinquished Bettina Benedikt <i>Bettina Benedikt 1/23/15 1413</i></p>	<p>Received (Printed Name/Signature/Date/Time) <i>PREET SORIANO, Momo</i> EU 1/23/15 0945</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time)</p>

1415

ANCHOR OEA
1400905
0.4% O.1%

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Vista Test Parameters (Sub's noted in Bold)										Comments	Comments/Preservation	
				PCBs (high res) EPA 168C	PCBs (low res) 2270 congeners - conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF)	ONLY (NOT OF) - BALANCE	WDDMU - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to Phys (C/N Stable isotopes)	Weather off 10 pectoral area scales, measure and use			Save fish head (girth) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	13	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
125	CS-WO-W5-01-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
126	CS-WO-W5-02-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
127	CS-WO-W5-03-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Offal from this replicate.
128	CS-FF/OF-W5-04-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
129	CS-WO-W5-05-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
130	CS-WO-W5-06-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
131	CS-WO-W5-07-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
132	CS-WO-W5-08-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
133	CS-WO-W5-09-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
134	CS-WO-W5-10-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
135	CS-WO-W5-Archive-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	L side Photo 37. Firm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3	X	X	X	X	X	X	X	X	X	X	X	Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-8
138	FH-WO-W5-Archive-08-20141014-FormerRep9	10/14/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via email 12/02/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: [Signature]
 Received By: [Signature] Company: OEA Date/Time: 12/2/14
 Signature/Printed Name: PRECY SORIANO

7 1400893
 B 1400903
 ∞ 1400905
 ∅ 1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way
El Dorado Hills, CA 95762

Origin ID: MHRA



Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

7415

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

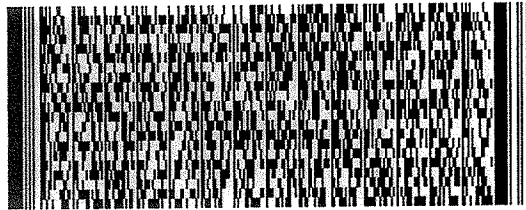
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

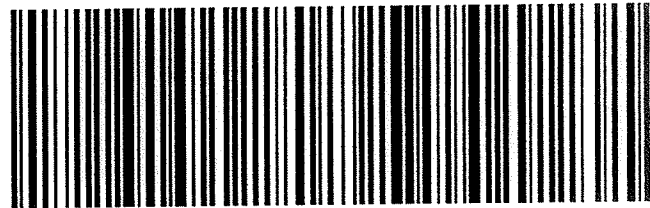
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
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Calscience

WORK ORDER #: **15-01-1415**

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2°C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: ^{tissue} 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{znna} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 965

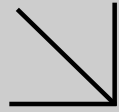
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure znna: ZnAc₂+NaOH f: Filtered **Scanned by:** 802

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Calscience



WORK ORDER NUMBER: 15-01-1416

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400903

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/13/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Work Order Number: 15-01-1416

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-1416
Project ID: 1400903

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twelve tissue samples were received for this project on January 23rd, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -0.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample CS-FF-CH-09-03-20141010 was used for matrix spiking and all parameters for the project were within the control limits.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/23/15. They were assigned to Work Order 15-01-1416.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-1416
9210 Sky Park Court, Suite 200	Project Name:	1400903
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/23/15 09:15
	Number of Containers:	12

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IA-FF-WC-08-07-20141011	15-01-1416-1	10/11/14 00:00	1	Tissue
IA-FF-WC-10-07-20141011	15-01-1416-2	10/11/14 00:00	1	Tissue
CS-FF-CH-01-03-20141010	15-01-1416-3	10/10/14 00:00	1	Tissue
CS-FF-CH-02-03-20141010	15-01-1416-4	10/10/14 00:00	1	Tissue
CS-FF-CH-03-03-20141010	15-01-1416-5	10/10/14 00:00	1	Tissue
CS-FF-CH-04-03-20141010	15-01-1416-6	10/10/14 00:00	1	Tissue
CS-FF-CH-05-03-20141010	15-01-1416-7	10/10/14 00:00	1	Tissue
CS-FF-CH-06-03-20141010	15-01-1416-8	10/10/14 00:00	1	Tissue
CS-FF-CH-07-03-20141010	15-01-1416-9	10/10/14 00:00	1	Tissue
CS-FF-CH-09-03-20141010	15-01-1416-10	10/10/14 00:00	1	Tissue
CS-FF-CH-10-03-20141010	15-01-1416-11	10/10/14 00:00	1	Tissue
CS-FF-LF-02-03-20141010	15-01-1416-12	10/10/14 00:00	1	Tissue

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1416
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-08-07-20141011	15-01-1416-1-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 14:11	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	1.1	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.15	0.20	0.044	1.00	J
4,4'-DDT	0.23	0.20	0.16	1.00	
4,4'-DDMU	0.79	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	59	10-150	
2,4,5,6-Tetrachloro-m-Xylene	79	10-150	

IA-FF-WC-08-07-20141011	15-01-1416-1-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 23:57	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	16	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	75	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-10-07-20141011	15-01-1416-2-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 14:29	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.40	0.24	2.00	
2,4'-DDE	6.9	0.40	0.33	2.00	
2,4'-DDT	ND	0.40	0.25	2.00	
4,4'-DDD	3.0	0.40	0.088	2.00	
4,4'-DDT	0.72	0.40	0.31	2.00	
4,4'-DDMU	8.2	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	27	10-150	
2,4,5,6-Tetrachloro-m-Xylene	99	10-150	

IA-FF-WC-10-07-20141011	15-01-1416-2-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 13:17	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	95	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	30	10-150	
2,4,5,6-Tetrachloro-m-Xylene	97	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-01-03-20141010	15-01-1416-3-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 14:47	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.14	0.20	0.044	1.00	J
4,4'-DDE	1.7	0.20	0.11	1.00	
4,4'-DDT	0.26	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	57	10-150	
2,4,5,6-Tetrachloro-m-Xylene	71	10-150	

CS-FF-CH-02-03-20141010	15-01-1416-4-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 15:05	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.18	0.20	0.12	1.01	J
2,4'-DDE	1.7	0.20	0.17	1.01	
2,4'-DDT	ND	0.20	0.13	1.01	
4,4'-DDD	1.0	0.20	0.044	1.01	
4,4'-DDT	0.43	0.20	0.16	1.01	
4,4'-DDMU	1.4	0.20	0.12	1.01	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	66	10-150	
2,4,5,6-Tetrachloro-m-Xylene	92	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-02-03-20141010	15-01-1416-4-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 00:51	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	26	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	56	10-150			
2,4,5,6-Tetrachloro-m-Xylene	72	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-03-03-20141010	15-01-1416-5-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 15:23	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.20	0.20	0.12	1.01	
2,4'-DDE	1.3	0.20	0.17	1.01	
2,4'-DDT	ND	0.20	0.13	1.01	
4,4'-DDD	1.1	0.20	0.044	1.01	
4,4'-DDT	ND	0.20	0.16	1.01	
4,4'-DDMU	1.2	0.20	0.12	1.01	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	54	10-150			
2,4,5,6-Tetrachloro-m-Xylene	92	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-03-03-20141010	15-01-1416-5-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 01:09	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	18	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	38	10-150			
2,4,5,6-Tetrachloro-m-Xylene	81	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-04-03-20141010	15-01-1416-6-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 15:40	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.18	0.20	0.12	1.01	J
2,4'-DDE	1.7	0.20	0.17	1.01	
2,4'-DDT	ND	0.20	0.13	1.01	
4,4'-DDD	1.3	0.20	0.044	1.01	
4,4'-DDT	ND	0.20	0.16	1.01	
4,4'-DDMU	1.5	0.20	0.12	1.01	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	48	10-150	
2,4,5,6-Tetrachloro-m-Xylene	77	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-04-03-20141010	15-01-1416-6-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 01:27	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	28	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	36	10-150	
2,4,5,6-Tetrachloro-m-Xylene	74	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1416
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-05-03-20141010	15-01-1416-7-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 15:58	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	0.995	
2,4'-DDE	0.86	0.20	0.16	0.995	
2,4'-DDT	ND	0.20	0.12	0.995	
4,4'-DDD	0.65	0.20	0.044	0.995	
4,4'-DDT	ND	0.20	0.15	0.995	
4,4'-DDMU	0.79	0.20	0.12	0.995	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	61	10-150	
2,4,5,6-Tetrachloro-m-Xylene	85	10-150	

CS-FF-CH-05-03-20141010	15-01-1416-7-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 01:45	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	13	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	77	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-06-03-20141010	15-01-1416-8-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/23/15 19:53	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.18	0.20	0.12	1.00	J
2,4'-DDE	1.8	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.5	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	1.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	64	10-150	
2,4,5,6-Tetrachloro-m-Xylene	90	10-150	

CS-FF-CH-06-03-20141010	15-01-1416-8-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 02:03	150131L16*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	27	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	47	10-150	
2,4,5,6-Tetrachloro-m-Xylene	76	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-07-03-20141010	15-01-1416-9-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 17:32	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	0.44	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.43	0.20	0.044	1.00	
4,4'-DDE	7.0	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.43	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	65	10-150	
2,4,5,6-Tetrachloro-m-Xylene	71	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-09-03-20141010	15-01-1416-10-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 17:50	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.14	0.20	0.12	1.00	J
2,4'-DDE	0.65	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.1	0.20	0.044	1.00	
4,4'-DDT	0.16	0.20	0.16	1.00	J
4,4'-DDMU	0.88	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	74	10-150	
2,4,5,6-Tetrachloro-m-Xylene	93	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-09-03-20141010	15-01-1416-10-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 02:38	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	15	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	88	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-10-03-20141010	15-01-1416-11-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 18:07	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.29	0.20	0.12	1.00	
2,4'-DDE	1.1	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	2.5	0.20	0.044	1.00	
4,4'-DDT	0.23	0.20	0.16	1.00	
4,4'-DDMU	1.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	67	10-150	
2,4,5,6-Tetrachloro-m-Xylene	85	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-CH-10-03-20141010	15-01-1416-11-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 03:50	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	18	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	87	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-LF-02-03-20141010	15-01-1416-12-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 18:25	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.27	0.20	0.12	1.00	
2,4'-DDE	1.6	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.74	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	1.4	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	68	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-FF-LF-02-03-20141010	15-01-1416-12-A	10/10/14 00:00	Tissue	GC/MS NNN	01/31/15	02/10/15 04:08	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	18	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	41	10-150	
2,4,5,6-Tetrachloro-m-Xylene	61	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1416
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400903

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-3	N/A	Tissue	GC/MS NNN	01/31/15	02/08/15 15:54	150131L16*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	109	10-150	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400903

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CS-FF-CH-09-03-20141010	Sample	Tissue	GC/MS NNN	01/31/15	02/10/15 17:50	150131S16*
CS-FF-CH-09-03-20141010	Matrix Spike	Tissue	GC/MS NNN	01/31/15	02/10/15 05:38	150131S16*
CS-FF-CH-09-03-20141010	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/31/15	02/10/15 05:56	150131S16*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	1.053	5.000	5.667	92	5.263	84	10-150	7	0-30	
4,4'-DDE	15.40	5.000	21.00	112	21.00	112	10-150	0	0-30	
4,4'-DDT	ND	5.000	3.686	74	3.705	74	10-150	1	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1416
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400903

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-3	LCS	Tissue	GC/MS NNN	01/31/15	02/08/15 17:23	150131L16*			
099-16-578-3	LCSD	Tissue	GC/MS NNN	01/31/15	02/08/15 17:41	150131L16*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	4.203	84	4.124	82	10-150	2	0-30	
4,4'-DDE	5.000	4.206	84	4.091	82	10-150	3	0-30	
4,4'-DDT	5.000	4.969	99	4.663	93	10-150	6	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-1416

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400903
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1416

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400903-01	IA-FF-WC-08-07-20141011	11-Oct-14 00:00	Tissue	1		
1400903-02	IA-FF-WC-10-07-20141011	11-Oct-14 00:00	Tissue	1		
1400903-03	CS-FF-CH-01-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-04	CS-FF-CH-02-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-05	CS-FF-CH-03-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-06	CS-FF-CH-04-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-07	CS-FF-CH-05-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-08	CS-FF-CH-06-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-09	CS-FF-CH-07-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-10	CS-FF-CH-09-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-11	CS-FF-CH-10-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-12	CS-FF-LF-02-03-20141010	10-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict
Bettina Benedict 1/22/15 1412

Received (Printed Name/Signature/Date/Time)

PRECI-SORIANO, PRIMO EY 01/23/15 PC 11:23/15

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

7416

ANCHOR OEA

1400903

0.1°C, 0.3°C, 0.3°C

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista

Date: 11/20/2014

Project Name: Harbor TMDL Food Web Sampling

Project Number: 120714-01-07 Task 1

Project Manager: Chris Stransky

Phone Number: (858) 300 4350

Shipment Method:

Table with columns: Track #, Field Sample ID, Type of Fish, Collection Date/Time, and various analytical parameters (PCBs, DDTs, WDDMU, % Solids, % Lipids, etc.).

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-Date.

Received By: [Signature] Vista Company: Anchor OEA Date/Time: 12/05/14

Received By: [Signature] Vista Company: Anchor OEA Date/Time: 12/04/14 1100

- 7 1400902
8 1400903
9 1400904
0 1400906

1416

ANCHOR
QEA
1400903

Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Vista Test Parameters (Sub's noted in Bold)										Comments			Comments/Preservation	
				PCBs (high res) eps 1688C	PCBs (low res) 8270 congeners - conducted on sample ID FF/OF - sample fish, but not fish file (FF ONLY) (NOT OFF)	DTS (8270 SIM DDx W/D/MU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotops)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otoith) and label zpick bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire otolith will be kept on the specific replicate.		
121	CS-FF-OF-CH-08-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13														Scales already collected.
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
128	CS-FF/OF-WS-04-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
136	CS-FF-IF-02-03-20141010	10/10/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3														L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1														Right side of "Lab Pics 036". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1														

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID, and FF is the identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining ofal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every FF/OF sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Michelle Panisset Company: Anchor QEA Date/Time: 10/14/14

Signature/Printed Name: Michelle Panisset Date/Time: 10/14/14

Requested By: Phewine, Presy SORIANO Company: ES Date/Time: 11/23/15

Signature/Printed Name: Phewine, Presy SORIANO Date/Time: 11/23/15

1400893
1400903
1400905
1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J151015011403uv

El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

7416

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

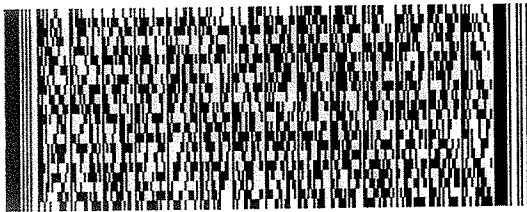
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

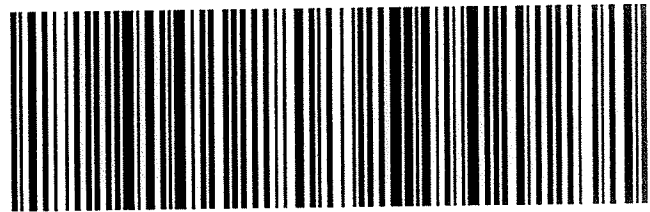
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
0201



92 APVA

92841
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537J1/8F15/EE4B

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Calscience

WORK ORDER #: **15-01-**1416

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2 °C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_zna 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

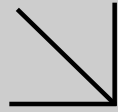
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 679

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure zna: ZnAc₂+NaOH f: Filtered Scanned by: 679

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Calscience



WORK ORDER NUMBER: 15-01-1417

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400902

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/16/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Work Order Number: 15-01-1417

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-1417
Project ID: 1400902

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 23rd, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -0.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample IA-FF-WC-04-07-20141011 was used for matrix spiking and all parameters for the project were within the control limits with the following exceptions.

The 4,4-DDE sample concentration exceeded the matrix spike concentrations by more than four times, which caused the MS, MSD and RPD values to fall outside the control limits. The results have been flagged with the appropriate qualifiers.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/23/15. They were assigned to Work Order 15-01-1417.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-1417
9210 Sky Park Court, Suite 200	Project Name:	1400902
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/23/15 09:45
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IB-FF-WC-02-05-20141012	15-01-1417-1	10/12/14 00:00	1	Tissue
IB-FF-WC-03-05-20141012	15-01-1417-2	10/12/14 00:00	1	Tissue
IB-FF-WC-04-05-20141012	15-01-1417-3	10/12/14 00:00	1	Tissue
IB-FF-WC-05-05-20141012	15-01-1417-4	10/12/14 00:00	1	Tissue
IB-FF-WC-06-05-20141012	15-01-1417-5	10/12/14 00:00	1	Tissue
IB-FF-WC-07-05-20141012	15-01-1417-6	10/12/14 00:00	1	Tissue
IB-FF-WC-08-05-20141012	15-01-1417-7	10/12/14 00:00	1	Tissue
IB-FF-WC-09-05-20141012	15-01-1417-8	10/12/14 00:00	1	Tissue
IB-FF-LF-01-05-20141012	15-01-1417-9	10/12/14 00:00	1	Tissue
IB-FF-LF-02-05-20141012	15-01-1417-10	10/12/14 00:00	1	Tissue
IB-FF-LF-03-05-20141012	15-01-1417-11	10/12/14 00:00	1	Tissue
IB-FF-LF-04-05-20141012	15-01-1417-12	10/12/14 00:00	1	Tissue
IB-FF-LF-05-05-20141012	15-01-1417-13	10/12/14 00:00	1	Tissue
IA-FF-WC-01-07-20141011	15-01-1417-14	10/11/14 00:00	1	Tissue
IA-FF-WC-02-07-20141011	15-01-1417-15	10/11/14 00:00	1	Tissue
IA-FF-WC-03-07-20141011	15-01-1417-16	10/11/14 00:00	1	Tissue
IA-FF-WC-04-07-20141011	15-01-1417-17	10/11/14 00:00	1	Tissue
IA-FF-WC-05-07-20141011	15-01-1417-18	10/11/14 00:00	1	Tissue
IA-FF-WC-06-07-20141011	15-01-1417-19	10/11/14 00:00	1	Tissue
IA-FF-WC-07-07-20141011	15-01-1417-20	10/11/14 00:00	1	Tissue


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Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-02-05-20141012	15-01-1417-1-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 10:48	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.25	0.20	0.12	1.00	
2,4'-DDE	5.2	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.1	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	5.0	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	93	10-150	
2,4,5,6-Tetrachloro-m-Xylene	127	10-150	

IB-FF-WC-02-05-20141012	15-01-1417-1-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 19:24	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	46	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	130	10-150	
2,4,5,6-Tetrachloro-m-Xylene	119	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-03-05-20141012	15-01-1417-2-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 11:06	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.80	0.48	4.00	
2,4'-DDE	12	0.80	0.66	4.00	
2,4'-DDT	ND	0.80	0.50	4.00	
4,4'-DDD	2.0	0.80	0.18	4.00	
4,4'-DDT	ND	0.80	0.62	4.00	
4,4'-DDMU	11	0.80	0.47	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	24	10-150	
2,4,5,6-Tetrachloro-m-Xylene	86	10-150	

IB-FF-WC-03-05-20141012	15-01-1417-2-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 20:21	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	140	10	5.4	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	87	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-04-05-20141012	15-01-1417-3-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 11:24	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.27	0.40	0.24	2.00	J
2,4'-DDE	7.0	0.40	0.33	2.00	
2,4'-DDT	ND	0.40	0.25	2.00	
4,4'-DDD	2.5	0.40	0.088	2.00	
4,4'-DDT	ND	0.40	0.31	2.00	
4,4'-DDMU	7.6	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	59	10-150	
2,4,5,6-Tetrachloro-m-Xylene	79	10-150	

IB-FF-WC-04-05-20141012	15-01-1417-3-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 20:39	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	78	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	62	10-150	
2,4,5,6-Tetrachloro-m-Xylene	66	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-05-05-20141012	15-01-1417-4-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 11:42	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.80	0.48	4.00	
2,4'-DDE	13	0.80	0.66	4.00	
2,4'-DDT	ND	0.80	0.50	4.00	
4,4'-DDD	2.9	0.80	0.18	4.00	
4,4'-DDT	ND	0.80	0.62	4.00	
4,4'-DDMU	13	0.80	0.47	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	106	10-150	
2,4,5,6-Tetrachloro-m-Xylene	105	10-150	

IB-FF-WC-05-05-20141012	15-01-1417-4-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 20:57	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	200	10	5.4	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	115	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-06-05-20141012	15-01-1417-5-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 12:00	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.30	0.40	0.24	2.00	J
2,4'-DDE	7.9	0.40	0.33	2.00	
2,4'-DDT	ND	0.40	0.25	2.00	
4,4'-DDD	2.0	0.40	0.088	2.00	
4,4'-DDT	2.0	0.40	0.31	2.00	
4,4'-DDMU	8.8	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	68	10-150	
2,4,5,6-Tetrachloro-m-Xylene	97	10-150	

IB-FF-WC-06-05-20141012	15-01-1417-5-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 21:15	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	100	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	63	10-150	
2,4,5,6-Tetrachloro-m-Xylene	121	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-07-05-20141012	15-01-1417-6-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 12:18	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.22	0.20	0.12	1.00	
2,4'-DDE	6.9	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.3	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	6.3	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	102	10-150	

IB-FF-WC-07-05-20141012	15-01-1417-6-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 20:54	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	75	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	100	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-08-05-20141012	15-01-1417-7-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 12:36	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.42	0.40	0.24	2.00	
2,4'-DDE	4.6	0.40	0.33	2.00	
2,4'-DDT	ND	0.40	0.25	2.00	
4,4'-DDD	1.0	0.40	0.088	2.00	
4,4'-DDT	0.39	0.40	0.31	2.00	J
4,4'-DDMU	4.8	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	97	10-150	
2,4,5,6-Tetrachloro-m-Xylene	112	10-150	

IB-FF-WC-08-05-20141012	15-01-1417-7-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 21:33	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	83	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	97	10-150	
2,4,5,6-Tetrachloro-m-Xylene	105	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-09-05-20141012	15-01-1417-8-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 12:54	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.80	0.48	4.00	
2,4'-DDE	7.8	0.80	0.66	4.00	
2,4'-DDT	ND	0.80	0.50	4.00	
4,4'-DDD	2.3	0.80	0.18	4.00	
4,4'-DDT	ND	0.80	0.62	4.00	
4,4'-DDMU	9.2	0.80	0.47	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	76	10-150	
2,4,5,6-Tetrachloro-m-Xylene	94	10-150	

IB-FF-WC-09-05-20141012	15-01-1417-8-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 21:51	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	150	10	5.4	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	59	10-150	
2,4,5,6-Tetrachloro-m-Xylene	94	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-LF-01-05-20141012	15-01-1417-9-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 13:12	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	2.0	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.84	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	2.6	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	42	10-150	
2,4,5,6-Tetrachloro-m-Xylene	69	10-150	

IB-FF-LF-01-05-20141012	15-01-1417-9-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 21:48	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	34	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	42	10-150	
2,4,5,6-Tetrachloro-m-Xylene	67	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-LF-02-05-20141012	15-01-1417-10-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 13:29	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.64	0.20	0.12	1.00	
2,4'-DDE	2.5	0.20	0.16	1.00	
2,4'-DDT	1.4	0.20	0.12	1.00	
4,4'-DDD	0.75	0.20	0.044	1.00	
4,4'-DDT	0.81	0.20	0.16	1.00	
4,4'-DDMU	3.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	58	10-150	
2,4,5,6-Tetrachloro-m-Xylene	118	10-150	

IB-FF-LF-02-05-20141012	15-01-1417-10-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 22:06	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	34	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-LF-03-05-20141012	15-01-1417-11-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 14:41	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.29	0.20	0.12	1.00	
2,4'-DDE	4.4	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.73	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	3.8	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	47	10-150	
2,4,5,6-Tetrachloro-m-Xylene	105	10-150	

IB-FF-LF-03-05-20141012	15-01-1417-11-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 23:18	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	54	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	46	10-150	
2,4,5,6-Tetrachloro-m-Xylene	90	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-LF-04-05-20141012	15-01-1417-12-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 14:59	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.16	0.20	0.12	1.00	J
2,4'-DDE	2.2	0.20	0.16	1.00	
2,4'-DDT	0.60	0.20	0.12	1.00	
4,4'-DDD	0.40	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	2.4	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	104	10-150	

IB-FF-LF-04-05-20141012	15-01-1417-12-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 23:35	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	25	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	54	10-150	
2,4,5,6-Tetrachloro-m-Xylene	82	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-LF-05-05-20141012	15-01-1417-13-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 15:17	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.19	0.20	0.12	1.00	J
2,4'-DDE	0.72	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.33	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.90	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	92	10-150	
2,4,5,6-Tetrachloro-m-Xylene	88	10-150	

IB-FF-LF-05-05-20141012	15-01-1417-13-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 23:53	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	20	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	90	10-150	
2,4,5,6-Tetrachloro-m-Xylene	78	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-01-07-20141011	15-01-1417-14-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 15:34	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.30	0.40	0.24	2.00	J
2,4'-DDE	7.1	0.40	0.33	2.00	
2,4'-DDT	0.39	0.40	0.25	2.00	J
4,4'-DDD	1.0	0.40	0.088	2.00	
4,4'-DDT	ND	0.40	0.31	2.00	
4,4'-DDMU	7.8	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	126	10-150	
2,4,5,6-Tetrachloro-m-Xylene	128	10-150	

IA-FF-WC-01-07-20141011	15-01-1417-14-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 22:09	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	74	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	143	10-150	
2,4,5,6-Tetrachloro-m-Xylene	123	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-02-07-20141011	15-01-1417-15-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 15:52	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.30	0.40	0.24	2.00	J
2,4'-DDE	6.7	0.40	0.32	2.00	
2,4'-DDT	0.51	0.40	0.25	2.00	
4,4'-DDD	1.4	0.40	0.087	2.00	
4,4'-DDT	1.1	0.40	0.31	2.00	
4,4'-DDMU	8.5	0.40	0.23	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	92	10-150	

IA-FF-WC-02-07-20141011	15-01-1417-15-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 22:27	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	82	4.0	2.1	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	99	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-03-07-20141011	15-01-1417-16-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 00:47	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	3.5	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	0.94	2.0	0.44	10.0	J
4,4'-DDE	36	2.0	1.1	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	4.3	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	109	10-150	
2,4,5,6-Tetrachloro-m-Xylene	92	10-150	

IA-FF-WC-04-07-20141011	15-01-1417-17-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 16:28	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	4.9	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.81	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	4.0	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	43	10-150	
2,4,5,6-Tetrachloro-m-Xylene	88	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-04-07-20141011	15-01-1417-17-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 01:05	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	57	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	38	10-150			
2,4,5,6-Tetrachloro-m-Xylene	80	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-05-07-20141011	15-01-1417-18-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 16:46	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	5.8	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.87	0.20	0.044	1.00	
4,4'-DDT	0.19	0.20	0.16	1.00	J
4,4'-DDMU	3.9	0.20	0.12	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	26	10-150			
2,4,5,6-Tetrachloro-m-Xylene	80	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-05-07-20141011	15-01-1417-18-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 01:23	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	54	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	27	10-150			
2,4,5,6-Tetrachloro-m-Xylene	74	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-06-07-20141011	15-01-1417-19-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 14:12	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.50	0.40	0.24	2.00	
2,4'-DDE	9.6	0.40	0.33	2.00	
2,4'-DDT	ND	0.40	0.25	2.00	
4,4'-DDD	1.8	0.40	0.088	2.00	
4,4'-DDT	ND	0.40	0.31	2.00	
4,4'-DDMU	7.3	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	24	10-150	
2,4,5,6-Tetrachloro-m-Xylene	91	10-150	

IA-FF-WC-06-07-20141011	15-01-1417-19-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 22:45	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	92	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	93	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-07-07-20141011	15-01-1417-20-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 14:30	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.40	0.24	2.00	
2,4'-DDE	5.6	0.40	0.33	2.00	
2,4'-DDT	2.0	0.40	0.25	2.00	
4,4'-DDD	1.3	0.40	0.088	2.00	
4,4'-DDT	ND	0.40	0.31	2.00	
4,4'-DDMU	7.1	0.40	0.24	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	31	10-150	
2,4,5,6-Tetrachloro-m-Xylene	88	10-150	

IA-FF-WC-07-07-20141011	15-01-1417-20-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 23:03	150131L15*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	79	4.0	2.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	35	10-150	
2,4,5,6-Tetrachloro-m-Xylene	89	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1417
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400902

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-2	N/A	Tissue	GC/MS NNN	01/31/15	02/08/15 15:36	150131L15*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	45	10-150	
2,4,5,6-Tetrachloro-m-Xylene	115	10-150	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400902

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IA-FF-WC-04-07-20141011	Sample	Tissue	GC/MS NNN	01/31/15	02/09/15 16:28	150131S15*
IA-FF-WC-04-07-20141011	Matrix Spike	Tissue	GC/MS NNN	01/31/15	02/10/15 06:14	150131S15*
IA-FF-WC-04-07-20141011	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/31/15	02/10/15 06:32	150131S15*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	0.8051	5.000	4.156	67	4.079	65	10-150	2	0-30	
4,4'-DDE	57.13	5.000	41.77	0	54.67	0	10-150	27	0-30	3
4,4'-DDT	ND	5.000	3.632	73	3.423	68	10-150	6	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1417
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400902

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-2	LCS	Tissue	GC/MS NNN	01/31/15	02/08/15 16:47	150131L15*			
099-16-578-2	LCSD	Tissue	GC/MS NNN	01/31/15	02/08/15 17:05	150131L15*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.710	74	3.552	71	10-150	4	0-30	
4,4'-DDE	5.000	3.538	71	3.485	70	10-150	2	0-30	
4,4'-DDT	5.000	3.470	69	3.398	68	10-150	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-1417

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1417

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400902-01	IB-FF-WC-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-02	IB-FF-WC-03-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-03	IB-FF-WC-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-04	IB-FF-WC-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-05	IB-FF-WC-06-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-06	IB-FF-WC-07-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-07	IB-FF-WC-08-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-08	IB-FF-WC-09-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-09	IB-FF-LF-01-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-10	IB-FF-LF-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-11	IB-FF-LF-03-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-12	IB-FF-LF-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-13	IB-FF-LF-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-14	IA-FF-WC-01-07-20141011	11-Oct-14 00:00	Tissue	1	
1400902-15	IA-FF-WC-02-07-20141011	11-Oct-14 00:00	Tissue	1	

Special Requests: See Original COC

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict</i> 1/22/15 1411</p>	<p>Received (Printed Name/Signature/Date/Time) PREEY SOPHANO, Ph.D. 1/22/15</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) 0947</p>

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

1417

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400902-16	IA-FF-WC-03-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-17	IA-FF-WC-04-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-18	IA-FF-WC-05-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-19	IA-FF-WC-06-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-20	IA-FF-WC-07-07-20141011	11-Oct-14 00:00	Tissue	1

Special Requests: See Original COC

Relinquished Bettina Benedict <i>Bettina Benedict</i>	Received (Printed Name/Signature/Date/Time) PRECY SORIANO, PRONIA <i>PRECY SORIANO, PRONIA</i>	Page 31 of 35 1/23/15 0945
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)	1/22/15 1411

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista

Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Stranasy
 Phone Number: (858) 300 4360
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID FFOF (sample fish, but test Fish Filet (FF) ONLY (NOT Off) - CALSCIENCE	DTR (8270 SIM DX W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (CN Stable isotopes)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.	Comments/Preservation
101	IA-WO-1F-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfperch	3														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
111	IA-FF-WC-09-07-20141011	10/11/14	White Croak.	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	X													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off filet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Received By: Via Email 10/20/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: _____
 Received By: Bethia Benedict Company: Vista Date/Time: 12/14/14 10:09
 Signature/Printed Name: _____
 Received By: Whitney PREGI SORIANO Company: ES Date/Time: 09/17
 Signature/Printed Name: _____

7 1400902
 ② 1400903
 ④ 1400904
 ① 1400906

1417
 ANCHOR
 OEA
 1400902
 0.2°C, -0.3°C, -2.1°C

1417

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Visita (see methods) (Subs. tested in Bold)										Comments/Preservation	
				PCBs (High res) epa 1698C	PCBs (low res) 2270 Congeners - is conducted on sample ID FF/OF	CALSCIENCE ONLY (NOT OF) - sample fish, but test Fish Fillets (FF)	DDT (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	FF/OF Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (CN Stable Isotope)	Twazoff 10 pectoral area Scales, measure and use envelope		Save fish head (goby) and label replicate ID and Fish Total Length (TL) size in cm. If multiple fish in replicate, replicate ID and Fish Total Length (TL) choose fish directed to in comments or Archive. No testing / keep frozen
81	IB-WO-WC-08-05-20141012	10/12/14	White Surfprch	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WC-09-05-20141012	10/12/14	White Surfprch	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-W5-10-05-20141012	10/12/14	White Surfprch	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WC-Archive-05-20141012	10/12/14	White Surfprch	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size), 130g
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Offal from this replicate.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#; DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, LA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/03/14 Company: Anchor OEA Date/Time: 12/03/14 11:08
 Signature/Printed Name: [Signature]

Requested By: [Signature] Company: SEA Date/Time: 09/08
 Signature/Printed Name: PREY SOBAXIO

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊗ 1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J151015011403uv

El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

1417

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

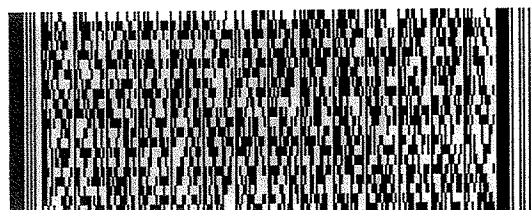
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

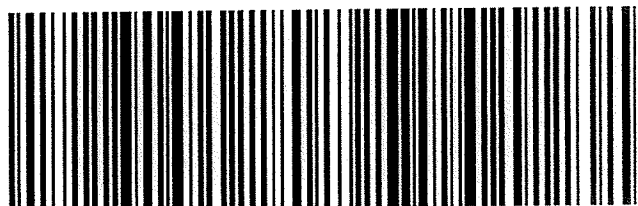
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
0201



92 APVA

92841
CA-US
SNA



537J1/8F15/EE4B

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience

WORK ORDER #: 15-01-1417

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2 °C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A

Checked by: 836

Sample _____ No (Not Intact) Not Present

Checked by: 965

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: ^{Tissue} 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{z_{na}} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 965

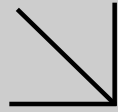
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 659

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** 659

Return to Contents



Calscience



WORK ORDER NUMBER: 15-01-1418

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400960

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/13/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



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Work Order Number: 15-01-1418

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-1418
Project ID: 1400960

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 23rd, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -0.5°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample OA-ST-MS-COMP2-01-2014-10-22 was used for matrix spiking and all parameters for the project were within the control limits with the following exceptions.

The 4,4-DDE matrix spike recoveries were above the control limit. The results have been flagged with the appropriate qualifiers.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

Pesticide surrogates 2,4,5,6-Tetrachloro-m-Xylene and/or Dibutylchloroendate were above the control limits in several samples due to necessary sample dilutions and/or matrix interference. The samples were re-analyzed for confirmation and the results have been flagged with the appropriate qualifiers.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/23/15. They were assigned to Work Order 15-01-1418.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-1418
9210 Sky Park Court, Suite 200	Project Name:	1400960
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/23/15 09:45
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
OA-ST-MS-COMP1-01-2014-10-22	15-01-1418-1	10/22/14 00:00	1	Tissue
OA-ST-MS-COMP2-01-2014-10-22	15-01-1418-2	10/22/14 00:00	1	Tissue
OA-ST-MS-COMP3-01-2014-10-22	15-01-1418-3	10/22/14 00:00	1	Tissue
OA-ST-MS-COMP4-01-2014-10-22	15-01-1418-4	10/22/14 00:00	1	Tissue
OA-ST-MS-COMP5-01-2014-10-22	15-01-1418-5	10/22/14 00:00	1	Tissue
IA-ST-MS-COMP1-02-2014-10-22	15-01-1418-6	10/22/14 00:00	1	Tissue
IA-ST-MS-COMP2-02-2014-10-22	15-01-1418-7	10/22/14 00:00	1	Tissue
IA-ST-MS-COMP3-02-2014-10-22	15-01-1418-8	10/22/14 00:00	1	Tissue
IA-ST-MS-COMP4-02-2014-10-22	15-01-1418-9	10/22/14 00:00	1	Tissue
IA-ST-MS-COMP5-02-2014-10-22	15-01-1418-10	10/22/14 00:00	1	Tissue
CS-ST-OY-COMP1-03-2014-10-22	15-01-1418-11	10/22/14 00:00	1	Tissue
CS-ST-OY-COMP2-03-2014-10-22	15-01-1418-12	10/22/14 00:00	1	Tissue
CS-ST-OY-COMP3-03-2014-10-22	15-01-1418-13	10/22/14 00:00	1	Tissue
CS-ST-OY-COMP4-03-2014-10-22	15-01-1418-14	10/22/14 00:00	1	Tissue
CS-ST-OY-COMP5-03-2014-10-22	15-01-1418-15	10/22/14 00:00	1	Tissue
IB-ST-MS-COMP1-04-2014-10-27	15-01-1418-16	10/27/14 00:00	1	Tissue
IB-ST-MS-COMP2-04-2014-10-27	15-01-1418-17	10/27/14 00:00	1	Tissue
IB-ST-MS-COMP3-04-2014-10-27	15-01-1418-18	10/27/14 00:00	1	Tissue
IB-ST-MS-COMP4-04-2014-10-27	15-01-1418-19	10/27/14 00:00	1	Tissue
IB-ST-MS-COMP5-04-2014-10-27	15-01-1418-20	10/27/14 00:00	1	Tissue



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP1-01-2014-10-22	15-01-1418-1-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 19:37	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	5.5	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.0	2.0	0.44	10.0	J
4,4'-DDE	30	2.0	1.1	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	3.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	41	10-150	
2,4,5,6-Tetrachloro-m-Xylene	76	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP2-01-2014-10-22	15-01-1418-2-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 14:07	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.37	0.20	0.12	1.00	
2,4'-DDE	6.5	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	1.1	0.20	0.044	1.00	
4,4'-DDT	0.67	0.20	0.16	1.00	
4,4'-DDMU	4.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	67	10-150	
2,4,5,6-Tetrachloro-m-Xylene	81	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP2-01-2014-10-22	15-01-1418-2-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 19:55	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	38	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchlorodate	42	10-150			
2,4,5,6-Tetrachloro-m-Xylene	84	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP3-01-2014-10-22	15-01-1418-3-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 14:25	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.35	0.20	0.12	1.00	
2,4'-DDE	7.2	0.20	0.16	1.00	
2,4'-DDT	0.27	0.20	0.12	1.00	
4,4'-DDD	0.95	0.20	0.044	1.00	
4,4'-DDT	0.52	0.20	0.16	1.00	
4,4'-DDMU	4.3	0.20	0.12	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchlorodate	90	10-150			
2,4,5,6-Tetrachloro-m-Xylene	87	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP3-01-2014-10-22	15-01-1418-3-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 20:13	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	36	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchlorodate	47	10-150			
2,4,5,6-Tetrachloro-m-Xylene	84	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP4-01-2014-10-22	15-01-1418-4-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 14:43	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.35	0.20	0.12	1.00	
2,4'-DDE	5.4	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.94	0.20	0.044	1.00	
4,4'-DDT	0.56	0.20	0.16	1.00	
4,4'-DDMU	3.3	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	43	10-150	
2,4,5,6-Tetrachloro-m-Xylene	70	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP4-01-2014-10-22	15-01-1418-4-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 20:31	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	31	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	46	10-150	
2,4,5,6-Tetrachloro-m-Xylene	73	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP5-01-2014-10-22	15-01-1418-5-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 15:01	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.37	0.20	0.12	1.00	
2,4'-DDE	5.1	0.20	0.16	1.00	
2,4'-DDT	0.14	0.20	0.12	1.00	J
4,4'-DDD	0.89	0.20	0.044	1.00	
4,4'-DDT	0.49	0.20	0.16	1.00	
4,4'-DDMU	3.1	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	62	10-150	
2,4,5,6-Tetrachloro-m-Xylene	87	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-ST-MS-COMP5-01-2014-10-22	15-01-1418-5-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 20:48	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	29	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	84	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-ST-MS-COMP1-02-2014-10-22	15-01-1418-6-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 15:19	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.55	0.20	0.12	1.00	
2,4'-DDE	7.8	0.20	0.16	1.00	
2,4'-DDT	0.45	0.20	0.12	1.00	
4,4'-DDD	4.7	0.20	0.044	1.00	
4,4'-DDT	2.3	0.20	0.16	1.00	
4,4'-DDMU	5.0	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	87	10-150	
2,4,5,6-Tetrachloro-m-Xylene	90	10-150	

IA-ST-MS-COMP1-02-2014-10-22	15-01-1418-6-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 21:06	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	36	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	143	10-150	
2,4,5,6-Tetrachloro-m-Xylene	115	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-ST-MS-COMP2-02-2014-10-22	15-01-1418-7-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 15:37	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.2	0.20	0.12	1.00	
2,4'-DDE	4.5	0.20	0.16	1.00	
2,4'-DDT	0.67	0.20	0.12	1.00	
4,4'-DDD	1.6	0.20	0.044	1.00	
4,4'-DDT	1.4	0.20	0.16	1.00	
4,4'-DDMU	2.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	66	10-150	

IA-ST-MS-COMP2-02-2014-10-22	15-01-1418-7-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 21:24	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	27	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	49	10-150	
2,4,5,6-Tetrachloro-m-Xylene	91	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-ST-MS-COMP3-02-2014-10-22	15-01-1418-8-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 17:21	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.5	0.20	0.12	1.00	
2,4'-DDE	6.1	0.20	0.16	1.00	
2,4'-DDT	1.2	0.20	0.12	1.00	
4,4'-DDD	2.5	0.20	0.044	1.00	
4,4'-DDT	2.8	0.20	0.16	1.00	
4,4'-DDMU	2.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	50	10-150	
2,4,5,6-Tetrachloro-m-Xylene	74	10-150	

IA-ST-MS-COMP3-02-2014-10-22	15-01-1418-8-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 21:42	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	22	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	39	10-150	
2,4,5,6-Tetrachloro-m-Xylene	66	10-150	

IA-ST-MS-COMP4-02-2014-10-22	15-01-1418-9-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 17:39	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.2	0.20	0.12	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	5.9	0.20	0.044	1.00	
4,4'-DDT	0.30	0.20	0.16	1.00	
4,4'-DDMU	5.5	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	135	10-150	
2,4,5,6-Tetrachloro-m-Xylene	108	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-ST-MS-COMP4-02-2014-10-22	15-01-1418-9-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 22:00	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	4.8	2.0	1.6	10.0	
4,4'-DDE	26	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	79	10-150	
2,4,5,6-Tetrachloro-m-Xylene	73	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-ST-MS-COMP5-02-2014-10-22	15-01-1418-10-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/03/15 22:18	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	9.8	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	30	2.0	0.44	10.0	
4,4'-DDE	26	2.0	1.1	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	2.7	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloredate	119	10-150	
2,4,5,6-Tetrachloro-m-Xylene	117	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP1-03-2014-10-22	15-01-1418-11-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/04/15 18:15	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.7	0.20	0.12	1.00	
2,4'-DDE	5.6	0.20	0.16	1.00	
2,4'-DDT	0.40	0.20	0.12	1.00	
4,4'-DDD	6.9	0.20	0.044	1.00	
4,4'-DDT	2.8	0.20	0.15	1.00	
4,4'-DDMU	1.9	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	169	10-150	2,7
2,4,5,6-Tetrachloro-m-Xylene	68	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP1-03-2014-10-22	15-01-1418-11-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 20:39	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	20	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	58	10-150	
2,4,5,6-Tetrachloro-m-Xylene	53	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP2-03-2014-10-22	15-01-1418-12-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 14:48	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.4	0.20	0.12	1.00	
2,4'-DDE	5.6	0.20	0.16	1.00	
2,4'-DDT	0.58	0.20	0.12	1.00	
4,4'-DDT	3.6	0.20	0.15	1.00	
4,4'-DDMU	3.6	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	68	10-150	
2,4,5,6-Tetrachloro-m-Xylene	67	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP2-03-2014-10-22	15-01-1418-12-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 20:57	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDD	11	2.0	0.44	10.0	
4,4'-DDE	29	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	55	10-150	
2,4,5,6-Tetrachloro-m-Xylene	64	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP3-03-2014-10-22	15-01-1418-13-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 21:15	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.6	2.0	1.2	10.0	
2,4'-DDE	5.4	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	14	2.0	0.44	10.0	
4,4'-DDE	36	2.0	1.1	10.0	
4,4'-DDT	5.1	2.0	1.5	10.0	
4,4'-DDMU	4.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	103	10-150	
2,4,5,6-Tetrachloro-m-Xylene	104	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP4-03-2014-10-22	15-01-1418-14-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 15:05	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	2.5	0.20	0.12	1.00	
2,4'-DDE	4.7	0.20	0.16	1.00	
2,4'-DDT	0.36	0.20	0.12	1.00	
4,4'-DDT	2.8	0.20	0.16	1.00	
4,4'-DDMU	2.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	67	10-150	
2,4,5,6-Tetrachloro-m-Xylene	57	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP4-03-2014-10-22	15-01-1418-14-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 21:33	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDD	7.6	2.0	0.44	10.0	
4,4'-DDE	24	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	53	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP5-03-2014-10-22	15-01-1418-15-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 15:23	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.2	0.20	0.12	1.00	
2,4'-DDE	5.7	0.20	0.16	1.00	
2,4'-DDT	0.62	0.20	0.12	1.00	
4,4'-DDT	3.5	0.20	0.16	1.00	
4,4'-DDMU	2.6	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	71	10-150	
2,4,5,6-Tetrachloro-m-Xylene	77	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-ST-OY-COMP5-03-2014-10-22	15-01-1418-15-A	10/22/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 21:51	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDD	9.8	2.0	0.44	10.0	
4,4'-DDE	30	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	58	10-150	
2,4,5,6-Tetrachloro-m-Xylene	75	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP1-04-2014-10-27	15-01-1418-16-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 15:41	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.83	0.20	0.12	1.00	
2,4'-DDE	7.6	0.20	0.16	1.00	
2,4'-DDT	0.21	0.20	0.12	1.00	
4,4'-DDD	2.1	0.20	0.044	1.00	
4,4'-DDT	1.2	0.20	0.15	1.00	
4,4'-DDMU	5.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	77	10-150	
2,4,5,6-Tetrachloro-m-Xylene	88	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP1-04-2014-10-27	15-01-1418-16-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 22:09	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	32	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	61	10-150	
2,4,5,6-Tetrachloro-m-Xylene	80	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP2-04-2014-10-27	15-01-1418-17-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	03/05/15 15:59	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.80	0.20	0.12	1.00	
2,4'-DDE	7.8	0.20	0.16	1.00	
2,4'-DDT	3.3	0.20	0.12	1.00	
4,4'-DDD	2.1	0.20	0.044	1.00	
4,4'-DDT	1.2	0.20	0.16	1.00	
4,4'-DDMU	5.1	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	69	10-150	
2,4,5,6-Tetrachloro-m-Xylene	81	10-150	

IB-ST-MS-COMP2-04-2014-10-27	15-01-1418-17-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 22:27	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	33	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	57	10-150	
2,4,5,6-Tetrachloro-m-Xylene	74	10-150	

IB-ST-MS-COMP3-04-2014-10-27	15-01-1418-18-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 11:37	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.64	0.20	0.12	1.00	
2,4'-DDT	0.18	0.20	0.12	1.00	J
4,4'-DDD	2.0	0.20	0.044	1.00	
4,4'-DDT	0.73	0.20	0.16	1.00	
4,4'-DDMU	7.7	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	65	10-150	
2,4,5,6-Tetrachloro-m-Xylene	99	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP3-04-2014-10-27	15-01-1418-18-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 22:45	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	6.7	2.0	1.6	10.0	
4,4'-DDE	33	2.0	1.1	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	51	10-150			
2,4,5,6-Tetrachloro-m-Xylene	65	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP4-04-2014-10-27	15-01-1418-19-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 11:54	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.1	0.20	0.12	1.00	
2,4'-DDT	0.23	0.20	0.12	1.00	
4,4'-DDD	2.5	0.20	0.044	1.00	
4,4'-DDT	0.83	0.20	0.16	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	166	10-150	2,7		
2,4,5,6-Tetrachloro-m-Xylene	223	10-150	2,7		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP4-04-2014-10-27	15-01-1418-19-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 23:03	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDE	7.9	2.0	1.6	10.0	
4,4'-DDE	39	2.0	1.1	10.0	
4,4'-DDMU	6.6	2.0	1.2	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	111	10-150			
2,4,5,6-Tetrachloro-m-Xylene	152	10-150	1,2,7		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-ST-MS-COMP5-04-2014-10-27	15-01-1418-20-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/08/15 12:12	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.71	0.20	0.12	1.00	
2,4'-DDE	6.8	0.20	0.16	1.00	
2,4'-DDT	0.15	0.20	0.12	1.00	J
4,4'-DDD	1.7	0.20	0.044	1.00	
4,4'-DDT	0.62	0.20	0.15	1.00	
4,4'-DDMU	5.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	89	10-150	
2,4,5,6-Tetrachloro-m-Xylene	110	10-150	

IB-ST-MS-COMP5-04-2014-10-27	15-01-1418-20-A	10/27/14 00:00	Tissue	GC/MS NNN	01/31/15	02/26/15 23:22	150131L14*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	20	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	70	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1418
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400960

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-1	N/A	Tissue	GC/MS NNN	01/31/15	02/08/15 16:12	150131L14*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	34	10-150	
2,4,5,6-Tetrachloro-m-Xylene	67	10-150	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400960

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OA-ST-MS-COMP2-01-2014-10-22	Sample	Tissue	GC/MS NNN	01/31/15	02/04/15 14:07	150131S14*
OA-ST-MS-COMP2-01-2014-10-22	Matrix Spike	Tissue	GC/MS NNN	01/31/15	02/08/15 12:30	150131S14*
OA-ST-MS-COMP2-01-2014-10-22	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/31/15	02/08/15 12:48	150131S14*

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	1.055	5.000	7.597	131	7.746	134	10-150	2	0-30	
4,4'-DDE	37.65	5.000	58.92	425	61.98	487	10-150	5	0-30	3
4,4'-DDT	0.6680	5.000	6.241	111	6.658	120	10-150	6	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1418
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400960

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-1	LCS	Tissue	GC/MS NNN	01/31/15	02/08/15 15:18	150131L14*			
099-16-578-1	LCSD	Tissue	GC/MS NNN	01/31/15	02/08/15 16:29	150131L14*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	4.732	95	4.728	95	10-150	0	0-30	
4,4'-DDE	5.000	4.736	95	4.630	93	10-150	2	0-30	
4,4'-DDT	5.000	4.985	100	4.640	93	10-150	7	0-30	

RPD: Relative Percent Difference. CL: Control Limits

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record

15-01-1418

1418

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400960-01	OA-ST-MS-COMP1-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-02	OA-ST-MS-COMP2-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-03	OA-ST-MS-COMP3-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-04	OA-ST-MS-COMP4-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-05	OA-ST-MS-COMP5-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-06	IA-ST-MS-COMP1-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-07	IA-ST-MS-COMP2-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-08	IA-ST-MS-COMP3-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-09	IA-ST-MS-COMP4-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-10	IA-ST-MS-COMP5-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-11	CS-ST-OY-COMP1-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-12	CS-ST-OY-COMP2-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-13	CS-ST-OY-COMP3-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-14	CS-ST-OY-COMP4-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-15	CS-ST-OY-COMP5-03-2014-10-2	22-Oct-14 00:00	Tissue	1

Special Requests: See Original COC

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1/22/15 1413</p>	<p>Received (Printed Name/Signature/Date/Time) <i>PRECY SORIANO</i> 11/23/15 BY 0988</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) (Printed Name/Signature/Date/Time)</p>

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

5114

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400960-16	IB-ST-MS-COMP1-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-17	IB-ST-MS-COMP2-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-18	IB-ST-MS-COMP3-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-19	IB-ST-MS-COMP4-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-20	IB-ST-MS-COMP5-04-2014-10-27	27-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished Bettina Benedict <i>Bettina Benedict</i>	(Printed Name/Signature/Date/Time) 11/23/15	Page 27 of 30 0945 eu
Relinquished PRECY SORIANO	(Printed Name/Signature/Date/Time) PRECY SORIANO	11/23/15
Relinquished (Printed Name/Signature/Date/Time)	(Printed Name/Signature/Date/Time)	(Printed Name/Signature/Date/Time)

1418

Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date	Bivalve Type	Vista Test Parameters (Sub's noted in Bold)					Comments/Preservation			
				PCBs (high res) epa 1668C	D/Ts (8270 SIM DDx W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Mussel Prep		Oyster Prep	Prep Sample adequate to ship to Physis (C/N Stable Isotope)	
1	OA-ST-MS-COMP1-01-2014-10-22	10/22/14	Mussel	70	x	x	x	x	x	x		1400960
2	OA-ST-M5-COMP2-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x	x		
3	OA-ST-MS-COMP3-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x	x		
4	OA-ST-MS-COMP4-01-2014-10-22	10/22/14	Mussel	68	x	x	x	x	x	x		
5	OA-ST-MS-COMP5-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x	x		
6	IA-ST-MS-COMP1-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x	x		
7	IA-ST-MS-COMP2-02-2014-10-22	10/22/14	Mussel	32	x	x	x	x	x	x		
8	IA-ST-MS-COMP3-02-2014-10-22	10/22/14	Mussel	49	x	x	x	x	x	x		
9	IA-ST-MS-COMP4-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x	x		
10	IA-ST-MS-COMP5-02-2014-10-22	10/22/14	Mussel	42	x	x	x	x	x	x		
11	CS-ST-OY-COMP1-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x	x	x		
12	CS-ST-OY-COMP2-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x	x	x		
13	CS-ST-OY-COMP3-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x	x	x		
14	CS-ST-OY-COMP4-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x	x	x		
15	CS-ST-OY-COMP5-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x	x	x		
16	IB-ST-MS-COMP1-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x	x		
17	IB-ST-MS-COMP2-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x	x		
18	IB-ST-MS-COMP3-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x	x		
19	IB-ST-MS-COMP4-04-2014-10-27	10/27/14	Mussel	61	x	x	x	x	x	x		
20	IB-ST-MS-COMP5-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x	x		

Relinquished By: Michelle Bowman Company: AMEC
 Signature/Printed Name: Michelle Bowman Date/Time: 12/15/2014 15:17

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Michael Benedict Company: Vista
 Signature/Printed Name: Michael Benedict Date/Time: 12/16/14 09:09

Received By: Dreino Trech Sorimo Company: SS
 Signature/Printed Name: Dreino Trech Sorimo Date/Time: 11/23/14 09:50

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

El Dorado Hills, CA 95762

Origin ID: MHRA



Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

1418

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

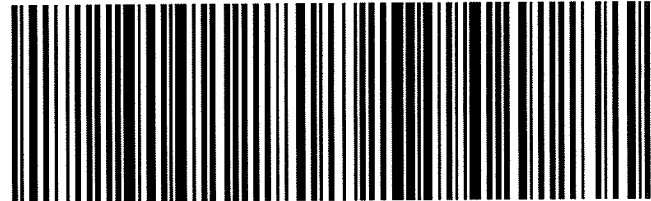
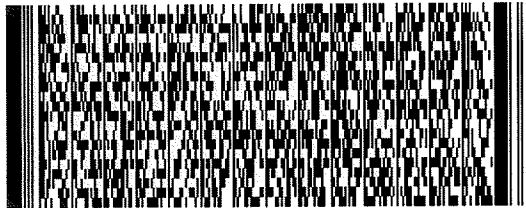
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Calscience

WORK ORDER #: 15-01-1418

SAMPLE RECEIPT FORM

Cooler / of /

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature -0.7 °C + 0.2 °C (CF) = -0.5 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{z_{na}} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 965

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 965

Return to Contents



Calscience



WORK ORDER NUMBER: 15-01-1419

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AMEC Foster Wheeler, Plc.

Client Project Name: 1400904

Attention: Chris Stransky
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Approved for release on 03/16/2015 by:
Danielle Gonsman
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Work Order Number: 15-01-1419

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CASE NARRATIVE
Eurofins Calscience Work Order No.: 15-01-1419
Project ID: 1400904

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the tissue samples.

Sample Condition on Receipt

Twenty tissue samples were received for this project on January 23rd, 2015. The samples were transferred to the laboratory in an ice-chest on ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -0.7°C. All samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and the tissues were stored in freezers pending homogenization and chemistry testing.

Tests Performed

Organochlorine Pesticides by EPA 8270C SIM

Data Summary

The tissue samples were homogenized prior to receipt.

Holding times

All holding times for the tissue samples were met.

The samples were received/analyzed outside the EPA Method recommended solid sample holding time for Organochlorine Pesticides. However, according to the client, the tissue samples were frozen after collection. Eurofins Calscience, Inc. follows standard SWAMP and PSEP guidelines for holding times in tissue samples, which states holding times may be extended up to one year if stored frozen at -18°C after collection. In addition, there are no EPA recommended holding times established for tissue samples. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met.

Method Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing with the following exceptions. Trace levels of 4,4'-DDE were detected below the RL in one of the three Method Blanks. Results have been flagged with the appropriate qualifiers.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters for the project were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis at the required frequencies. Project sample IB-FF-CH-01-05-20141012 was used for matrix spiking and all parameters for the project were within the control limits with the following exceptions.

In QC Batch 150131S17, the 4,4-DDE concentration detected in the sample exceeded the matrix spike concentrations by more than four times, which caused the MS/MSD recoveries to fall outside the control limits. The results have been flagged with the appropriate qualifiers.

In QC Batch 150308S01, the MS and MSD recoveries for all three analytes were outside the control limits. The results have been flagged with the appropriate qualifiers.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits with the following exceptions.

Pesticide surrogates 2,4,5,6-Tetrachloro-m-Xylene and/or Dibutylchloroendate were outside the control limits in several samples plus one of the three Method Blanks due to necessary sample dilutions and/or matrix interference. The samples were re-analyzed for surrogate confirmations and the results have been flagged with the appropriate qualifiers.

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/23/15. They were assigned to Work Order 15-01-1419.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: AMEC Foster Wheeler, Plc.	Work Order:	15-01-1419
9210 Sky Park Court, Suite 200	Project Name:	1400904
San Diego, CA 92123-4302	PO Number:	
	Date/Time Received:	01/23/15 09:45
	Number of Containers:	20

Attn: Chris Stransky

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
FH-FF-CH-07-08-20141013	15-01-1419-1	10/13/14 00:00	1	Tissue
FH-OF-CH-07-08-20141013	15-01-1419-2	10/13/14 00:00	1	Tissue
FH-FF-WS-01-08-20141013	15-01-1419-3	10/13/14 00:00	1	Tissue
FH-OF-WS-01-08-20141013	15-01-1419-4	10/13/14 00:00	1	Tissue
FH-FF-WC-10-08-20141013	15-01-1419-5	10/13/14 00:00	1	Tissue
FH-OF-WC-10-08-20141013	15-01-1419-6	10/13/14 00:00	1	Tissue
OA-FF-CH-06-06-20141011	15-01-1419-7	10/11/14 00:00	1	Tissue
OA-OF-CH-06-06-20141011	15-01-1419-8	10/11/14 00:00	1	Tissue
OA-FF-WS-07-06-20141013	15-01-1419-9	10/13/14 00:00	1	Tissue
OA-OF-WS-07-06-20141013	15-01-1419-10	10/13/14 00:00	1	Tissue
OA-FF-WC-02-06-20141011	15-01-1419-11	10/11/14 00:00	1	Tissue
OA-OF-WC-02-06-20141011	15-01-1419-12	10/11/14 00:00	1	Tissue
IB-FF-CH-01-05-20141012	15-01-1419-13	10/12/14 00:00	1	Tissue
IB-OF-CH-01-05-20141012	15-01-1419-14	10/12/14 00:00	1	Tissue
IB-FF-WS-10-05-20141012	15-01-1419-15	10/12/14 00:00	1	Tissue
IB-OF-WS-10-05-20141012	15-01-1419-16	10/12/14 00:00	1	Tissue
IB-FF-WC-10-05-20141012	15-01-1419-17	10/12/14 00:00	1	Tissue
IB-OF-WC-10-05-20141012	15-01-1419-18	10/12/14 00:00	1	Tissue
IA-FF-WC-09-07-20141011	15-01-1419-19	10/11/14 00:00	1	Tissue
IA-OF-WC-09-07-20141011	15-01-1419-20	10/11/14 00:00	1	Tissue


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Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-07-08-20141013	15-01-1419-1-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 03:47	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	2.4	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.28	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	1.8	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	123	10-150	
2,4,5,6-Tetrachloro-m-Xylene	103	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-07-08-20141013	15-01-1419-1-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 02:40	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	55	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchlorodate	92	10-150	
2,4,5,6-Tetrachloro-m-Xylene	89	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-CH-07-08-20141013	15-01-1419-2-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 02:58	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	20	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.0	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	13	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	43	10-150	
2,4,5,6-Tetrachloro-m-Xylene	116	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-CH-07-08-20141013	15-01-1419-2-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 21:23	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	710	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	105	10-150	
2,4,5,6-Tetrachloro-m-Xylene	119	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WS-01-08-20141013	15-01-1419-3-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 04:05	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.15	0.20	0.12	1.00	J
2,4'-DDE	1.3	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.73	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	3.4	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	128	10-150	
2,4,5,6-Tetrachloro-m-Xylene	146	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WS-01-08-20141013	15-01-1419-3-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 03:16	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	67	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	95	10-150	
2,4,5,6-Tetrachloro-m-Xylene	122	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-WS-01-08-20141013	15-01-1419-4-A	10/13/14 00:00	Tissue	GC/MS NNN	02/22/15	02/26/15 15:02	150222L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	15	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	8.9	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	33	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	38	10-150	
2,4,5,6-Tetrachloro-m-Xylene	56	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-WS-01-08-20141013	15-01-1419-4-A	10/13/14 00:00	Tissue	GC/MS NNN	02/22/15	02/26/15 15:26	150222L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	780	50	27	250	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	72	10-150	
2,4,5,6-Tetrachloro-m-Xylene	0	10-150	1,2,6

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-10-08-20141013	15-01-1419-5-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 03:52	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	11	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.3	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	14	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	81	10-150	
2,4,5,6-Tetrachloro-m-Xylene	108	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-10-08-20141013	15-01-1419-5-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 21:41	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	190	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	76	10-150	
2,4,5,6-Tetrachloro-m-Xylene	113	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-WC-10-08-20141013	15-01-1419-6-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 04:10	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.2	2.0	1.2	10.1	J
2,4'-DDE	38	2.0	1.7	10.1	
2,4'-DDT	ND	2.0	1.3	10.1	
4,4'-DDD	8.6	2.0	0.44	10.1	
4,4'-DDT	ND	2.0	1.6	10.1	
4,4'-DDMU	48	2.0	1.2	10.1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	202	10-150	1,7
2,4,5,6-Tetrachloro-m-Xylene	123	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-OF-WC-10-08-20141013	15-01-1419-6-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 21:59	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	510	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	108	10-150	
2,4,5,6-Tetrachloro-m-Xylene	98	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-06-06-20141011	15-01-1419-7-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 04:41	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	0.14	0.20	0.12	1.00	J
2,4'-DDE	3.4	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.67	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	3.4	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	123	10-150	
2,4,5,6-Tetrachloro-m-Xylene	151	10-150	7

OA-FF-CH-06-06-20141011	15-01-1419-7-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 04:28	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	46	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	95	10-150	
2,4,5,6-Tetrachloro-m-Xylene	128	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-OF-CH-06-06-20141011	15-01-1419-8-A	10/11/14 00:00	Tissue	GC/MS NNN	03/08/15	03/11/15 12:07	150308L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	7.0	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	1.9	2.0	0.44	10.0	J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.9	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	31	10-150	
2,4,5,6-Tetrachloro-m-Xylene	39	10-150	

OA-OF-CH-06-06-20141011	15-01-1419-8-A	10/11/14 00:00	Tissue	GC/MS NNN	03/08/15	03/11/15 11:49	150308L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	120	20	11	100	B

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	53	10-150	
2,4,5,6-Tetrachloro-m-Xylene	50	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WS-07-06-20141013	15-01-1419-9-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 05:17	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.15	0.20	0.044	1.00	J
4,4'-DDE	7.1	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.15	1.00	
4,4'-DDMU	0.35	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	150	10-150	
2,4,5,6-Tetrachloro-m-Xylene	140	10-150	

OA-OF-WS-07-06-20141013	15-01-1419-10-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 05:22	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.1	
2,4'-DDE	7.4	2.0	1.7	10.1	
2,4'-DDT	ND	2.0	1.3	10.1	
4,4'-DDD	5.8	2.0	0.44	10.1	
4,4'-DDT	ND	2.0	1.6	10.1	
4,4'-DDMU	15	2.0	1.2	10.1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	123	10-150	
2,4,5,6-Tetrachloro-m-Xylene	111	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-OF-WS-07-06-20141013	15-01-1419-10-A	10/13/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 22:17	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	370	20	11	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	116	10-150			
2,4,5,6-Tetrachloro-m-Xylene	113	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-02-06-20141011	15-01-1419-11-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 07:09	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	7.4	2.0	1.6	10.0	
2,4'-DDT	3.5	2.0	1.2	10.0	
4,4'-DDD	1.9	2.0	0.44	10.0	J
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	6.5	2.0	1.2	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	73	10-150			
2,4,5,6-Tetrachloro-m-Xylene	109	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-02-06-20141011	15-01-1419-11-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 22:35	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	140	20	11	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloroendate	110	10-150			
2,4,5,6-Tetrachloro-m-Xylene	105	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-OF-WC-02-06-20141011	15-01-1419-12-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 07:27	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	11	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.3	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	8.6	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	29	10-150	
2,4,5,6-Tetrachloro-m-Xylene	68	10-150	

OA-OF-WC-02-06-20141011	15-01-1419-12-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 22:53	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	200	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	63	10-150	
2,4,5,6-Tetrachloro-m-Xylene	81	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-CH-01-05-20141012	15-01-1419-13-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 05:35	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	2.5	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.40	0.20	0.044	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	2.2	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	122	10-150	
2,4,5,6-Tetrachloro-m-Xylene	139	10-150	

IB-FF-CH-01-05-20141012	15-01-1419-13-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 07:45	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	33	2.0	1.1	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	97	10-150	
2,4,5,6-Tetrachloro-m-Xylene	112	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-OF-CH-01-05-20141012	15-01-1419-14-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 08:03	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	30	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	5.4	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	27	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	31	10-150	
2,4,5,6-Tetrachloro-m-Xylene	100	10-150	

IB-OF-CH-01-05-20141012	15-01-1419-14-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/05/15 23:11	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	650	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	51	10-150	
2,4,5,6-Tetrachloro-m-Xylene	113	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WS-10-05-20141012	15-01-1419-15-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/09/15 05:53	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	0.074	0.20	0.044	1.00	J
4,4'-DDE	5.5	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	0.19	0.20	0.12	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	139	10-150	
2,4,5,6-Tetrachloro-m-Xylene	118	10-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-OF-WS-10-05-20141012	15-01-1419-16-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 01:34	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	9.4	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	8.6	2.0	0.44	10.0	
4,4'-DDT	2.4	2.0	1.6	10.0	
4,4'-DDMU	26	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	186	10-150	1,7
2,4,5,6-Tetrachloro-m-Xylene	111	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-OF-WS-10-05-20141012	15-01-1419-16-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 00:05	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	630	20	11	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	118	10-150			
2,4,5,6-Tetrachloro-m-Xylene	121	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-10-05-20141012	15-01-1419-17-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 01:52	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.1	2.0	1.2	10.0	
2,4'-DDE	18	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	4.9	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.5	10.0	
4,4'-DDMU	22	2.0	1.2	10.0	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	226	10-150	1,7		
2,4,5,6-Tetrachloro-m-Xylene	141	10-150			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-10-05-20141012	15-01-1419-17-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 00:23	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	630	20	11	100	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Dibutylchloredate	96	10-150			
2,4,5,6-Tetrachloro-m-Xylene	164	10-150	1,7		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-OF-WC-10-05-20141012	15-01-1419-18-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 02:10	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	3.7	2.0	1.2	10.0	
2,4'-DDE	29	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	6.9	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	36	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	93	10-150	
2,4,5,6-Tetrachloro-m-Xylene	49	10-150	

IB-OF-WC-10-05-20141012	15-01-1419-18-A	10/12/14 00:00	Tissue	GC/MS NNN	01/31/15	02/20/15 18:53	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	540	40	22	200	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	66	10-150	
2,4,5,6-Tetrachloro-m-Xylene	66	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-09-07-20141011	15-01-1419-19-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 02:28	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	1.9	2.0	1.2	10.0	J
2,4'-DDE	8.3	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	3.4	2.0	0.44	10.0	
4,4'-DDT	1.8	2.0	1.6	10.0	J
4,4'-DDMU	12	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	76	10-150	
2,4,5,6-Tetrachloro-m-Xylene	133	10-150	

IA-FF-WC-09-07-20141011	15-01-1419-19-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 00:58	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	290	20	11	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	88	10-150	
2,4,5,6-Tetrachloro-m-Xylene	130	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-OF-WC-09-07-20141011	15-01-1419-20-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/06/15 02:46	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	31	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	2.9	2.0	0.44	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	45	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	338	10-150	1,7
2,4,5,6-Tetrachloro-m-Xylene	75	10-150	

IA-OF-WC-09-07-20141011	15-01-1419-20-A	10/11/14 00:00	Tissue	GC/MS NNN	01/31/15	02/20/15 19:11	150131L17*
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
4,4'-DDE	750	100	54	500	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	234	10-150	1,7
2,4,5,6-Tetrachloro-m-Xylene	0	10-150	1,6

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-7	N/A	Tissue	GC/MS NNN	01/31/15	02/05/15 20:47	150131L17*

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	2.0	1.2	10.0	
2,4'-DDE	ND	2.0	1.6	10.0	
2,4'-DDT	ND	2.0	1.2	10.0	
4,4'-DDD	ND	2.0	0.44	10.0	
4,4'-DDE	ND	2.0	1.1	10.0	
4,4'-DDT	ND	2.0	1.6	10.0	
4,4'-DDMU	ND	2.0	1.2	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	469	10-150	1,7
2,4,5,6-Tetrachloro-m-Xylene	1046	10-150	1,7

Method Blank	099-16-578-8	N/A	Tissue	GC/MS NNN	02/22/15	02/26/15 14:44	150222L01
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	ND	0.20	0.11	1.00	
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	20	10-150	
2,4,5,6-Tetrachloro-m-Xylene	91	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C PEST-SIM
 Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-578-6	N/A	Tissue	GC/MS NNN	01/01/95	03/11/15 11:31	150308L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
2,4'-DDD	ND	0.20	0.12	1.00	
2,4'-DDE	ND	0.20	0.16	1.00	
2,4'-DDT	ND	0.20	0.12	1.00	
4,4'-DDD	ND	0.20	0.044	1.00	
4,4'-DDE	0.14	0.20	0.11	1.00	J
4,4'-DDT	ND	0.20	0.16	1.00	
4,4'-DDMU	ND	0.20	0.12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibutylchloroendate	41	10-150	
2,4,5,6-Tetrachloro-m-Xylene	45	10-150	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-CH-07-08-20141013	15-01-1419-1-A	10/13/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 12:25	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.24	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.13	1.00	
PCB028	0.16	0.20	0.095	1.00	J
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	0.51	0.20	0.084	1.00	
PCB052	0.99	0.20	0.12	1.00	
PCB056	ND	0.20	0.18	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	0.98	0.20	0.083	1.00	
PCB070	0.20	0.20	0.11	1.00	J
PCB074	0.41	0.20	0.088	1.00	
PCB077	ND	0.20	0.048	1.00	
PCB081	ND	0.20	0.080	1.00	
PCB087	1.2	0.20	0.075	1.00	
PCB095	0.45	0.20	0.11	1.00	
PCB097	2.2	0.20	0.15	1.00	
PCB099	2.5	0.20	0.099	1.00	
PCB101	3.7	0.20	0.082	1.00	
PCB105	1.3	0.20	0.094	1.00	
PCB110	1.9	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	3.9	0.20	0.073	1.00	
PCB119	0.15	0.20	0.075	1.00	J
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	0.69	0.20	0.065	1.00	
PCB132/153	7.2	0.40	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.23	0.20	0.096	1.00	
PCB138/158	4.7	0.40	0.13	1.00	
PCB141	0.51	0.20	0.15	1.00	
PCB149	1.1	0.20	0.070	1.00	
PCB151	0.45	0.20	0.053	1.00	
PCB156	0.40	0.20	0.087	1.00	
PCB157	0.11	0.20	0.059	1.00	J
PCB167	0.12	0.20	0.077	1.00	J
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	0.84	0.20	0.081	1.00	
PCB174	0.19	0.20	0.083	1.00	J
PCB177	0.14	0.20	0.069	1.00	J
PCB180	1.7	0.20	0.062	1.00	
PCB183	0.55	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	1.1	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	0.32	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.092	1.00	
PCB201	0.098	0.20	0.091	1.00	J
PCB203	ND	0.20	0.13	1.00	
PCB206	0.26	0.20	0.074	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	56	10-150			
p-Terphenyl-d14	70	10-150			


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WS-01-08-20141013	15-01-1419-3-A	10/13/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 12:51	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	0.56	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	0.30	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	0.35	0.20	0.11	1.00	
PCB049	0.89	0.20	0.084	1.00	
PCB052	1.8	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	1.9	0.20	0.083	1.00	
PCB070	1.3	0.20	0.11	1.00	
PCB074	1.1	0.20	0.088	1.00	
PCB077	0.36	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	1.7	0.20	0.076	1.00	
PCB095	0.91	0.20	0.11	1.00	
PCB097	1.4	0.20	0.15	1.00	
PCB099	3.3	0.20	0.10	1.00	
PCB101	4.6	0.20	0.083	1.00	
PCB105	1.8	0.20	0.095	1.00	
PCB110	1.8	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	5.5	0.20	0.073	1.00	
PCB119	0.15	0.20	0.076	1.00	J
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	0.79	0.20	0.066	1.00	
PCB132/153	7.4	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.28	0.20	0.097	1.00	
PCB138/158	5.3	0.40	0.13	1.00	
PCB141	0.45	0.20	0.15	1.00	
PCB149	0.95	0.20	0.070	1.00	
PCB151	0.64	0.20	0.053	1.00	
PCB156	0.41	0.20	0.087	1.00	
PCB157	0.14	0.20	0.060	1.00	J
PCB167	0.15	0.20	0.077	1.00	J
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	0.87	0.20	0.082	1.00	
PCB174	0.086	0.20	0.084	1.00	J
PCB177	0.27	0.20	0.069	1.00	
PCB180	1.9	0.20	0.062	1.00	
PCB183	0.56	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	1.3	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	0.33	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	0.11	0.20	0.075	1.00	J
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	86	10-150			
p-Terphenyl-d14	73	10-150			


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-FF-WC-10-08-20141013	15-01-1419-5-A	10/13/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 13:16	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	2.6	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	1.8	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	2.9	0.20	0.11	1.00	
PCB049	2.4	0.20	0.084	1.00	
PCB052	4.3	0.20	0.12	1.00	
PCB056	0.75	0.20	0.19	1.00	
PCB060	0.99	0.20	0.19	1.00	
PCB066	4.4	0.20	0.083	1.00	
PCB070	4.0	0.20	0.11	1.00	
PCB074	2.3	0.20	0.088	1.00	
PCB077	0.87	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	4.3	0.20	0.076	1.00	
PCB095	4.8	0.20	0.11	1.00	
PCB097	3.5	0.20	0.15	1.00	
PCB099	6.4	0.20	0.10	1.00	
PCB101	11	0.20	0.083	1.00	
PCB105	3.2	0.20	0.095	1.00	
PCB110	7.0	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	10	0.20	0.073	1.00	
PCB119	0.40	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	1.5	0.20	0.066	1.00	
PCB132/153	20	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.49	0.20	0.097	1.00	
PCB138/158	11	0.40	0.13	1.00	
PCB141	1.6	0.20	0.15	1.00	
PCB149	6.4	0.20	0.070	1.00	
PCB151	2.0	0.20	0.053	1.00	
PCB156	0.84	0.20	0.087	1.00	
PCB157	0.24	0.20	0.060	1.00	
PCB167	0.42	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	2.5	0.20	0.082	1.00	
PCB174	1.8	0.20	0.084	1.00	
PCB177	1.2	0.20	0.069	1.00	
PCB180	5.7	0.20	0.062	1.00	
PCB183	1.6	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	4.7	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	1.2	0.20	0.064	1.00	
PCB195	0.58	0.20	0.19	1.00	
PCB200	0.18	0.20	0.093	1.00	J
PCB201	0.28	0.20	0.091	1.00	
PCB203	2.0	0.20	0.13	1.00	
PCB206	1.1	0.20	0.075	1.00	
PCB209	0.52	0.20	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	87	10-150	
p-Terphenyl-d14	69	10-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-CH-06-06-20141011	15-01-1419-7-A	10/11/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 13:42	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.15	1.00	
PCB018	ND	0.20	0.095	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	0.13	0.20	0.096	1.00	J
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.12	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	0.50	0.20	0.085	1.00	
PCB052	0.64	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	0.66	0.20	0.084	1.00	
PCB070	0.39	0.20	0.11	1.00	
PCB074	0.27	0.20	0.089	1.00	
PCB077	ND	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	1.1	0.20	0.076	1.00	
PCB095	0.91	0.20	0.11	1.00	
PCB097	0.82	0.20	0.15	1.00	
PCB099	1.6	0.20	0.10	1.00	
PCB101	2.7	0.20	0.083	1.00	
PCB105	0.73	0.20	0.095	1.00	
PCB110	1.6	0.20	0.087	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	2.2	0.20	0.073	1.00	
PCB119	0.11	0.20	0.076	1.00	J
PCB123	ND	0.20	0.055	1.00	
PCB126	ND	0.20	0.081	1.00	
PCB128	0.47	0.20	0.066	1.00	
PCB132/153	5.1	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.15	0.20	0.097	1.00	J
PCB138/158	3.1	0.40	0.13	1.00	
PCB141	0.48	0.20	0.16	1.00	
PCB149	1.7	0.20	0.070	1.00	
PCB151	0.52	0.20	0.054	1.00	
PCB156	0.23	0.20	0.088	1.00	
PCB157	ND	0.20	0.060	1.00	
PCB167	ND	0.20	0.078	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.080	1.00	
PCB170	0.54	0.20	0.082	1.00	
PCB174	0.33	0.20	0.084	1.00	
PCB177	0.26	0.20	0.070	1.00	
PCB180	1.1	0.20	0.063	1.00	
PCB183	0.38	0.20	0.063	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	1.1	0.20	0.075	1.00	
PCB189	ND	0.20	0.064	1.00	
PCB194	0.24	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.092	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	ND	0.20	0.075	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	104	10-150			
p-Terphenyl-d14	92	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WS-07-06-20141013	15-01-1419-9-A	10/13/14 00:00	Tissue	GC/MS HHH	01/31/15	02/10/15 17:11	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	0.12	0.20	0.096	1.00	J
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	0.54	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	ND	0.20	0.084	1.00	
PCB052	0.17	0.20	0.12	1.00	J
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	0.15	0.20	0.083	1.00	J
PCB070	0.16	0.20	0.11	1.00	J
PCB074	0.099	0.20	0.088	1.00	J
PCB077	ND	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	0.15	0.20	0.076	1.00	J
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.15	1.00	
PCB099	0.16	0.20	0.10	1.00	J
PCB101	0.25	0.20	0.083	1.00	
PCB105	0.12	0.20	0.095	1.00	J
PCB110	0.14	0.20	0.086	1.00	J
PCB114	ND	0.20	0.060	1.00	
PCB118	0.34	0.20	0.073	1.00	
PCB119	ND	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	0.068	0.20	0.066	1.00	J
PCB132/153	0.44	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.20	0.097	1.00	
PCB138/158	0.29	0.40	0.13	1.00	J
PCB141	ND	0.20	0.15	1.00	
PCB149	ND	0.20	0.070	1.00	
PCB151	0.054	0.20	0.053	1.00	J
PCB156	ND	0.20	0.087	1.00	
PCB157	ND	0.20	0.060	1.00	
PCB167	ND	0.20	0.077	1.00	
PCB168	0.29	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	ND	0.20	0.082	1.00	
PCB174	ND	0.20	0.084	1.00	
PCB177	ND	0.20	0.069	1.00	
PCB180	0.11	0.20	0.062	1.00	J
PCB183	ND	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	0.093	0.20	0.074	1.00	J
PCB189	ND	0.20	0.063	1.00	
PCB194	ND	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	ND	0.20	0.075	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	68	10-150			
p-Terphenyl-d14	77	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OA-FF-WC-02-06-20141011	15-01-1419-11-A	10/11/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 14:33	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	0.70	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	0.49	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	1.4	0.20	0.11	1.00	
PCB049	0.86	0.20	0.084	1.00	
PCB052	1.8	0.20	0.12	1.00	
PCB056	0.60	0.20	0.19	1.00	
PCB060	0.36	0.20	0.19	1.00	
PCB066	1.7	0.20	0.083	1.00	
PCB070	1.5	0.20	0.11	1.00	
PCB074	1.0	0.20	0.088	1.00	
PCB077	0.54	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	2.2	0.20	0.076	1.00	
PCB095	2.5	0.20	0.11	1.00	
PCB097	1.6	0.20	0.15	1.00	
PCB099	2.9	0.20	0.10	1.00	
PCB101	4.8	0.20	0.083	1.00	
PCB105	1.6	0.20	0.095	1.00	
PCB110	3.1	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	4.7	0.20	0.073	1.00	
PCB119	0.17	0.20	0.076	1.00	J
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	0.79	0.20	0.066	1.00	
PCB132/153	9.1	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.29	0.20	0.097	1.00	
PCB138/158	5.9	0.40	0.13	1.00	
PCB141	0.78	0.20	0.15	1.00	
PCB149	2.9	0.20	0.070	1.00	
PCB151	0.92	0.20	0.053	1.00	
PCB156	0.42	0.20	0.087	1.00	
PCB157	0.16	0.20	0.060	1.00	J
PCB167	0.11	0.20	0.077	1.00	J
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	1.1	0.20	0.082	1.00	
PCB174	0.77	0.20	0.084	1.00	
PCB177	0.58	0.20	0.069	1.00	
PCB180	2.4	0.20	0.062	1.00	
PCB183	0.72	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	1.9	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	0.47	0.20	0.064	1.00	
PCB195	0.22	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	0.10	0.20	0.091	1.00	J
PCB203	0.76	0.20	0.13	1.00	
PCB206	0.38	0.20	0.075	1.00	
PCB209	0.23	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	77	10-150			
p-Terphenyl-d14	63	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-CH-01-05-20141012	15-01-1419-13-A	10/12/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 14:58	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.24	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.13	1.00	
PCB028	0.11	0.20	0.095	1.00	J
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	0.27	0.20	0.084	1.00	
PCB052	0.68	0.20	0.12	1.00	
PCB056	ND	0.20	0.18	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	0.56	0.20	0.083	1.00	
PCB070	0.26	0.20	0.11	1.00	
PCB074	0.30	0.20	0.088	1.00	
PCB077	ND	0.20	0.048	1.00	
PCB081	ND	0.20	0.080	1.00	
PCB087	0.80	0.20	0.075	1.00	
PCB095	0.56	0.20	0.11	1.00	
PCB097	0.67	0.20	0.15	1.00	
PCB099	1.3	0.20	0.099	1.00	
PCB101	2.2	0.20	0.082	1.00	
PCB105	0.64	0.20	0.094	1.00	
PCB110	1.3	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	1.9	0.20	0.073	1.00	
PCB119	0.12	0.20	0.075	1.00	J
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	0.41	0.20	0.065	1.00	
PCB132/153	4.8	0.40	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.20	0.096	1.00	
PCB138/158	3.0	0.40	0.13	1.00	
PCB141	0.37	0.20	0.15	1.00	
PCB149	1.4	0.20	0.070	1.00	
PCB151	0.56	0.20	0.053	1.00	
PCB156	0.16	0.20	0.087	1.00	J
PCB157	ND	0.20	0.059	1.00	
PCB167	ND	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	0.54	0.20	0.081	1.00	
PCB174	0.36	0.20	0.083	1.00	
PCB177	0.29	0.20	0.069	1.00	
PCB180	1.4	0.20	0.062	1.00	
PCB183	0.43	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	1.3	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	0.21	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.092	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	0.22	0.20	0.074	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	75	10-150			
p-Terphenyl-d14	72	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WS-10-05-20141012	15-01-1419-15-A	10/12/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 15:24	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	ND	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	ND	0.20	0.084	1.00	
PCB052	ND	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.083	1.00	
PCB070	ND	0.20	0.11	1.00	
PCB074	ND	0.20	0.088	1.00	
PCB077	ND	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	ND	0.20	0.076	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.15	1.00	
PCB099	0.24	0.20	0.10	1.00	
PCB101	0.25	0.20	0.083	1.00	
PCB105	0.13	0.20	0.095	1.00	J
PCB110	ND	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	0.41	0.20	0.073	1.00	
PCB119	ND	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	ND	0.20	0.066	1.00	
PCB132/153	0.76	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.20	0.097	1.00	
PCB138/158	0.51	0.40	0.13	1.00	
PCB141	ND	0.20	0.15	1.00	
PCB149	0.087	0.20	0.070	1.00	J
PCB151	ND	0.20	0.053	1.00	
PCB156	ND	0.20	0.087	1.00	
PCB157	ND	0.20	0.060	1.00	
PCB167	ND	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	ND	0.20	0.082	1.00	
PCB174	ND	0.20	0.084	1.00	
PCB177	ND	0.20	0.069	1.00	
PCB180	0.20	0.20	0.062	1.00	J
PCB183	0.090	0.20	0.062	1.00	J
PCB184	ND	0.20	0.12	1.00	
PCB187	0.17	0.20	0.074	1.00	J
PCB189	ND	0.20	0.063	1.00	
PCB194	ND	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	ND	0.20	0.075	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	62	10-150			
p-Terphenyl-d14	70	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-FF-WC-10-05-20141012	15-01-1419-17-A	10/12/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 15:50	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.40	0.32	1.00	
PCB005/008	ND	0.80	0.49	1.00	
PCB015	ND	0.40	0.29	1.00	
PCB018	ND	0.40	0.19	1.00	
PCB027	ND	0.40	0.27	1.00	
PCB028	3.9	0.40	0.19	1.00	
PCB029	ND	0.40	0.31	1.00	
PCB031	1.2	0.40	0.26	1.00	
PCB033	ND	0.40	0.24	1.00	
PCB037	ND	0.40	0.23	1.00	
PCB044	7.9	0.40	0.22	1.00	
PCB049	8.8	0.40	0.17	1.00	
PCB052	16	0.40	0.24	1.00	
PCB056	ND	0.40	0.37	1.00	
PCB060	5.4	0.40	0.39	1.00	
PCB066	21	0.40	0.17	1.00	
PCB070	5.4	0.40	0.21	1.00	
PCB074	9.7	0.40	0.18	1.00	
PCB077	6.7	0.40	0.097	1.00	
PCB081	ND	0.40	0.16	1.00	
PCB087	29	0.40	0.15	1.00	
PCB095	30	0.40	0.22	1.00	
PCB097	23	0.40	0.30	1.00	
PCB099	57	0.40	0.20	1.00	
PCB101	92	0.40	0.17	1.00	
PCB105	26	0.40	0.19	1.00	
PCB110	50	0.40	0.17	1.00	
PCB114	ND	0.40	0.12	1.00	
PCB118	95	0.40	0.15	1.00	
PCB119	2.8	0.40	0.15	1.00	
PCB123	ND	0.40	0.11	1.00	
PCB126	ND	0.40	0.16	1.00	
PCB128	17	0.40	0.13	1.00	
PCB132/153	230	0.80	0.39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	4.8	0.40	0.19	1.00	
PCB138/158	140	0.80	0.26	1.00	
PCB141	19	0.40	0.31	1.00	
PCB149	75	0.40	0.14	1.00	
PCB151	25	0.40	0.11	1.00	
PCB156	9.6	0.40	0.17	1.00	
PCB157	2.1	0.40	0.12	1.00	
PCB167	6.1	0.40	0.15	1.00	
PCB168	ND	0.40	0.11	1.00	
PCB169	3.1	0.40	0.16	1.00	
PCB170	33	0.40	0.16	1.00	
PCB174	25	0.40	0.17	1.00	
PCB177	17	0.40	0.14	1.00	
PCB180	71	0.40	0.12	1.00	
PCB183	22	0.40	0.12	1.00	
PCB184	ND	0.40	0.25	1.00	
PCB187	57	0.40	0.15	1.00	
PCB189	ND	0.40	0.13	1.00	
PCB194	12	0.40	0.13	1.00	
PCB195	5.3	0.40	0.38	1.00	
PCB200	1.6	0.40	0.19	1.00	
PCB201	2.6	0.40	0.18	1.00	
PCB203	20	0.40	0.27	1.00	
PCB206	6.8	0.40	0.15	1.00	
PCB209	2.8	0.40	0.32	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	90	10-150			
p-Terphenyl-d14	60	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-FF-WC-09-07-20141011	15-01-1419-19-A	10/11/14 00:00	Tissue	GC/MS HHH	01/31/15	02/05/15 16:15	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	0.88	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	0.40	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	1.4	0.20	0.11	1.00	
PCB049	1.4	0.20	0.084	1.00	
PCB052	2.8	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	1.0	0.20	0.19	1.00	
PCB066	3.5	0.20	0.083	1.00	
PCB070	1.7	0.20	0.11	1.00	
PCB074	1.9	0.20	0.088	1.00	
PCB077	0.90	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	4.6	0.20	0.076	1.00	
PCB095	4.0	0.20	0.11	1.00	
PCB097	3.4	0.20	0.15	1.00	
PCB099	8.2	0.20	0.10	1.00	
PCB101	12	0.20	0.083	1.00	
PCB105	3.9	0.20	0.095	1.00	
PCB110	6.8	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	13	0.20	0.073	1.00	
PCB119	0.46	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	2.4	0.20	0.066	1.00	
PCB132/153	32	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	0.63	0.20	0.097	1.00	
PCB138/158	19	0.40	0.13	1.00	
PCB141	2.3	0.20	0.15	1.00	
PCB149	8.6	0.20	0.070	1.00	
PCB151	3.0	0.20	0.053	1.00	
PCB156	1.3	0.20	0.087	1.00	
PCB157	0.43	0.20	0.060	1.00	
PCB167	0.38	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	0.33	0.20	0.079	1.00	
PCB170	3.8	0.20	0.082	1.00	
PCB174	2.5	0.20	0.084	1.00	
PCB177	2.0	0.20	0.069	1.00	
PCB180	8.6	0.20	0.062	1.00	
PCB183	2.7	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	7.5	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	1.6	0.20	0.064	1.00	
PCB195	0.68	0.20	0.19	1.00	
PCB200	0.21	0.20	0.093	1.00	
PCB201	0.34	0.20	0.091	1.00	
PCB203	2.5	0.20	0.13	1.00	
PCB206	0.97	0.20	0.075	1.00	
PCB209	0.39	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	90	10-150			
p-Terphenyl-d14	54	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners
Units: ug/kg

Project: 1400904

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-574-5	N/A	Tissue	GC/MS HHH	01/31/15	02/05/15 00:09	150131L23

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
PCB003	ND	0.20	0.16	1.00	
PCB005/008	ND	0.40	0.25	1.00	
PCB015	ND	0.20	0.14	1.00	
PCB018	ND	0.20	0.094	1.00	
PCB027	ND	0.20	0.14	1.00	
PCB028	ND	0.20	0.096	1.00	
PCB029	ND	0.20	0.16	1.00	
PCB031	ND	0.20	0.13	1.00	
PCB033	ND	0.20	0.12	1.00	
PCB037	ND	0.20	0.11	1.00	
PCB044	ND	0.20	0.11	1.00	
PCB049	ND	0.20	0.084	1.00	
PCB052	ND	0.20	0.12	1.00	
PCB056	ND	0.20	0.19	1.00	
PCB060	ND	0.20	0.19	1.00	
PCB066	ND	0.20	0.083	1.00	
PCB070	ND	0.20	0.11	1.00	
PCB074	ND	0.20	0.088	1.00	
PCB077	ND	0.20	0.049	1.00	
PCB081	ND	0.20	0.081	1.00	
PCB087	ND	0.20	0.076	1.00	
PCB095	ND	0.20	0.11	1.00	
PCB097	ND	0.20	0.15	1.00	
PCB099	ND	0.20	0.10	1.00	
PCB101	ND	0.20	0.083	1.00	
PCB105	ND	0.20	0.095	1.00	
PCB110	ND	0.20	0.086	1.00	
PCB114	ND	0.20	0.060	1.00	
PCB118	ND	0.20	0.073	1.00	
PCB119	ND	0.20	0.076	1.00	
PCB123	ND	0.20	0.054	1.00	
PCB126	ND	0.20	0.080	1.00	
PCB128	ND	0.20	0.066	1.00	
PCB132/153	ND	0.40	0.20	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

AMEC Foster Wheeler, Plc.
 9210 Sky Park Court, Suite 200
 San Diego, CA 92123-4302

Date Received: 01/23/15
 Work Order: 15-01-1419
 Preparation: EPA 3541
 Method: EPA 8270C SIM PCB Congeners
 Units: ug/kg

Project: 1400904

Page 22 of 22

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB137	ND	0.20	0.097	1.00	
PCB138/158	ND	0.40	0.13	1.00	
PCB141	ND	0.20	0.15	1.00	
PCB149	ND	0.20	0.070	1.00	
PCB151	ND	0.20	0.053	1.00	
PCB156	ND	0.20	0.087	1.00	
PCB157	ND	0.20	0.060	1.00	
PCB167	ND	0.20	0.077	1.00	
PCB168	ND	0.20	0.057	1.00	
PCB169	ND	0.20	0.079	1.00	
PCB170	ND	0.20	0.082	1.00	
PCB174	ND	0.20	0.084	1.00	
PCB177	ND	0.20	0.069	1.00	
PCB180	ND	0.20	0.062	1.00	
PCB183	ND	0.20	0.062	1.00	
PCB184	ND	0.20	0.12	1.00	
PCB187	ND	0.20	0.074	1.00	
PCB189	ND	0.20	0.063	1.00	
PCB194	ND	0.20	0.064	1.00	
PCB195	ND	0.20	0.19	1.00	
PCB200	ND	0.20	0.093	1.00	
PCB201	ND	0.20	0.091	1.00	
PCB203	ND	0.20	0.13	1.00	
PCB206	ND	0.20	0.075	1.00	
PCB209	ND	0.20	0.16	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	104	10-150			
p-Terphenyl-d14	105	10-150			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400904

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-FF-CH-01-05-20141012	Sample	Tissue	GC/MS NNN	01/31/15	02/09/15 05:35	150131S17
IB-FF-CH-01-05-20141012	Matrix Spike	Tissue	GC/MS NNN	01/31/15	02/08/15 13:06	150131S17
IB-FF-CH-01-05-20141012	Matrix Spike Duplicate	Tissue	GC/MS NNN	01/31/15	02/08/15 13:24	150131S17

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	0.3961	5.000	5.917	110	5.542	103	10-150	7	0-30	
4,4'-DDE	33.01	5.000	33.24	5	31.53	0	10-150	5	0-30	3
4,4'-DDT	ND	5.000	5.968	119	5.237	105	10-150	13	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400904

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OA-OF-CH-06-06-20141011	Sample	Tissue	GC/MS NNN	03/08/15	03/11/15 12:07	150308S01
OA-OF-CH-06-06-20141011	Matrix Spike	Tissue	GC/MS NNN	03/08/15	03/11/15 12:25	150308S01
OA-OF-CH-06-06-20141011	Matrix Spike Duplicate	Tissue	GC/MS NNN	03/08/15	03/11/15 12:43	150308S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	ND	50.00	3.411	7	3.427	7	10-150	0	0-30	3
4,4'-DDE	119.6	50.00	86.06	0	88.71	0	10-150	3	0-30	3
4,4'-DDT	ND	50.00	1.504	3	1.491	3	10-150	1	0-30	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: 1400904

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
IB-FF-CH-01-05-20141012	Sample	Tissue	GC/MS HHH	01/31/15	02/05/15 14:58	150131S23
IB-FF-CH-01-05-20141012	Matrix Spike	Tissue	GC/MS HHH	01/31/15	02/05/15 10:45	150131S23
IB-FF-CH-01-05-20141012	Matrix Spike Duplicate	Tissue	GC/MS HHH	01/31/15	02/05/15 11:10	150131S23

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	50.00	60.20	120	63.33	127	10-150	5	0-30	
PCB028	ND	50.00	64.28	129	68.35	137	10-150	6	0-30	
PCB044	ND	50.00	61.66	123	65.74	131	10-150	6	0-30	
PCB052	0.6842	50.00	53.44	106	56.80	112	10-150	6	0-30	
PCB066	0.5636	50.00	68.48	136	72.39	144	10-150	6	0-30	
PCB077	ND	50.00	68.56	137	71.90	144	10-150	5	0-30	
PCB101	2.158	50.00	61.12	118	64.95	126	10-150	6	0-30	
PCB105	0.6365	50.00	66.24	131	69.97	139	10-150	5	0-30	
PCB118	1.940	50.00	69.14	134	73.46	143	10-150	6	0-30	
PCB126	ND	50.00	63.89	128	67.04	134	10-150	5	0-30	
PCB128	0.4081	50.00	55.96	111	58.05	115	10-150	4	0-30	
PCB170	0.5388	50.00	57.53	114	60.60	120	10-150	5	0-30	
PCB180	1.350	50.00	60.63	119	63.12	124	10-150	4	0-30	
PCB187	1.253	50.00	57.45	112	60.88	119	10-150	6	0-30	
PCB195	ND	50.00	69.43	139	71.41	143	10-150	3	0-30	
PCB206	0.2205	50.00	62.61	125	64.54	129	10-150	3	0-30	
PCB209	ND	50.00	59.59	119	60.67	121	10-150	2	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400904

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-7	LCS	Tissue	GC/MS NNN	01/31/15	02/08/15 11:01	150131L17*			
099-16-578-7	LCSD	Tissue	GC/MS NNN	01/31/15	02/08/15 11:19	150131L17*			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	50.00	53.00	106	57.36	115	10-150	8	0-30	
4,4'-DDE	50.00	54.55	109	58.09	116	10-150	6	0-30	
4,4'-DDT	50.00	58.36	117	63.16	126	10-150	8	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400904

Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-578-8	LCS	Tissue	GC/MS NNN	02/22/15	02/25/15 11:42	150222L01
099-16-578-8	LCSD	Tissue	GC/MS NNN	02/22/15	02/25/15 12:00	150222L01

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.402	68	3.256	65	10-150	4	0-30	
4,4'-DDE	5.000	3.151	63	3.094	62	10-150	2	0-30	
4,4'-DDT	5.000	4.125	82	4.101	82	10-150	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C PEST-SIM

Project: 1400904

Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-578-6	LCS	Tissue	GC/MS NNN	01/01/95	03/11/15 10:34	150308L01			
099-16-578-6	LCSD	Tissue	GC/MS NNN	01/01/95	03/11/15 10:52	150308L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
4,4'-DDD	5.000	3.267	65	2.853	57	10-150	14	0-30	
4,4'-DDE	5.000	3.320	66	2.799	56	10-150	17	0-30	
4,4'-DDT	5.000	4.154	83	3.532	71	10-150	16	0-30	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

AMEC Foster Wheeler, Plc.
9210 Sky Park Court, Suite 200
San Diego, CA 92123-4302

Date Received: 01/23/15
Work Order: 15-01-1419
Preparation: EPA 3541
Method: EPA 8270C SIM PCB Congeners

Project: 1400904

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-16-574-5	LCS	Tissue	GC/MS HHH	01/31/15	02/04/15 23:20	150131L23				
099-16-574-5	LCSD	Tissue	GC/MS HHH	01/31/15	02/04/15 23:45	150131L23				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
PCB018	50.00	56.15	112	49.85	100	10-150	0-173	12	0-30	
PCB028	50.00	62.35	125	54.79	110	10-150	0-173	13	0-30	
PCB044	50.00	60.28	121	53.95	108	10-150	0-173	11	0-30	
PCB052	50.00	52.91	106	47.19	94	10-150	0-173	11	0-30	
PCB066	50.00	65.98	132	58.35	117	10-150	0-173	12	0-30	
PCB077	50.00	64.70	129	56.49	113	10-150	0-173	14	0-30	
PCB101	50.00	59.34	119	52.33	105	10-150	0-173	13	0-30	
PCB105	50.00	64.35	129	56.71	113	10-150	0-173	13	0-30	
PCB118	50.00	66.93	134	59.23	118	10-150	0-173	12	0-30	
PCB126	50.00	65.20	130	56.56	113	10-150	0-173	14	0-30	
PCB128	50.00	52.59	105	46.37	93	10-150	0-173	13	0-30	
PCB170	50.00	53.05	106	48.18	96	10-150	0-173	10	0-30	
PCB180	50.00	62.62	125	54.74	109	10-150	0-173	13	0-30	
PCB187	50.00	59.35	119	51.38	103	10-150	0-173	14	0-30	
PCB195	50.00	65.79	132	60.24	120	10-150	0-173	9	0-30	
PCB206	50.00	59.36	119	54.94	110	10-150	0-173	8	0-30	
PCB209	50.00	58.21	116	53.31	107	10-150	0-173	9	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Glossary of Terms and Qualifiers

Work Order: 15-01-1419

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain-of-Custody Record

AMEC

9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1419

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400904-01	FH-FF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-02	FH-OF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-03	FH-FF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-04	FH-OF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-05	FH-FF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-06	FH-OF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-07	OA-FF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-08	OA-OF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-09	OA-FF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1		
1400904-10	OA-OF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1		
1400904-11	OA-FF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-12	OA-OF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-13	IB-FF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-14	IB-OF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-15	IB-FF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict

Bettina Benedict 1/22/15 1412

Received (Printed Name/Signature/Date/Time)

Memo, Kelly Saraso 09/15

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record

1419

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400904-16	IB-OF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-17	IB-FF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-18	IB-OF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-19	IA-FF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1		
1400904-20	IA-OF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict</i> 11/22/15 142</p>	<p>Received (Printed Name/Signature/Date/Time) <i>J. Moreno, PREGY SORIANO</i> 1/23/15 0945</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time)</p>

1419

ANCHOR OEA 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista		Date: 11/20/2014		Project Name: Harbor TMDL Food Web Sampling		Project Number: 120714-01-07 Task 1		Project Manager: Chris Stranay		Phone Number: (658) 300 4350		Shipment Method:								
Track #	Field Sample ID	Collection Date/Time	Fish Type	No. of Fish in Replicate	PCBs (high res) EPA 1689C	PBA (low res) 8270 Congeners - is sample fish, but test for fish (FF)	ONLY (NOT Otolith) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Tissue Prep (Maximize Tissue)	Whole Body Fish Prep	Prep Sample (enough to ship to Phys (CM Stable Isotope)	Tweezer off 10 pectoral area	Save fish head (ototh) and label envelope	Check bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicates, choose fish directed to in comments	Archival: No tailing / keep frozen	See notes: Section at bottom. FPCP fish replicates will produce two full sets of tests. Because of this, the entire effort will be kept on this specific replicate.	Comments	Comments/Preservation
21	FH-WO-WC-Archive-08-20141014	10/14/14	White Surfperch	7													X		Lab pic 028. Contains A1-A7. Orig. archive.	
22	FH-WO-WC-08-20141013	10/13/14	Shiner Surfperch	1															TAKE SCALES: Analyze this sample only for lipids and PCBs	
23	FH-WO-WC-01-08-20141013	10/13/14	White Croak	2															TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.	
24	FH-WO-WC-02-08-20141013	10/13/14	White Croak	2															TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.	
25	FH-WO-WC-03-08-20141013	10/13/14	White Croak	2															Scales already collected. TAKE FISH HEAD from TL=21cm. SL=18cm fish.	
26	FH-WO-WC-04-08-20141013	10/13/14	White Croak	2															Scales already collected. TAKE FISH HEAD from TL=21cm. SL=18cm fish.	
27	FH-WO-WC-05-08-20141013	10/13/14	White Croak	2															Scales already collected. TAKE FISH HEAD from TL=21cm. SL=18cm fish.	
28	FH-WO-WC-06-08-20141013	10/13/14	White Croak	2															Scales already collected of both fish in replicate. Same lengths. Note girth, weight of fish.	
29	FH-WO-WC-07-08-20141013	10/13/14	White Croak	2															Scales already collected of both fish in replicate. Note size of fish the Otolith comes from	
30	FH-WO-WC-08-08-20141013	10/13/14	White Croak	1															Scales already collected.	
31	FH-WO-WC-09-08-20141013	10/13/14	White Croak	1															Scales already collected. Note new Sample ID. Re-label bag + tag.	
32	FH-WO-WC-10-08-20141013	10/13/14	White Croak	1															Scales already collected. Skin-Off Fillets + Offal from this replicate.	
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak	4															4 plus possibly another 4 more archive fish	
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	
39	OA-FF-CH-06-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected. Skin-Off Fillets + Offal from this replicate.	
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1															Scales already collected.	

Notes: YY-FF-FF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FFOF" sample. These two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = whole organism, OL = otolith, SC = scale. Location IDs: FH-Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Ship, IB=Long Beach Inner Harbor, A=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOTLOTS ARE TAKEN FOR TESTING.

Requested By: Vista Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: Vista
 Requisitioned By: Chris Stranay Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: Chris Stranay

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Chain of Custody Record & Laboratory Analysis Request
Laboratory Number: Vista

Date: 11/20/2014
Project Name: Harbor TMDL Food Web Sampling
Project Number: 120711-01.07.Task 1
Project Manager: Chris Stransky
Phone Number: (858) 300 4350
Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) EPA 1688C	PCBs (low res) 8270 Congeners - conducted on sample ID FF/OF - enable fish, but test Fish Fillets (FF)	GALSCIENCE ONLY (NOT Otolith (OT))	DTA (8270 SIM DDX W/DMMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Otolith Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Phys (C/N Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label otolith in bag and NYSW ID tag with size in cm. If replicate fish in replicate, replicate fish directed to in comments or middle like fish.	Archive, No testing / keep frozen	See notes, section at bottom, FF/OF fish replicates will produce two fillets of fish. Because of this, the entire otolith will be kept on this specific replicate.	Comments
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5	X	X	X	X	X	X	X	X	X	X	X	X	X	Photo 29. Label says "OA-XX-CA-A-06-20141011"	
45	OA-WO-W5-01-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.	
46	OA-WO-W5-02-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
47	OA-WO-W5-03-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
48	OA-WO-W5-04-06-20141011	10/11/14	White Surfprch.	5	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
49	OA-WO-W5-05-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
50	OA-WO-W5-06-06-20141011	10/13/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
51	OA-FF/OF-W5-07-06-20141013	10/13/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected. Skin-Off Fillets + Otolith from this replicate.	
52	OA-WO-W5-Archive-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
53	OA-WO-S5-08-06-20141013	10/13/14	Shiner Surfprch.	6	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
54	OA-WO-S5-09-06-20141011	10/11/14	Shiner Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.	
55	OA-WO-S5-10-06-20141011	10/11/14	Shiner Surfprch.	7	X	X	X	X	X	X	X	X	X	X	X	X	X	Unknown actual number b/c of on-boat mis-ID	
56	OA-WO-S5-Archive-06-20141013	10/13/14	Shiner Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected. Skin-Off Fillets + Otolith from this replicate.	
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scalcs already collected.	

Notes: YY, FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#:Location#. DateCode while the remaining otolith after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#:Location#-Date. Please apply this identification code scheme to every FF/OF sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfprch, WS = White Surfprch, Fish Tissue Type IDs: FF = Skin off fillet, OF = otolith, SC = scale, Location IDs: FF=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOUOTS ARE TAKEN FOR TESTING.

Requested By: Vista Company: Anchor QEA Date/Time: 12/14/14

Signature/Printed Name: Vista

Received By: Phano, Pacy Soriano Company: Anchor QEA Date/Time: 1/21/15

Signature/Printed Name: Phano, Pacy Soriano

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Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Visits/Test Parameters (Sub's noted in Bold)										Comments				Comments/Preservation
				TCBS (high res) epa 1688C	PCBs (low res) 8270 Congeners - is conducted on sample ID FF/CF/OF	DTS (8270 SIM DOX W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Phys (CN Stable isotopes)	Tweezer off 10 pectoral area scales, measure and use envelope	Seal fish head (oleith) and label replicate bag and fish tail Length (TL) in cm. If multiple fish in replicate or choose fish directed to in comments or middle size fish.	Archive: No testing / Keep frozen	See notes section at bottom. FF/CF/OF will be tested for chemistry and no oleith will be kept on this specific replicate.		
51	OA-FF-WC-05-06-20141011	10/11/14	White Croak	1	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected.	
52	OA-FF-WC-05-06-20141011	10/11/14	White Croak	3	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
53	OA-FF-WC-07-06-20141011	10/11/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected, TAKE FISH HEAD. Both fish same size. TL=21cm, SL=18cm	
54	OA-FF-WC-08-06-20141011	10/11/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected, TAKE FISH HEAD. Both fish same size. TL=19cm, SL=16cm	
55	OA-FF-WC-09-06-20141011	10/11/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
56	OA-FF-WC-10-06-20141011	10/11/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
57	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak	4													TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
58	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
59	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Oleolith) ID to.	
60	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21	X	X	X	X	X	X	X	X	X	X	X	X	# of Archive unknown b/c of final sorting	
61	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected. Skin-Off Fillets + Offal from this replicate.	
62	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected. TAKE FISH HEAD from TL=30cm, SL=25cm fish.	
63	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch	6	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected from one fish in this rep.	
64	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch	4	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected from one fish in this rep.	
65	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected from one fish in this rep.	
66	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from (size). No oleith.	
67	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected from both fish in this Rep #5.	
68	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch	1	X	X	X	X	X	X	X	X	X	X	X	X	Scalae already collected from one fish in this rep.	
69	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch	1	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from (size). No oleith.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location# DateCode while the remaining offal after milling this sample should have the identification code of YY-OF-ZZ-Rep#-Location# Date. Please apply this identification code scheme to every FF/OF sample. These two samples (two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WG = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfprch, WIS = White Surfprch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = oleith, SC = scale. Location IDs: FF-Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/24/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: [Signature]
 Received By: [Signature] Company: Anchor OEA Date/Time: 12/23/15
 Signature/Printed Name: [Signature]

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 12071-01-07 Task 1
 Project Manager: Chris Strzansky
 Phone Number: (859) 300 4330
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	PCBs (high res) eps 1698C	PCBs (low res) 8270 Congeners - is sample fish, but not fish filets (FF)	ONLY (NOT OTHER) CALSCIENCE	DTs (8270 SIM DX W/DDMU) CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Filet Prep (Maximize Tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (C/N Stable Isotope)	Tweezer off 10 pectoral area Scales, measure end use envelope	Save fish head (cont) and label zeploc bag and NEW ID tag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate, size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two fish filets. Because of this, the entire filets will be kept on this specific replicate.	Comments/Preservation
81	18-WO-W5-08-05-20141012	10/12/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No ololith.
82	18-WO-W5-09-05-20141012	10/12/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No ololith.
83	18-WO-W5-10-05-20141012	10/12/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from. Skin-Off Filets + Offal from this replicate.
84	18-WO-W5-Archive-05-20141012	10/12/14	White Surfperch	6														
85	18-FF-WC-01-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm SL=18cm fish.
86	18-FF-WC-02-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm SL=18cm fish.
87	18-FF-WC-03-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=21cm SL=19cm fish (both same size). 130g
88	18-FF-WC-04-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
89	18-FF-WC-05-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
90	18-FF-WC-06-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm SL=21cm.
91	18-FF-WC-07-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm SL=21cm.
92	18-FF-WC-08-05-20141012	10/12/14	White Croak	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=24cm SL=21cm fish.
93	18-FF-WC-09-05-20141012	10/12/14	White Croak	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=25cm SL=22cm fish.
94	18-FF-WC-Archive-05-20141012	10/12/14	White Croak	6														Scales already collected. Skin-Off Filets + Offal from this replicate.
95	18-FF-WC-10-05-20141012	10/12/14	White Croak	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
96	18-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
97	18-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
98	18-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
99	18-FF-LF-04-05-20141012	10/12/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.
100	18-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two sample / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off filets, OF = offal, WO = whole organism, OL = ololith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Chris Strzansky Company: Anchor OEA Date/Time: 12/09/14
 Signature/Printed Name: Chris Strzansky Signature/Printed Name: Justin Signature/Printed Name: Justin Date/Time: 12/09/14
 Received By: Justin Company: Anchor OEA Date/Time: 12/09/14
 Signature/Printed Name: Justin Signature/Printed Name: Justin Signature/Printed Name: Justin Date/Time: 12/09/14

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊗ 1400906

1419

ANCHOR OEA

1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista

Date: 11/20/2014

Project Name: Harbor TMDL Food Web Sampling

Project Number: 120711-07 Task 1

Project Manager: Chris Stransky

Phone Number: (859) 300-4350

Shipment Method:

Track #		Field Sample ID		Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample (NOT Offal (CF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMUY) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample allocated to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otoolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments, or middle size fish.	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.	Comments	Comments/Preservation
---------	--	-----------------	--	----------------------	--------------	--------------------------	---------------------------	--	--	-------------------------	-------------------------	------------------------------------	------------	----------------------	---	---	--	--	----------	-----------------------

101	IA-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2																
102	IA-WO-W5-Archive-07-20141011	10/11/14	White Surfperch	3																
103	IA-FF-WC-07-20141011	10/11/14	White Croak	2																
104	IA-FF-WC-07-20141011	10/11/14	White Croak	2																
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak	2																
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak	2																
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak	2																
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak	1																
109	IA-FF-WC-07-20141011	10/11/14	White Croak	1																
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak	1																
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak	1		X														
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak	1																
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak	4																
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2																
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2																
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2																
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2																
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1																
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1																
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1																

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#. DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = oolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requisitioned By: *Via email 12/03/14* Company: Anchor OEA
Signature/Printed Name: *[Signature]* Date/Time: *12/03/14*

Received By: *[Signature]* Company: *Vista*
Signature/Printed Name: *[Signature]* Date/Time: *11/23/14*

1400902
1400903
1400904
1400904

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 38.0 LB
CAD: 104489254/INET3610

TH19

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

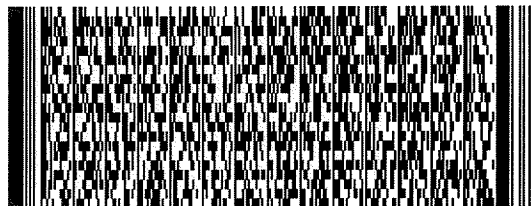
BILL SENDER

Ref # 1400960
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

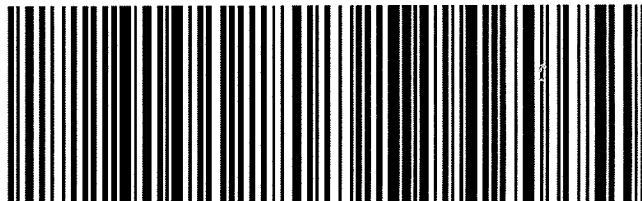
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 8534
0201



92 APVA

92841
CA-US
SNA



537J10F15/EE4B

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience

WORK ORDER #: 15-01-1419

SAMPLE RECEIPT FORM

Cooler / of /

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2°C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A

Checked by: 836

Sample _____ No (Not Intact) Not Present

Checked by: 965

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Collection date/time, matrix, and/or # of containers logged in based on sample labels.

No analysis requested. Not relinquished. No date/time relinquished.

Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------------------	--------------------------	--------------------------	-------------------------------------

Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------

Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Aqueous samples received within 15-minute holding time

<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Unpreserved vials received for Volatiles analysis

Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

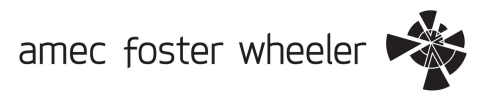
250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 862

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 862

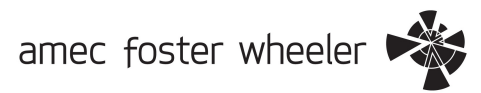
POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



APPENDIX G

ISOTOPE ANALYSIS REPORT

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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Customer: Stransky, Chris
 Institution: PHYSIS Environmental Labs, Inc.
 Email: chris.stransky@amechw.com
 Project:
 Submission Date: 03/30/15
 Report Date:

Sample ID	d13C	C Amount (ug)	d13C Comment	d15N	N Amount (ug)	d15N Comment	Tray Name	Well Id	Type of Material	Analysis	Enriched?	Estimated Enrichment	Amount (mg)	OurLabID	Analysis Number
OAWOWS060620141013R2	-18.26	532.98		17.16	105.13		Tray 2	F10	Ground/Dried Tissue	13C, 15N	No		1.079	855093	305250
OAWOSS080620141013	-17.61	437.06		16.04	114.07		Tray 2	F11	Ground/Dried Tissue	13C, 15N	No		1.028	855094	305251
OAWOSS090620141011R1	-17.15	444.51		16.07	116.82		Tray 2	F12	Ground/Dried Tissue	13C, 15N	No		1.04	855095	305252
OAWOSS090620141011R2	-17.20	449.17		15.92	117.50		Tray 2	G1	Ground/Dried Tissue	13C, 15N	No		1.032	855096	305256
OAWOSS100620141011	-17.20	440.79		15.93	115.44		Tray 2	G2	Ground/Dried Tissue	13C, 15N	No		1.045	855097	305257
IBWOSS010520141012R1	-18.23	442.65		16.46	103.07		Tray 2	G3	Ground/Dried Tissue	13C, 15N	No		1.02	855098	305258
IBWOSS010520141012R2	-18.17	447.31		16.49	104.44		Tray 2	G4	Ground/Dried Tissue	13C, 15N	No		1.036	855099	305259
IBWOSS020520141012R1	-18.20	461.32		16.69	99.63		Tray 2	G5	Ground/Dried Tissue	13C, 15N	No		1.032	855100	305260
IBWOSS020520141012R2	-18.26	514.96		16.78	109.94		Tray 2	G6	Ground/Dried Tissue	13C, 15N	No		1.071	855101	305261
IBWOSS030520141012R1	-16.76	424.06		16.76	118.88		Tray 2	G7	Ground/Dried Tissue	13C, 15N	No		1.007	855102	305262
IBWOSS030520141012R2	-16.75	440.79		16.90	117.50		Tray 2	G8	Ground/Dried Tissue	13C, 15N	No		1.015	855103	305263
T1 WMT A	-16.31	438.92		11.82	130.58		Tray 2	G9	Ground/Dried Tissue	13C, 15N	No		1.021	855104	305264
T2 WMT A	-16.32	440.79		9.16	131.96		Tray 2	G10	Ground/Dried Tissue	13C, 15N	No		1.027	855105	305265
02-34 B2	-15.98	431.48		14.44	129.89		Tray 2	G11	Ground/Dried Tissue	13C, 15N	No		1.01	855106	305266

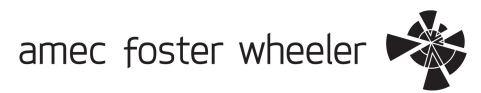
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G Isotope Analysis Report

Analysis Reference	Weight (ug)	C Amount (ug)	d13C	N Amount (ug)	d15N	Reference Values			
Ref Id	Name		d13C	%C	d15N	%N			
305082 G-13		501.01	-21.54	101.62	7.70				
305144 G-13		492.35	-21.82	99.48	7.68	G-13	Bovine Liver	-21.69	7.72
305221 G-13		495.12	-21.66	101.69	7.61	G-17	USGS-41 Glutamic Acid	37.626	47.6
305306 G-13		493.24	-21.74	101.01	7.81	G-18	Nylon 5	-27.72	-10.31
G-13 StdDev			0.12		0.08				
305083 G-17		352.47	37.72	81.57	47.19	G-20	Glutamic Acid	-16.65	40.81
305084 G-17		415.57	37.67	96.63	47.84				
305145 G-17		184.34	37.63	42.06	47.51				
305146 G-17		400.25	37.48	90.90	47.85				
305222 G-17		412.94	37.62	94.82	47.32				
305223 G-17		411.09	37.68	94.82	47.56				
305307 G-17		407.39	37.46	92.76	47.63				
305308 G-17		407.39	37.74	94.14	47.88				
G-17 StdDev			0.11		0.25				
305016 G-18		442.41	-27.69	83.73	-10.42				
305019 G-18		466.40	-27.76	88.04	-10.51				
305020 G-18		454.88	-27.66	85.88	-10.33				
305021 G-18		452.00	-27.65	85.88	-10.19				
305022 G-18		463.52	-27.58	88.04	-10.19				
305037 G-18		464.48	-27.86	92.34	-10.10				
305039 G-18		494.27	-27.83	98.06	-10.35				
305052 G-18		419.40	-27.76	80.85	-10.24				
305053 G-18		467.36	-27.81	90.90	-10.33				
305066 G-18		487.54	-27.78	91.62	-10.19				
305068 G-18		441.45	-27.80	83.73	-10.45				
305081 G-18		452.96	-27.60	83.73	-10.36				
305085 G-18		472.16	-27.58	90.90	-9.97				
305086 G-18		448.16	-27.66	85.88	-10.34				
305099 G-18		443.36	-27.59	85.16	-10.24				
305101 G-18		442.41	-27.72	84.44	-10.58				
305114 G-18		473.12	-27.71	88.75	-10.24				
305116 G-18		475.04	-27.73	90.19	-10.48				
305129 G-18		437.61	-27.74	82.29	-10.23				
305130 G-18		452.96	-27.80	85.88	-10.50				
305143 G-18		433.78	-27.81	81.57	-10.42				
305147 G-18		432.82	-27.68	82.29	-10.11				
305148 G-18		420.36	-27.77	80.13	-10.34				
305155 G-18		415.72	-27.70						
305158 G-18		437.06	-27.68						
305159 G-18		418.50	-27.66	79.72	-10.30				
305160 G-18		403.70	-27.63	76.98	-10.40				
305161 G-18		424.98	-27.66	81.10	-10.44				
305176 G-18		434.27	-27.76	83.15	-10.02				
305178 G-18		424.98	-27.80	82.47	-10.38				
305191 G-18		415.72	-27.74	79.72	-10.19				
305192 G-18		442.65	-27.84	84.53	-10.37				
305205 G-18		412.94	-27.82	76.98	-10.28				
305207 G-18		432.41	-27.74	82.47	-10.44				
305220 G-18		424.06	-27.84	79.04	-10.30				
305224 G-18		419.42	-27.73	79.72	-10.07				
305225 G-18		455.71	-27.80	86.59	-10.33				
305238 G-18		405.54	-27.67	76.29	-10.24				
305240 G-18		419.42	-27.70	79.72	-10.49				
305253 G-18				158.83	-10.20				
305255 G-18		424.98	-27.62	81.10	-10.43				
305267 G-18		416.64	-27.64	78.35	-10.19				
305268 G-18		397.24	-27.63	74.24	-10.39				
305281 G-18		435.20	-27.66	81.78	-10.32				
305283 G-18		404.62	-27.62	76.29	-10.33				
305296 G-18		410.17	-27.55	79.04	-10.31				
305298 G-18		426.84	-27.71	80.41	-10.42				
305305 G-18		411.09	-27.75	78.35	-10.25				
305309 G-18		413.87	-27.92	78.35	-10.34				
305310 G-18		439.85	-27.86	83.15	-10.31				
G-18 StdDev			0.09		0.13				
305023 G-20	3981	1624.73	-16.68	379.11					
305024 G-20	183	72.67		17.22	-6.69				
305038 G-20	994	412.70	-16.66	98.77	-6.76				
305067 G-20	3012	1230.92	-16.75	287.20	-6.75				
305100 G-20	498	202.31	-16.74	45.51	-6.79				
305115 G-20	2015	816.40	-16.69	189.21	-6.70				
305162 G-20	3988	1595.78	-16.58	372.85	-6.75				
305163 G-20	218	94.34	-16.52	22.35					
305177 G-20	992	403.70	-16.59	94.82	-6.69				
305206 G-20	3012	1259.67	-16.66	293.97	-6.77				
305239 G-20	497	202.71	-16.51	47.18	-6.83				
305254 G-20	2007	802.82	-16.38	186.45	-6.68				
305282 G-20	3985	1641.94	-16.42	382.65	-6.66				
305297 G-20	511	206.23	-16.52	47.72	-6.62				
G-20 StdDev			0.12		0.06				

APPENDIX H

OTOLITH AND SCALE REPORTS (SCMI)

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Otolith Summary

Site	Species	Composite #	Total Length (cm)	Standard Length (cm)	Weight (Net)-(grams)	ID	Otolith Annular Rings	Comments
Fish Harbor - 08	Ca. Halibut	1	41	35	680	FH-FF-CH-01-08-20141013	5	initial read = 5, re check = 5
Fish Harbor - 08	Ca. Halibut	2	34	29	336	FH-FF-CH-02-08-20141013	4	
Fish Harbor - 08	Ca. Halibut	3	35	30	396	FH-FF-CH-03-08-20141013	5	
Fish Harbor - 08	Ca. Halibut	4	34	30	391	FH-FF-CH-04-08-20141013	6	
Fish Harbor - 08	Ca. Halibut	5	32	28	326	FH-FF-CH-05-08-20141013	5	
Fish Harbor - 08	Ca. Halibut	6	31	27	291	FH-FF-CH-06-08-20141013	5	
Fish Harbor - 08	Ca. Halibut	7	33	29	311	FH-FF/OF-CH-07-08-20141013	NA	
Fish Harbor - 08	Ca. Halibut	8	29	25	216	FH-FF-CH-08-08-20141013	3	
Fish Harbor - 08	Ca. Halibut	9	28	24	181	FH-FF-CH-09-08-20141013	4	initial read = 4, re check = 4
Fish Harbor - 08	Ca. Halibut	10	26	22	176	FH-FF-CH-10-08-20141013	4	initial read = 4, re check = 4
Fish Harbor - 08	White Croaker	1	19	16	96	FH-FF-WC-01-08-20141013	4	
Fish Harbor - 08	White Croaker	2	20	17	106	FH-FF-WC-02-08-20141013	5	
Fish Harbor - 08	White Croaker	3	21	19	136	FH-FF-WC-03-08-20141013	4	
Fish Harbor - 08	White Croaker	4	21	18	126	FH-FF-WC-04-08-20141013	5	
Fish Harbor - 08	White Croaker	5	21	18	136	FH-FF-WC-05-08-20141013	6	
Fish Harbor - 08	White Croaker	6	22	19	141	FH-FF-WC-06-08-20141013	5	
Fish Harbor - 08	White Croaker	7	22	19	156	FH-FF-WC-07-20141013	5	
Fish Harbor - 08	White Croaker	8	23	20	171	FH-FF-WC-08-08-20141013	4	
Fish Harbor - 08	White Croaker	9	25	21	173	FH-FF-WC-09-08-20141013	10	
Fish Harbor - 08	White Croaker	10	24	21	181	FH-FF/OF-WC-10-08-20141013	NA	

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Otolith Summary

Site	Species	Composite #	Total Length (cm)	Standard Length (cm)	Weight (Net)- (grams)	ID	Otolith Annular Rings	Comments
LA Outer Harbor - 06	Ca. Halibut	1	34	29	405	OA-FF-CH-01-06-20141011	4	
LA Outer Harbor - 06	Ca. Halibut	2	38	32	580	OA-FF-CH-02-06-20141011	4	
LA Outer Harbor - 06	Ca. Halibut	3	36	30	435	OA-FF-CH-03-06-20141011	3	
LA Outer Harbor - 06	Ca. Halibut	4	39	33	570	OA-FF-CH-04-06-20141011	4	
LA Outer Harbor - 06	Ca. Halibut	5	36	33	480	OA-FF-CH-05-06-20141011	4	
LA Outer Harbor - 06	Ca. Halibut	6	31	27	340	OA-FF/OF-CH-06-06-20141011	NA	
LA Outer Harbor - 06	Ca. Halibut	7	32	27	330	OA-FF-CH-07-06-20141011	2	
LA Outer Harbor - 06	Ca. Halibut	8	30	26	250	OA-FF-CH-08-06-20141011	2	
LA Outer Harbor - 06	Ca. Halibut	9	37	33	546	OA-FF-CH-09-06-20141011	3	
LA Outer Harbor - 06	Ca. Halibut	10	36	29	450	OA-FF-CH-10-06-20141011	3	
LA Outer Harbor - 06	White Croaker	1	26	23	230	OA-FF-WC-01-06-20141011	7	
LA Outer Harbor - 06	White Croaker	2	25	21	195	OA-FF/OF-WC-02-06-20141011	NA	
LA Outer Harbor - 06	White Croaker	3	26	22	205	OA-FF-WC-03-06-20141011	7	initial read = 5, re check = 7
LA Outer Harbor - 06	White Croaker	4	23	20	160	OA-FF-WC-04-06-20141011	5	
LA Outer Harbor - 06	White Croaker	5	23	21	175	OA-FF-WC-05-06-20141011	6	
LA Outer Harbor - 06	White Croaker	6	19	15	76	OA-FF-WC-06-06-20141011	4	
LA Outer Harbor - 06	White Croaker	7	19	16	87	OA-FF-WC-07-06-20141011	4	
LA Outer Harbor - 06	White Croaker	8	21	18	120	OA-FF-WC-08-06-20141011	7	
LA Outer Harbor - 06	White Croaker	9	19	16	81	OA-FF-WC-09-06-20141011	5	
LA Outer Harbor - 06	White Croaker	10	19	16	80	OA-FF-WC-10-06-20141011	4	
LA Outer Harbor - 06	Ca. Lizardfish	1	27	23	102	OA-FF-LF-01-06-20141011	1	
LA Outer Harbor - 06	Ca. Lizardfish	2	27	24	136	OA-FF-LF-02-06-20141011	4	

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Otolith Summary

Site	Species	Composite #	Total Length (cm)	Standard Length (cm)	Weight (Net)- (grams)	ID	Otolith Annular Rings	Comments
LB Inner Harbor - 05	Ca. Halibut	1	54	47	1650	IB-OF/FF-CH-01-05-20141012	NA	
LB Inner Harbor - 05	Ca. Halibut	2	30	25	250	IB-FF-CH-02-05-20141012	3	
LB Inner Harbor - 05	White Croaker	1	20	18	90	IB-FF-WC-01-05-20141012	5	
LB Inner Harbor - 05	White Croaker	2	20	18	95	IB-FF-WC-02-05-20141012	5	
LB Inner Harbor - 05	White Croaker	3	21	19	110	IB-FF-WC-03-05-20141012	5	
LB Inner Harbor - 05	White Croaker	4	21.5	18.5	125	IB-FF-WC-04-05-20141012	7	
LB Inner Harbor - 05	White Croaker	5	22	18	118	IB-FF-WC-05-05-20141012	5	
LB Inner Harbor - 05	White Croaker	6	24	21	135	IB-FF-WC-06-05-20141012	6	
LB Inner Harbor - 05	White Croaker	7	24	21	160	IB-FF-WC-07-05-20141012	6	
LB Inner Harbor - 05	White Croaker	8	24	21	170	IB-FF-WC-08-05-20141012	6	
LB Inner Harbor - 05	White Croaker	9	25	22	170	IB-FF-WC-09-05-20141012	11	
LB Inner Harbor - 05	White Croaker	10	26	23	220	IB-FF/OF-WC-10-05-20141012	NA	
LB Inner Harbor - 05	Ca. Lizardfish	1	26	23	95	IB-FF-LF-01-05-20141012	3	
LB Inner Harbor - 05	Ca. Lizardfish	2	25	22	100	IB-FF-LF-02-05-20141012	2	
LB Inner Harbor - 05	Ca. Lizardfish	3	26	23	110	IB-FF-LF-03-05-20141012	3	
LB Inner Harbor - 05	Ca. Lizardfish	4	29	26	160	IB-FF-LF-04-05-20141012	3	
LB Inner Harbor - 05	Ca. Lizardfish	5	30	26	185	IB-FF-LF-05-05-20141012	3	

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Otolith Summary

Site	Species	Composite #	Total Length (cm)	Standard Length (cm)	Weight (Net)-(grams)	ID	Otolith Annular Rings
LA Inner Harbor - 07	White Croaker	1	19	16	85	IA-FF-WC-01-07-20141011	5
LA Inner Harbor - 07	White Croaker	2	21	18	110	IA-FF-WC-02-07-20141011	5
LA Inner Harbor - 07	White Croaker	3	20	18	110	IA-FF-WC-03-07-20141011	3
LA Inner Harbor - 07	White Croaker	4	21	18	125	IA-FF-WC-04-07-20141011	4
LA Inner Harbor - 07	White Croaker	5	22	19	140	IA-FF-WC-05-07-20141011	5
LA Inner Harbor - 07	White Croaker	6	23	20	160	IA-FF-WC-06-07-20141011	4
LA Inner Harbor - 07	White Croaker	7	23	20	170	IA-FF-WC-07-07-20141011	6
LA Inner Harbor - 07	White Croaker	8	17	15	170	IA-FF-WC-08-07-20141011	3
LA Inner Harbor - 07	White Croaker	9	25	22	195	IA-FF/OF-WC-09-07-20141011	NA
LA Inner Harbor - 07	White Croaker	10	27	23	250	IA-FF-WC-10-07-20141011	9

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Otolith Summary

Site	Species	Composite #	Total Length (cm)	Standard Length (cm)	Weight (Net)- (grams)	ID	Otolith Annular Rings	Comments
Consolidated Slip - 03	Ca. Halibut	1	20	17	75	CS-FF-CH-01-03-20141010	1	
Consolidated Slip - 03	Ca. Halibut	2	22	18	85	CS-FF-CH-02-03-20141010	1	
Consolidated Slip - 03	Ca. Halibut	3	23	20	120	CS-FF-CH-03-03-20141010	3	
Consolidated Slip - 03	Ca. Halibut	4	25	21	155	CS-FF-CH-04-03-20141010	2	
Consolidated Slip - 03	Ca. Halibut	5	27.4	22.4	200	CS-FF-CH-05-03-20141010	3	
Consolidated Slip - 03	Ca. Halibut	6	30.4	25.4	270	CS-FF-CH-06-03-20141010	2	
Consolidated Slip - 03	Ca. Halibut	7	32	29	325	CS-FF-CH-07-03-20141010	3	
Consolidated Slip - 03	Ca. Halibut	8	34	29	365	CS-FF/OF-CH-08-03-20141010	NA	
Consolidated Slip - 03	Ca. Halibut	9	49	44	1250	CS-FF-CH-09-03-20141010	4	Initial read = 4, re check = 4
Consolidated Slip - 03	Ca. Halibut	10	43	38	870	CS-FF-CH-10-03-20141010	3	Initial read = 3, recheck = 3
Consolidated Slip - 03	Ca. Lizardfish	2	26	23	105	CS-FF-LF-02-03-20141010	3	

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Scale Summary

SCMI Number	Read date 2015	Species	ID Number	Total Length size mm	Standard Length Size mm	Weight g	Scale 1	Scale 2	Scale 3	reader	Mode	Notes	Comments
S001	6-Apr	White Surfperch	OA-WO-WS-01-06-20141011		82	14.58	0	1	0	BT	0		
			Sample # 1400892-09				0	1	0	CW	0		
S002	6-Apr	Shiner Surfperch	FH-WO-SS-09-08-20141013		91	18.6	1	1	1	BT	1		
			Sample # 1400893-16				1	1	1	CW	1		
S003	6-Apr	Shiner Surfperch	OA-WO-SS-10-06-20141011		72	9.2	0	0	0	BT			
			Sample # 1400892-17				0	0	0	CW			
S004	6-Apr	Shiner Surfperch	IB-WO-SS-04-05-20141012		109	29.7	2	2	2	BT			
			SAMPLE # 1400893-01				2	2	2	CW			
S005	6-Apr	White Surfperch	IB-WO-WS-07-05-20141012		169	99.5	1	2	1	BT	1		
			sample # 1400893-04				1	2	1	CW	1		
S006	6-Apr	White Surfperch	IB-WO-WS-08-05-20141012		161	111	2	2	2	BT			
			sample # 1400893-05				2	2	2	CW			
S007	6-Apr	White Surfperch	IB-WO-WS-09-05-20141012		163	108.6	2	2	2	BT			
			Sample # 1400893-06				2	2	2	CW			
S008	6-Apr	White Surfperch	FH-OF/FF-WS-01-08-20141013		160	96.6	1	1	1	BT			
			Sample # 1400904-03				1	1	1	CW			
S009	6-Apr	White Surfperch	IB-FF/OF-WS-10-05-20141012		182	136.7	3	4	3	BT	3		
			Sample # 1400-04-15				3	4	3	CW	3		
S010	7-Apr	White Surfperch	CS-SC-WS-A1-03-20141010		200	160	5	5	5	BT		edit says "A1-03" original says "01-03"	
							5	5	5	CW			
S011	7-Apr	White Surfperch	CS-SC-WS-02-03-20141010		180	140	4	4	4	BT			
							4	4	3	CW			
S012	7-Apr	White Surfperch	CS-SC-WS-03-03-20141010		160	105	2	2	2	BT			
							2	2	2	CW			
S013	7-Apr	White Surfperch	CS-SC-WS-04-03-20141010		165	125	2	2	2	BT			
							2	2	2	CW			
S014	7-Apr	White Surfperch	CS-SC-WS-05-03-20141010		170	115	3	2	3	BT	3		
							2	2	3	CW	2		
S015	7-Apr	White Surfperch	CS-SC-WS-06-03-20141010		142	90	0	0	0	BT			
							0	0	0	CW			
S016	7-Apr	White Surfperch	CS-SC-WS-07-03-20141010		145	90	0	1	0	BT	0		
							0	1	0	CW	0		
S017	7-Apr	White Surfperch	CS-SC-WS-08-03-20141010		151	90	0	0	0	BT			
							0	0	0	CW			
S018	7-Apr	White Surfperch	CS-SC-WS-09-03-20141010		138	75	1	1	0	BT			

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SCMI Number	Read date 2015	Species	ID Number	Total Length size mm	Standard Length Size mm	Weight g	Scale 1	Scale 2	Scale 3	reader	Mode	Notes	Comments
							1	1	1	CW			
S019	7-Apr	White Surfperch	CS-SC-WS-10-03-20141010		168	125	2	3	3	BT	3		
							2	3	3	CW	3		
S020	7-Apr	White Surfperch	CS-SC-WS-01-03-20141010		140	84	0	0	0	BT		edit says "WS-01" original = WS-11	
							0	0	0	CW			
S021	7-Apr	Shiner Surfperch	IB-SC-SS-01-05-20141012		80	11	0	0	0	BT		edit = "SS-01". Original = "SS-05"	
							0	0	0	CW			
S022	7-Apr	Shiner Surfperch	IB-SC-SS-02-05-20141012		80	12	0	0	0	BT		edit="ss-02" original="ss-03"	
							0	0	0	CW			
S023	7-Apr	Shiner Surfperch	IB-SC-WW-03-05-20141012		110	31	2	3	1	BT	1,2,3	edit="ss-03" orig = "ss-01"	
							2	3	1	CW	1,2,3		
S024	7-Apr	Shiner Surfperch	IB-SC-SS-06-05-2014-1012		120	37	0	0	0	BT	0	edit = "SS-06" orig = "ss-06"	SCMI Please double check age / re-read scales
							0	0	0	CW	0	2nd reading BT 0,1,1 CW 0,1,1; Mode = 1	
S025	7-Apr	Shiner Surfperch	IB-SC-SS-05-05-20141012		110	33	1	2	1	BT	1	edit = "ss-05" orig = "ss-02"	
			S025 & S026 have same ID?				1	2	1	CW	1		
S026	7-Apr	Shiner Surfperch	IB-SC-SS-05-05-2014-1012		120	32	2	2	2	BT		edit = "ss-05" orig = "ss-06"	
			S025 & S026 have same ID?				2	2	2	CW			
S027	8-Apr	White Surfperch	FH-SC-WS-01-08-20141013		140	74	0	0	0	BT			
							0	0	0	CW			
S028	8-Apr	White Surfperch	FH-SC-WS-02-08-20141013		110	35	0	0	0	BT	0		
							0	0	0	CW	0		
S029	8-Apr	White Surfperch	FH-SC-WS-03-08-20141013		90	18	0	0	0	BT			
							0	0	0	CW			
S030	8-Apr	White Surfperch	FH-SC-WS04-08-20141013		80	17	0	0	0	BT			
			missing "08" on envelope				0	0	0	CW			
S031	8-Apr	White Surfperch	FH-SC-WS-05-08-20141013		90	21	0	0	0	BT			
			missing "08" on envelope				0	0	0	CW			
S032	8-Apr	White Surfperch	FH-SC-WS-06-08-20141013		100	24	0	0	0	BT			
			missing "08" on envelope				0	0	0	CW			
S033	8-Apr	White Surfperch	FH-SC-WS-07-08-20141013		160	115	1	1	0	BT			
			missing "08" on envelope				1	1	1	CW			
S034	8-Apr	White Surfperch	FH-SC-WS-08-08-20141014		170	101	0	0	0	BT			
							0	0	0	CW			
S035	8-Apr	White Surfperch	FH-SC-WS-10-08-20141014		170	111	1	1	1	BT			
							1	1	1	CW			
S036	8-Apr	White Surfperch	FH-SC-WS-09-08-20141014		170	130	1	0	0	BT	0		

POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Scale Summary

SCMI Number	Read date 2015	Species	ID Number	Total Length size mm	Standard Length Size mm	Weight g	Scale 1	Scale 2	Scale 3	reader	Mode	Notes	Comments
							1	0	0	CW	0		
S037	8-Apr	White Surfperch	OA-SC-WS-A4-06-20141011		190	170	1	0	1	BT	1		
							1	0	1	CW	1		
S038	8-Apr	White Surfperch	OA-SC-WS-02-06-20141011		90	15	0	0	0	BT			
							0	0	0	CW			
S039	8-Apr	White Surfperch	OA-SC-WS-03-06-20141011		80	15	0	0	0	BT			
							0	0	0	CW			
S040	8-Apr	White Surfperch	OA-SC-WS-04-06-20141011		80	13	0	0	0	BT			
							0	0	0	CW			
S041	8-Apr	White Surfperch	OA-SC-WS-05-06-20142011		90	16	0	0	0	BT			
							0	0	0	CW			
S042	8-Apr	White Surfperch	IB-SC-WS-A-05-20141012		190	145	0	0	0	BT		edit=A, orig = 01	
							0	0	0	CW			
S043	8-Apr	White Surfperch	IB-SC-WS-02-05-20141012		180	120	2	2	2	BT		edit=02, orig = 10	
							2	2	2	CW			
S044	8-Apr	White Surfperch	IB-SC-WS-03-05-20141012		190	170	0	1	1	BT	1	edit = 3, orig = A	
							0	1	1	CW	1		
S045	8-Apr	White Surfperch	IB-SC-WS-04-05-20141012		180	130	0	1	1	BT	1	edit = 4, orig = A	
							0	1	1	CW	1		
S046	9-Apr	White Surfperch	OA-SC-WS-06-06-20141013		150	87	0	0	0	BT		edit = 06, orig = 08	
							0	0	0	CW			
S047	9-Apr	White Surfperch	OA-SC-WS-07-06-20141013		180	141	2	2	2	BT		edit = 07, orig = 09	
							2	2	3	CW			
S048	9-Apr	White Surfperch	OA-SC-WS-A3-06-20141013		220	226	3	4	5	BT	3,4,5	edit = A3, orig = 10	
							4	4	5	CW	4		
S049	9-Apr	Shiner Surfperch	OA-SC-SS-08-06-20141011		70	10	0	0	0	BT		edit = 08, orig = 01	
							0	0	0	CW			
S050	9-Apr	Shiner Surfperch	OA-SC-SS-09-06-20141011		70	9	0	0	0	BT		edit = 09, orig = 02	
							0	0	0	CW			
NO1	26-Jun	White Croaker	IA-SC-WC-09-07-20141011		220	195	2	1	2	BT		edit: 09, orig = 03	
				250	220	195	2	1	2	CW		envelope	
NO2	26-Jun	California Halibut	IB-SC-CH-01-05-20141012		470	1650	0	0	0	BT			
				540	470	1650	0	0	0	CW		envelope	
NO3	26-Jun	White Croaker	IB-SC-WC-10-05-20141012		230	240	2	1	2	BT		edit: 10; orig = 06	
				260	230	240	2	2	2	CW		envelope	

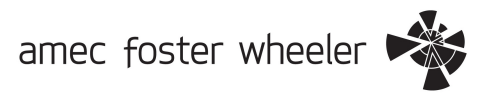
POLA/POLB Final Report Harbor Toxics TMDL Special Study: Food Web Sampling - Appendix G - Scale Summary

SCMI Number	Read date 2015	Species	ID Number	Total Length size mm	Standard Length Size mm	Weight g	Scale 1	Scale 2	Scale 3	reader	Mode	Notes	Comments
NO4	26-Jun	White Croaker	FH-SC-WC-09-08-20141013		210	173	2	1	1	BT		edit: 09; orig = 01	
				250	210	173	2	1	2	CW		envelope	
NO5	26-Jun	White Croaker	FH-SC-WC-10-08-20141013		210	181	1	0	1	BT		edit: 10; orig = 02	
				240	210	181	1	1	1	CW		envelope	
NO6	26-Jun	California Halibut	FH-SC-CH-07-08-20141013		290	311	0	0	0	BT			
				330	290	311	0	0	0	CW		envelope	
NO7	26-Jun	California Halibut	CS-SC-CH-08-03-20141010		290	365	0	0	0	BT		Edit: 08; orig = 03	
				340	290	365	0	0	0	CW		envelope	
NO8	26-Jun	White Croaker	OA-SC-WC-02-06-20141011		210	195	2	2	1	BT			
				250	210	195	2	2	1	CW		envelope	
NO9	26-Jun	California Halibut	OA-SC-CH-06-06-20141011		270	340	0	0	0	BT			
				310	270	340	0	0	0	CW		envelope	

APPENDIX I

DATA VALIDATION REPORT

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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**FINAL
DATA EVALUATION FOR FISH TISSUE SAMPLES
TO SUPPORT FOOD WEB STUDY
IN THE GREATER LOS ANGELES AND LONG BEACH HARBOR WATERS**

**Submitted to:
Port of Long Beach
4801 Airport Plaza Drive
Long Beach, California 90815**

**And:
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, California 90731**

**Submitted by:
Amec Foster Wheeler, Environment & Infrastructure, Inc.
9210 Sky Park Court, Suite 200
San Diego, California 92123**

February 2016

Amec Foster Wheeler Project No. 1315100113

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APPENDIX A “STABLE ISOTOPE ANALYSES OF FAUNA FROM PORTS OF LOS ANGELES AND LONG BEACH,” BRIAN N. POPP

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ACRONYMS AND ABBREVIATIONS

%	percent
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
ERL	Effects Range Low
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicates
ng/g	nanogram per gram
OPR	Ongoing Precision and Recovery
PCB	polychlorinated biphenyls
PQAPP	Programmatic Quality Assurance Project Plan
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
SRM	Standard Reference Materials

POLB and POLA
Final Data Evaluation for Fish Tissue Samples to
Support Food Web Study in the Greater Los Angeles
and Long Beach Harbor Waters
Amec Foster Wheeler Project No. 1315100113
February 2016

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1.0 INTRODUCTION

Fishing trawls and hand collection of mussels and oysters was conducted in October of 2014 and tissues samples obtained from these fishes and invertebrates were submitted for chemical testing. The analytical approach and laboratory data quality objectives are described in the *Food Web Sampling Work Plan, Greater Los Angeles and Long Beach Harbor Waters* (Anchor QEA, dated August 2014) and corresponding *Draft Programmatic Quality Assurance Project Plan, Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxic Total Daily Maximum Load (PQAPP)*, as provided in Appendix A of the referenced work plan (Anchor QEA, dated August 2014). Chemical testing of tissues was performed for:

- High resolution polychlorinated biphenyls (PCB) congeners (method 1668c by Vista Laboratories)
- Low resolution standard detection level PCB congeners (method 8270c SIM by Eurofins-Calscience)
- Organochlorine pesticides-DDT (dichlorodiphenyltrichloroethane) (method 8270c SIM by Eurofins-Calscience)
- Stable isotope analyses (by EA-IRMS by UC Davis)
- Percent Lipids (by Vista Analytical, Inc.)

Per the Section 6.2 of the Draft PQAPP, all laboratory data will receive a Stage 2A validation. The recommended QC checks identified in a Stage 2A validation are as follows:

- Completeness = 90 percent (%) of each class were not rejected
- Holding times = holding times were met
- Requested methods were performed = check chemistry report against WP
- Method Reporting Limits and Estimated Detection Limits – project requirements were met = check against WP
- Sample-related QC data were analyzed at the required frequencies = check against WP
- QC performance criteria were met for the following:
 - Laboratory control samples (LCS) = within laboratory-specified recovery
 - Matrix spike/matrix spike duplicate (MS/MSD) = within laboratory-specified recovery
 - Standard reference material = within laboratory-specified recovery
 - Surrogate recoveries = within laboratory-specified recovery
 - Method blanks
- Field QC samples

Each of these evaluation criteria are chronologically evaluated in the Section 2 (results) and Section 3 overall Quality Assurance/ Quality Control (QA/QC) discussion and summary. Based on the results of the data validation herein, the corresponding Microsoft Excel database of results was revised to include validation qualifiers as defined in Section 1.2.

1.1 Definitions of Qualifiers

The following qualifiers were used by the laboratory and additional validation qualifiers as necessary.

B	Analyte was present in the associated method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
EMPC	Estimated Maximum Possible Concentration
H	Recovery was outside laboratory acceptance limits.
HP	High Duplicate recovery.
HS	High Surrogate recovery. Analytical results may be biased high.
I	Chemical Interference
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
LP	Low Duplicate recovery.
LS	Low Surrogate recovery. Analytical results may be biased low.
U	Parameter not detected at the indicated reporting limit.
NQ	There is a lack of QC for this analyte.
X	Relative Percent Difference (RPD) outside of PQAPP specified range.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Exceeds target Effects Range Low (ERL) in the PQAPP
4	Exceeds target ERL in the PQAPP by a factor of 3

2.0 LEVEL 2A QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Applicable quantitative goals for precision, accuracy, and completeness and laboratory QC frequency requirements are derived from the State Water Resources Control Board's California Surface Water Ambient Monitoring Program guidance (SWRCB 2008). The overall frequency goal was 5% for duplicate tissues (to assess homogenization and analytical precision) and analytical replicates to assess method precision. Accuracy was addressed by Standard Reference Materials (SRM) and MS/MSD recoveries (50–150%).

2.1 Completeness

All target samples were submitted and analyzed as described in the work plan. The completeness for the number of primary tissues samples is considered 100% above the 90% PQAPP goal. No data was flagged as rejected and the analytical completeness is similarly 100%, above the 90% PQAPP goal. QC samples were not included in the completeness goal and are addressed in Section 2.7.6.

2.2 Holding times

Frozen fish tissues were given a 1 year holding time. All method holding times for solid samples were met after fish were defrosted and prepared for extraction and testing.

2.3 Requested Methods

All tests were performed using method prescribed in the work plan and PQAPP. No modifications or other alternative methods were substituted.

2.4 Method Reporting Limits and Estimated Detection Limits

Method 8270c low resolution standard detection level PCB congeners and Organochlorine pesticides – DDT

All individual PCB congeners had a 0.4 nanogram per gram (ng/g) target reporting limit, with the exception of PCB-189, which had a 20.0 ng/g RL. Organochlorine pesticides-DDT has a range of reporting limits from 4.0 to 10.0 ng/g. In cases where the sample was diluted for analysis, the reporting limit was higher by the factor of the dilution. In most cases where the reporting limit exceeded the target and the sample was not diluted, the reporting limit was still within the 3X threshold as required by the PQAPP; Samples above the 3X threshold were flagged.

Method 1668c high resolution PCB congeners:

All individual congeners had a 0.001 ng/g target RL. In a few cases, congeners that co-elute (e.g., PCB 4/10) the additive RL was slightly higher than target (e.g., 0.00192 ng/g wet weight). In cases where the sample was diluted for analysis, the RL was higher by the factor of the dilution.

2.5 Percent lipids.

Percent lipids were analyzed by Vista and all detection and reporting limit objectives were met. All detection limits were met for lipids.

2.6 QC Performance Criteria

Analytical QC frequencies are defined in Appendix A, Table 10 of the PQAPP. Percent lipids have a frequency goal of 5% laboratory replicates. PCBs and Organochlorine pesticides (both high and low resolution methods) have a frequency goal of 5% LCS or SRM frequency goal.

In addition, low resolution DDT and PCB congeners have a 5% MS/MSD requirement. The following subsections provide a summary of the achieved frequency on a per method basis and which samples that did not meet corresponding QC criteria. Samples that did not meet criteria were flagged as described in Section 2.1

2.6.1 Laboratory Control Samples

Low resolution Organochlorine pesticides-DDTs and PCBs:

A LCS analysis was performed at the required frequency (one LCS per batch). LCS/LCSD were within the laboratory-specified 50% to 150% limits and RPDs were less than or equal to the PQAPP-specified maximum of 25%.

High resolution PCBs:

Ongoing Precision and Recovery (OPR) samples were extracted and analyzed at the required frequency (one per batch). OPRs were within the laboratory-specified recovery limits.

2.6.2 Matrix Spike/Matrix Spike Duplicate

Low resolution Organochlorine pesticides-DDTs and PCBs:

MS analyses were performed at the required frequency (one MS/MSD per batch). Most MS/MSDs were within the laboratory-specified 10% to 150% limits, with the exception of some 4,4-DDE (dichlorodiphenyldichloroethylene) and 4,4-DDD MS recoveries, which were above the control limit. This was the case for the following samples:

- IA-FF-WC-04-07-20141011
- OA-ST-MS-COMP2-01-2014-10-22
- IB-FF-CH-01-05-20141012

For sample IA-FF-WC-04-07-20141011, the 4,4-DDE sample concentration exceeded the MS concentrations by more than four times, which caused the MS, MSD, and RPD values to fall outside of control limits.

For sample CS-WO-WS-02-03-20141010, the MS/MSD RPD was out of control due to suspected matrix interference for the 4,4-DDE sample concentration.

Low resolution PCBs

No MS/MSD analyses were required for high resolution PCBs.

2.6.3 Standard Reference Material

Low resolution Organochlorine pesticides-DDTs and PCBs:

SRM analyses were not analyzed for low resolution organochlorine pesticides and PCBs. To meet the PQAPP requirements, a LCS was analyzed for each batch in lieu of SRM analyses.

High resolution PCB Congeners:

Vista analyzed SRMs for 30 PCB congeners. Analyte recoveries were generally lower (about 56% of samples) than the laboratory-specified certified mass fractions (from a wet-mass basis) for the selected PCB congeners. Cases where analyte recovery was higher than the certified mass fractions (about 15% of samples) can be attributed to co-eluted congeners. In order to remain consistent with the MS/MSD limits, the 50% to 150% limit for individual congeners were used for validation purposes.

2.6.4 Surrogate Recoveries

Low resolution Organochlorine pesticides-DDTs and PCBs:

Eurofins Calscience reported 10 % to 150% as the surrogate QC limit. Surrogate recoveries were within this specified limit with the exception of fifteen samples for Dibutyl chlorendate and twenty five samples for Tetrachloro-m-xylene. Over 50% of these samples were dilutions.

High resolution PCB Congeners:

Vista reported two sets of surrogate QC limits: 5% to 145% for congeners PCB 1 through PCB 70, and 10% to 145% for the remaining congeners. Surrogate recoveries were within the specified limit with the following exception:

- The recovery of IS 13C-PCB-209 was 161% in sample OA-FF-CH-06-06-20141011, which is above the method limit of 145%.

2.6.5 Methods Blanks

Low resolution Organochlorine pesticides-DDTs and PCBs:

Target analytes were not detected in the method blanks associated with the analysis of these samples, with the following exceptions:

- In Project # 15-01-0709, the method blank contained small amounts of 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT.
- In Project # 15-01-1419, the method blank contained small amounts of 4,4'-DDE.

High resolution PCB Congeners:

Target analytes were not detected in the method blanks associated with the analyses of these samples, with the following exceptions:

- In Project # 1400900, various PCB congeners (PCB-28 and PCB-195), total octaCB, triCB, and total PCBs were detected in the method blank.
- In Project # 1400903, various PCB congeners (PCB-20/21/33, 22, 28, 35, 41/64/71/72, 47, 56/60, 61/70, 77, 105, 106/118, 189), total triCB, total tetraCB, total pentaCB, total heptaCB, and total PCBs were detected in the method blank.
- In Project # 1400904, various PCB congeners (PCB-11, 28, 37, 66/76, 105, 106/118, 138/163/164, 153, 180), total diCB, total triCB, total tetraCB, total pentaCB, total hexaCB, total heptaCB, and total PCBs were detected in the method blank.
- In Project # 1400905, various PCB congeners (PCB-20/21/33, 22, 28, 35, 41/64/71/72, 47, 56/60, 61/70, 77, 105, 106/118, 189), total triCB, total tetraCB, total pentaCB, total heptaCB, and total PCBs were detected in the method blank.
- In Project # 1400960, various PCB congeners (PCB-11, PCB-52/69), total diCB, total tetraCB, and total PCBs were detected in the method blank.

2.6.6 Field QC Samples

The field (homogenization) duplicate frequency goal was 1 in 20 samples (5%) for all methods. Eurofins-Calscience inadvertently excluded testing of duplicate homogenate samples due to a log-in error. The error was identified when the data was reviewed for low resolution level PCB congeners (method 8270c) and Organochlorine pesticides-DDT (method 8270c SIM). As a result, the laboratory was requested to inventory available tissue mass for subsequent duplicate testing. Based on available mass, the laboratory was able to run additional homogenates for a total of 8 replicate samples pairs for DDT. DDT was recommended for duplicate analysis due to the significant number of detected DDT congeners. Duplicate precision for DDT varied significantly from 0% RPD to 176% RPD, and a total of 32 analytical duplicate congener pairs exceeded the 25% RPD guideline. The cause(s) of this variability (sample heterogeneity due to homogenization, batch QC replicates run separately from original sample, analytical imprecision, the low level concentrations of detections) is unknown. Since specific bias cannot be attributed to this variability, no validation qualifier was applied to these data. However, end data users should be aware of the observed variability depending on data use (e.g., inputs for modeling studies, and reproducibility relative to the work plan design future field studies).

No duplicates were performed for Method 8270c low resolution standard detection level PCB congeners and Organochlorine pesticides due to lack of available tissue mass. For this reason, the entire data set for these methods was given a validation qualifier of NQ (see Section 1.2). The laboratories meet the duplicate frequency requirement for all other methods.

Vista performed duplicate analyses for percent lipids on 6 tissue samples (not including SRM duplicates). Four of six sample samples exceeded RPD criteria of 25%, listed below:

- CS-FF-CH-09-03-20141010
- FH-FF-CH-01-08-20141013
- IB-FF-CH-01-05-20141012
- OA-FF-CH-04-06-20141011

Method 1668c high resolution PCB congeners:

Vista performed duplicate analyses on the below 6 tissue samples (not including SRM duplicates) for high resolution PCB congeners. The percentage of congeners that exceeded the RPD criteria of 25 for each duplicate pair is indicated in parenthesis:

- CS-FF-CH-09-03-20141010 (81.6%)
- FH-FF-CH-01-08-20141013 (85.5%)
- IB-FF-CH-01-05-20141012 (10.1%)
- IB-FF-WC-02-05-20141012 (6.15%)
- OA-FF-CH-04-06-20141011 (7.26%)
- OA-ST-MS-COMP3-01-2014-10-22 (6.15%)

Method 8270c low resolution standard detection level PCB congeners and Organochlorine pesticides-DDT:

Eurofins-Calscience performed duplicate analysis of tissue samples for DDTs. The percentage of congeners that exceeded the RPD criteria of 25 for each duplicate pair is indicated in parenthesis:

- CS-FF-CH-08-03-20141010 (57.1%)
- CS-FF-CH-09-03-20141010 (71.4%)
- FH-FF-CH-01-08-20141013 (42.9%)
- FH-WO-WS-10-08-20141013 (57.1%)
- IB-FF-LF-01-05-20141012 (42.9%)
- IB-WO-WS-08-05-20141012 (42.9%)
- OA-FF-CH-04-06-20141011 (28.6%)
- OA-ST-MS-COMP2-01-20141022 (85.7%)

2.7 Stable Isotopic Analyses

The accuracy and precision of carbon and nitrogen isotopic analysis found in the dataset are similar to that produced by other laboratories to analyze sample of fish and bivalve muscle tissue using comparable instrumentation. A detailed report on the *Stable Isotope Analyses of Fauna from Ports of Los Angeles and Long Beach* (Popp, via email dated May 2015) is provided in Appendix A.

3.0 REFERENCES

Anchor QEA. 2014. *Food Web Sampling Work Plan, Greater Los Angeles and Long Beach Harbor Waters*. August.

Popp, Brian N. 2015. *Stable Isotope Analyses of Fauna from Ports of Los Angeles and Long Beach*. May 2015.

State Water Resources Control Board (SWRCB). 2008. *State Water Resources Control Board's California Surface Water Ambient Monitoring Program guidance*.

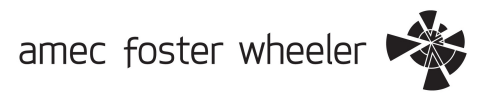
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POLB and POLA
Final Data Evaluation for Fish Tissue Samples to
Support Food Web Study in the Greater Los Angeles
and Long Beach Harbor Waters
Amec Foster Wheeler Project No. 1315100113
February 2016

APPENDIX A

“STABLE ISOTOPE ANALYSES OF FAUNA FROM PORTS OF LOS ANGELES AND LONG BEACH,” BRIAN N. POPP

POLB and POLA
Final Data Evaluation for Fish Tissue Samples to
Support Food Web Study in the Greater Los Angeles
and Long Beach Harbor Waters
Amec Foster Wheeler Project No. 1315100113
February 2016



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Stable Isotope Analyses of Fauna from Ports of Los Angeles and Long Beach
Brian N. Popp

Introduction

Accurate knowledge of trophic structure and food web interactions is an important component of understanding ecosystems and can be necessary to gauge anthropogenic influences on an ecosystem. Marine trophic structure has traditionally been derived from stomach content analyses. More recently, carbon and nitrogen stable isotope techniques have been used in both aquatic and terrestrial systems to compliment stomach content analyses and to delineate trophic positions and trace energy and nutrient flow through ecosystems (Peterson and Fry 1987; Jennings et al. 2008a, b). The premise underlying these studies is that the stable isotopic compositions of consumers reflect that of their diet. More specifically, preferential incorporation of ^{15}N and ^{13}C in consumer tissues results in predictable $\sim 2.0\text{-}3.4\text{‰}$ increases in $\delta^{15}\text{N}$ values and $\sim 0.5\text{-}1.0\text{‰}$ increases in $\delta^{13}\text{C}$ values in consumers relative to their prey at each subsequent trophic level (DeNiro and Epstein 1981; Vanderklift and Ponsard 2003; McCutchan et al. 2003). Thus $\delta^{13}\text{C}$ values in consumers can be a relatively conservative tracer of the source of carbon used by an ecosystem whereas $\delta^{15}\text{N}$ values reflect the trophic position of an organism.

Ecological interpretation of stable isotopic data for marine predators can easily be complicated by the inability to constrain temporal and spatial variability in the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of primary producers at the base of the food web in question. In addition, lipids are depleted in ^{13}C relative to protein (Hayes 2001) therefore tissues that contain variable fat contents can compromise the use of $\delta^{13}\text{C}$ values as a dietary indicator. Since lipids contain no nitrogen, $\delta^{15}\text{N}$ values are not expected to be affected and the carbon/nitrogen ratio of a tissue can normally be used as an indicator of lipid content and as well as to correct for variability in $\delta^{13}\text{C}$ values.

The $\delta^{15}\text{N}$ value of any consumer is predominantly a function of both the trophic level of that consumer and the $\delta^{15}\text{N}$ value of the primary producers at the base of the food web. In marine environments, the microalgae that support marine food webs typically have $\delta^{15}\text{N}$ values that change spatially and seasonally due to incomplete utilization of nitrogenous nutrients (*e.g.*, Altabet 2001, Lourey et al. 2003), uptake of partly denitrified

nitrate (*e.g.*, Cline and Kaplan 1975, Voss et al. 2001, Sigman *et al.* 2005), and because primary producers can use different sources of nitrogen (nitrate, ammonium, N₂) in different areas and seasons (*e.g.*, Dugdale and Goering 1967, Owens 1987, Dugdale and Wilkerson 1991, Dore et al. 2002). When determining the relative trophic level of predators, characterizing the $\delta^{15}\text{N}$ values of the base of marine food webs can be challenging because marine microalgae have very short life spans and can be difficult to isolate from other organic suspended particulate material. An alternative approach is to use primary consumers (*e.g.*, bivalve mollusks), which may integrate short-term and spatial variability in the $\delta^{15}\text{N}$ values of their diet, to represent trophic level 2 or slightly higher (*e.g.*, Post 2002, Jennings *et al.* 2002).

The purpose of this report is to 1) evaluate the analytical precision and accuracy of isotope analyses, 2) determine if variable lipid contents affected $\delta^{13}\text{C}$ values and if so correct for the contribution of lipids and 3) provide a preliminary assessment of the trophic positions and source of carbon to ecosystem elements in Port of Los Angeles (POLA) and Port of Long Beach (POLB) based on their carbon and nitrogen isotopic composition.

Evaluation of Precision and Accuracy of Isotope Analyses

Estimates of precision and accuracy of isotope analyses are based on the reproducibility of reported data as well as the analysis of two laboratory reference samples (T1-WMT-A and T2-WMT-A) characterized by the University of Hawaii Stable Isotope Biogeochemistry Laboratory. The carbon and nitrogen isotopic composition of T1-WMT-A and T2-WMT-A provided have been extensively characterized using certified reference materials obtained from the National Institute of Science and Technology and the International Atomic Energy Agency and verified independently in other isotope laboratories.

Samples were analyzed using an elemental analyzer interfaced with an isotope ratio mass spectrometer and normalized to the international stable isotope standards VPDB and AIR. The fact that the measured δ -values of Bovine Liver (G-13), USGS-41 Glutamic Acid (G-17) and Nylon 5 (G-18) are identical to the accepted δ -values indicates that these reference materials used to normalize the δ -values of the unknowns to VPDB and AIR. USGS-41 is distributed by the United States Geological Survey and is widely

used by the isotope community whereas Bovine Liver, Nylon 5 and Glutamic Acid (G-20) appear to be in-house reference materials specific to this laboratory. The standard deviation based on repeated analyses of these reference materials is approximately $\pm 0.1\%$ and $\pm 0.2\%$ for $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values, respectively.

Accuracy of analysis can be assessed using G-13, G-17 and G-18 to normalize the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of samples T1-WMT-A and T2-WMT-A, which are homogenized white muscle tissue of yellowfin tuna. The average difference between accepted and measured $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values are $\pm 0.1\%$ and $\pm 0.2\%$, respectively (Table 1) and serves as an estimate of the accuracy of analyses.

Table 1. Difference in measured and accepted C and N isotopic composition of tuna white muscle tissue

	$\delta^{13}\text{C}$, ‰ vs. VPDB		$\delta^{15}\text{N}$, ‰ vs. AIR	
	Measured	Accepted	Measured	Accepted
T1 WMT A	-16.31	-16.42	11.82	11.55
T2 WMT A	-16.32	-16.35	9.16	9.00
	$\delta^{13}\text{C}_{\text{accepted}} - \delta^{13}\text{C}_{\text{measured}}$		$\delta^{15}\text{N}_{\text{accepted}} - \delta^{15}\text{N}_{\text{measured}}$	
T1 WMT A	-0.11		-0.27	
T2 WMT A	-0.03		-0.16	
Average difference	-0.1		-0.2	

The accuracy and precision of carbon and nitrogen isotopic analysis found in this data set are similar to that produced by other laboratories to analyze samples of fish and bivalve muscle tissue using comparable instrumentation.

Effect of Lipid Content on Carbon and Nitrogen Isotopic Compositions

The effect of lipid content on sample $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values was determined using sample C/N ratios by weight. The percent lipid content of samples is significantly linearly correlated with C/N ($p < 0.0001$, $n = 167$) and models exist that allow correction for the effects of lipid contents on the stable isotopic composition of tissues based on C/N ratios (e.g., Fry et al. 2003, Logan et al. 2008).

I found no effect of lipid content on $\delta^{15}\text{N}$ values. Lipids are a large and diverse group of naturally occurring organic compounds that are related by their solubility in nonpolar organic solvents and general insolubility in water. Lipids generally contain little or no nitrogen and their presence in tissues does not produce isotopic fractionation (e.g.,

there is no bond formation or bond cleavage) thus variable lipid content generally does not affect $\delta^{15}\text{N}$ values (e.g., see also Logan et al. 2008).

$\delta^{13}\text{C}$ values are correlated to C/N ratios in all samples except the white muscle tissues of California Halibut and Lizard Fish. Bias of $\delta^{13}\text{C}$ values by lipid content is small when the lipid content is low. There is little effect of lipid content on $\delta^{13}\text{C}$ values in fish muscle tissue with C/N ratios less than ~ 3.4 by weight (3.0 molar C/N ratio) however, $\delta^{13}\text{C}$ values decrease systematically with increasing C/N ratio because lipids are depleted in ^{13}C relative to proteins, which are the primary components of fish muscle (Hayes 2001). For this study $\delta^{13}\text{C}$ values were corrected for lipid contents in all samples except the white muscle tissues of California Halibut and Lizard Fish using the approach of Fry et al. (2003) as modified by Logan et al. (2008) and are given as $\delta^{13}\text{C}'$ values in electronic Appendix 1.

Source of Carbon and Trophic Positions of POLA and POLB Fauna

Spatial variations in the isotopic composition at the base of the food web can be approximated using analyses of mussels and oysters. These bivalves are sedentary filter feeding organisms that consume mainly microalgae (e.g., Vokhshoori et al. 2014, Vokhshoori and McCarthy 2015, Wilson et al. 2009) and thus have a trophic position around 2 (e.g., herbivore). It is expected that their $\delta^{13}\text{C}$ values closely approximate those in phytoplankton. The $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values are considerably lower than those of fish analyzed (Figure 1) however each trophic transfer in a food web is accompanied by ^{13}C and ^{15}N enrichment (Peterson and Fry 1987; Jennings et al. 2008a, b). In order to separate fish ecological changes in $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values from spatial variations in these values at the base of the food web, it is instructive to consider independent estimates of the trophic position of the POLA and POLB fauna.

Traditional methods for calculating trophic position include stomach content analysis (SCA) and stable isotope analysis. SCA has been valued for taxonomic identification of prey items and their relative importance, which allows calculation of trophic position (Hyslop 1980). However, this method may be biased by what dietary items are identifiable in the food bolus and can be misleading from an energetics perspective because not all dietary material is actually assimilated (Rindorf and Lewy 2004). Furthermore, SCA only presents a snap-shot of the most recent foraging events.

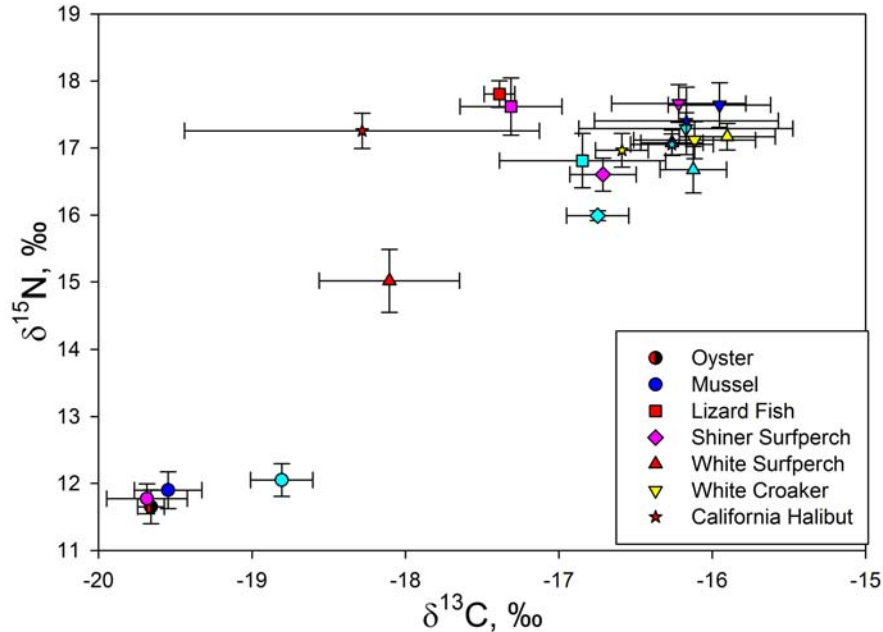


Figure 1. Plot of carbon and nitrogen isotopic composition of fauna from the Ports of Los Angeles and Long Beach. Symbols represent the organism analyzed however, the symbol colors reflect the sample location: Red = Consolidated Slip POLA, Yellow = Fish Harbor POLA, Blue = Inner POLA, Pink = Inner POLB and Cyan = Outer POLA. All carbon isotope results except the white muscle tissues of California Halibut have been corrected for the contribution of lipids.

Despite these known limitations, SCA has been the conventional method for establishing trophic position of fish for decades (e.g., Hynes 1950) because it provides a level of taxonomic resolution that cannot be achieved using other methods. Trophic positions of California Halibut, White Croaker and Shiner Surfperch are based on food items characterized from extensive gut content analysis whereas assumption are made about the trophic positions of White Surfperch and Lizard fish based on the size and trophic position of congeners of these fish where extensive gut content analysis have been performed. Greater confidence should therefore be place on the SCA based trophic positions of California Halibut, White Croaker and Shiner Surfperch.

The trophic position of fish from POLA and POLB based on their stomach content analysis ranged from 3 to 4.5 (Table 2). Assuming a relative ^{13}C enrichment of 1‰ per trophic level, predicted $\delta^{13}\text{C}$ values of consumers should range from approximately -18 to -16.9‰. These predicted values agree reasonably well with the measured $\delta^{13}\text{C}$ values of most fish (Figure 1). California Halibut, White Surfperch and White Croaker from Fish Harbor POLA, Inner POLA, Inner POLB and Outer POLA

Table 2. Trophic position of fishes from POLA and POLB based on stomach content analysis and from nitrogen isotopic compositions

Common Name	Scientific Name	TP _{SCA}	*TP _{δ¹⁵N}	Comment
Mussels & Oysters		2	-	Ref 1, 2, 3
California Halibut	<i>Paralichthys californicus</i>	4.5±0.63	3.8	Based on food items (FB)
White Surfperch	<i>Phanerodon furcatus</i>	3.4±0.50	3.5	Based on size and TP of closest relatives (FB)
White Croaker	<i>Genyonemus lineatus</i>	3.4±0.49	3.8	Based on food items (FB)
Shiner Surfperch	<i>Cymatogaster aggregata</i>	3.0±0.31	3.5	Based on food items (FB)
Lizard Fish	<i>Homaloptera orthogoniata</i>	3.5±0.40	3.8	Based on size and TP of closest relatives (FB)

*Assumes a trophic enrichment factor of 3

Ref 1, 2, 3 - Wilson et al. (2009), Vokhshoori et al. (2014) Vokhshoori and McCarthy (2015)
FB = FishBase (www.fishbase.org)

have somewhat higher $\delta^{13}\text{C}$ values. In addition, the $\delta^{13}\text{C}$ values of California Halibut, White Surfperch are somewhat lower than predicted. These offsets could be due to feeding within a food web with a base not well represented by the sedentary bivalves analyzed although the variation in $\delta^{13}\text{C}$ values is quite low.

The $\delta^{15}\text{N}$ values of oysters and mussels cluster tightly ($11.9\pm 0.2\text{‰}$) suggesting little variation in the source of nitrogen within POLA and POLB. Assuming that oysters and mussels are approximately trophic level 2 (Table 2), the trophic position of fish may be estimated from their $\delta^{15}\text{N}$ values and those of mussels and oysters by

$$TL_{Fish} = \frac{\delta^{15}N_{Fish} - \delta^{15}N_{Oyster/Mussel}}{TEF} + TL_{Oyster/Mussel} \quad (1)$$

where $TL_{Oyster/Mussel}$ is the trophic level of oysters and mussels, $\delta^{15}N_{Oysters/Mussels}$ is the mean $\delta^{15}\text{N}$ value of oysters and mussels, and TEF represents the trophic enrichment factor between a consumer and its diet. Several workers have adopted an average TEF value of 3.4‰ for many taxa (Minawaga and Wada 1984; Vander Zanden and Rasmussen 2001; Post 2002), however there is acknowledged variance in TEF values (e.g., Gannes et al. 1997). For example, compilations of data for laboratory-grown ammonotelic fish show lower TEF values (e.g. 2.0‰ Vanderklift and Ponsard 2003; 2.3‰ McCutchan et al. 2003). I adopt a compromise TEF value here of 3‰.

Using equation 1, trophic positions of White Surfperch, White Croaker and Lizard Fish calculated using the mean $\delta^{15}\text{N}$ values are in good agreement (within 0.4 TP) with that determined by either SCA or the stomach contents of fish of similar size and taxonomy. This consistency between the trophic positions estimated from stomach

content analysis and $\delta^{15}\text{N}$ values (eqn. 1) indicates that for these fish the $\delta^{15}\text{N}$ values of oysters and mussels are a reasonably good proxy for variations at the base of the POLA and POLB food web. However, it should be noted that the trophic position of White Surfperch from the Consolidated Slip POLA estimated using equation 1 is lower than the same species collected at the other locations. If White Surfperch collected from the Consolidated Slip POLA were a mobile predator, its $\delta^{15}\text{N}$ value would be expected to converge with that of the other White Surfperch living in nearby waters. Consequently it should be assumed that the White Surfperch collected from the Consolidated Slip POLA have unique nitrogen and carbon (see above) sources in its diet that are not well represented by isotope analyses of oysters. The $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values as well as the trophic position of Lizard Fish and White Croaker collected from the Consolidated Slip POLA are not different from those collected from Inner POLA/POLB and Outer POLA. If a unique nitrogen source exists in the Consolidated Slip POLA, it is not reflected in the $\delta^{15}\text{N}$ values of Lizard Fish and White Croaker suggesting they do not forage on the same food as the White Surfperch collected from the Consolidated Slip POLA.

In general the carbon and nitrogen isotopic composition of mussels and oysters from POLA and POLB reflect the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values at the base of the food web as estimated from the isotopic compositions of mussels and oysters. The exception to this generality is the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of White Surfperch and to some extent the $\delta^{15}\text{N}$ values of California Halibut collected from Consolidated Slip POLA.

Future Research

Further resolution of the trophic ecology of POLA and POLB would benefit from amino acid compound specific nitrogen isotope analyses (AA-CSIA). AA-CSIA has recently emerged as a useful tool for constraining baseline isotopic food web variability and estimating trophic positions in both primary and higher level consumers (e.g., McClelland & Montoya 2002; Chikaraishi et al. 2009; Dale et al. 2011). Instead of attempting to concurrently sample multiple organisms from different trophic levels, the AA-CSIA approach uses the $\delta^{15}\text{N}$ values of AAs measured from a single sample of the consumer (e.g., Chikaraishi et al. 2007; Popp et al. 2007; Sherwood et al. 2011). Laboratory experiments by McClelland and Montoya (2002) demonstrated that certain AAs (e.g., phenylalanine, glycine, serine) fractionate very little with trophic processing

and are indicative of the isotopic composition at the base of a food web. Alternatively, other AAs (e.g., glutamic acid, alanine, aspartic acid) involved in transamination and deamination reactions undergo significant enrichment in ^{15}N (~7‰ per trophic level) and are thus indicative of the fractional trophic position of the consumer. Popp et al. (2007) introduced the terms "source" amino acids for those AAs that show little or no change in $\delta^{15}\text{N}$ values in consumers and "trophic" amino acids for those AAs that are highly enriched in ^{15}N with each trophic transfer. Using the AA-CSIA approach, consumer trophic position can be estimated using a reasonably well-established relationship between trophic and source AAs (Chikaraishi et al. 2009; Hannides et al. 2009; Dale et al. 2011), providing valuable information that can be easily utilized by ecosystem modelers and managers alike, without the need to independently characterize the isotopic baseline of the system.

References Cited

- Altabet MA 2001. Nitrogen isotopic evidence for micronutrient control of fractional NO_3^- utilization in the equatorial Pacific. *Limnology and Oceanography* 46:368–380.
- Chikaraishi Y, Kashiyama Y, Ogawa NO, Kitazato H and Ohkouchi N (2007) Metabolic control of nitrogen isotope composition of amino acids in macroalgae and gastropods: implications for aquatic food web studies. *Marine Ecology Progress Series* 342:85-90.
- Chikaraishi, Y., Ogawa NO, Kashiyama Y, Takano Y, Suga H, Tomitani A, Miyashita H, Kitazato H and Ohkouchi N (2009) Determination of aquatic food-web structure based on compound-specific nitrogen isotopic composition of amino acids. *Limnology Oceanography: Methods* 7:740-750.
- Cline JD and Kaplan IR (1975) Isotopic fractionation of dissolved nitrate during denitrification in the eastern tropical North Pacific Ocean. *Marine Chemistry* 3:271–299.
- Dale JJ, Wallsgrrove NJ, Popp BN and Holland KN (2011) Nursery habitat use and foraging ecology of the brown stingray, *Dasyatis lata*, determined from stomach content, bulk and amino acid stable isotope analysis. *Marine Ecology Progress Series* 433:221-236.
- Deniro MJ and Epstein S (1981) Influence of diet on the distribution of nitrogen isotopes in animals. *Geochimica et Cosmochimica Acta* 45:341-351.
- Dore JE, Brum JR, Tupas LM and Karl DM (2002) Seasonal and interannual variability in sources of nitrogen supporting export in the oligotrophic subtropical North Pacific Ocean. *Limnology and Oceanography* 47:1595–1607.
- Dugdale RC and Goering JJ (1967) Uptake of new and regenerated forms of nitrogen in primary production. *Limnology and Oceanography* 12:196-206.
- Dugdale RC and Wilkerson FP (1991) Low specific nitrate uptake rate: a common feature of high-nutrient, low-chlorophyll marine ecosystems. *Limnology and Oceanography* 36:1678-1688.
- FishBase (www.fishbase.org) Accessed May 27, 2015.

- Fry B, Baltz DM, Benfield MC, Fleeger JW, Gace A, Haas HL and Quinones-Rivera ZJ (2003) Stable isotope indicators of movement and residency for brown shrimp (*Farfantepenaeus aztecus*) in Coastal Louisiana Marshscapes. *Estuaries* 26:82-97.
- Gannes LZ, O'Brian DM and Martinez del Rio C (1997) Stable isotopes in animal ecology: assumptions, caveats, and a call for more laboratory studies. *Ecology* 78:1271-1276.
- Hayes JM (2001) Fractionation of the isotopes of carbon and hydrogen in biosynthetic processes. pp. 225-278 in JW Valley and DR Cole (eds.) *Stable Isotope Geochemistry, Reviews in Mineralogy and Geochemistry Vol. 43*. Mineralogical Society of America, Washington, D. C.
- Hannides CCS, Popp BN, Landry MR and Graham BS (2009) Quantification of zooplankton trophic position in the North Pacific Subtropical Gyre using stable nitrogen isotopes. *Limnology and Oceanography* 54:50-61.
- Hynes HBN (1950) The food of fresh-water sticklebacks (*Gasterosteus aculeatus* and *Pygosteus pungitius*), with a review of methods used in studies of the food of fishes. *Journal of Animal Ecology* 19:36-58.
- Hyslop EJ (1980) Stomach contents analysis: a review of methods and their application. *Journal of Fish Biology* 17:411-429.
- Jennings S, Greenstreet SPR, Hill L, Piet GJ, Pinnegar JK and Warr KJ (2002) Long-term trends in the trophic structure of the North Sea fish community: evidence from stable-isotope analysis, size-spectra and community metrics. *Marine Biology* 141:1085-1097.
- Jennings S, Barnes C, Sweeting CJ and Polunin NVC (2008a) Application of nitrogen stable isotope analysis in size-based marine food web and macroecological research. *Rapid Communications in Mass Spectrometry* 22:1673-1680.
- Jennings S, Maxwell TAD, Schratzberger M and Milligan SP (2008b) Body-size dependent temporal variations in nitrogen stable isotope ratios in food webs. *Marine Ecology Progress Series* 370:199-206.
- Logan JM, Jardine TD, Miller TJ, Bunn SE, Cunjak RA and Lutcavage ME (2008) Lipid corrections in carbon and nitrogen stable isotope analyses: comparison of chemical extraction and modelling methods. *Journal of Animal Ecology* 77:838-846 doi: 10.1111/j.1365-2656.2008.01394.x.
- Lourey MJ, Trull TW and Sigman DM (2003) Sensitivity of $\delta^{15}\text{N}$ of nitrate, surface suspended and deep sinking particulate nitrogen to seasonal nitrate depletion in the Southern Ocean, *Global Biogeochemical Cycles*, 17:1081, doi:10.1029/2002GB001973.
- McClelland JW and Montoya JP (2002) Trophic relationships and the nitrogen isotopic composition of amino acids in phytoplankton. *Ecology* 83:2173-2180.
- McCutchan JH Jr., Lewis WM, Kendall C and McGrath CC (2003) Variation in trophic shift for stable isotope ratios of carbon, nitrogen and sulfur. *OIKOS* 102:378-390.
- Minagawa M and Wada E (1984) Stepwise enrichment of ^{15}N along food chains: further evidence and the relation between ^{15}N and animal age. *Geochimica et Cosmochimica Acta* 48:1135-1140.
- Owens NJP (1987) Natural variations in $\delta^{15}\text{N}$ in the marine environment. *Advances in Marine Biology* 24:389-451.
- Peterson BJ and Fry B (1987) Stable isotopes in ecosystem studies. *Annual Review of Ecology and Systematics* 18:293-320.

- Popp BN, Graham BS, Olson R, Hannides CCS, Lott M, López-Ibarra G, Galván-Magña F and Fry B (2007) Insight into the trophic ecology of yellowfin tuna, *Thunnus albacares*, from compound-specific nitrogen isotope analysis of proteinaceous amino acids, p. 173–190. In TD Dawson and RTW. Siegwolf [eds.], Stable isotopes as indicators of ecological change. Elsevier.
- Post DM (2002) Using stable isotopes to estimate trophic position: models, methods and assumptions. *Ecology* 83:703–718.
- Rindorf A and Lewy P (2004) Bias in estimating food consumption of fish by stomach-content analysis. *Canadian Journal of Fisheries and Aquatic Science* 61:2487-2498.
- Sherwood OA, Lehmann MF, Schubert CJ, Scott B and McCarthy MD (2011) Nutrient regime shift in the western North Atlantic indicated by compound-specific $\delta^{15}\text{N}$ of deep-sea gorgonian corals. *Proceeding of the National Academy of Sciences USA* 108:1011-1015.
- Sigman DM, Granger J, DiFiore PJ, Lehmann MM, Ho R, Cane C and A. van Geen A (2005) Coupled nitrogen and oxygen isotope measurements of nitrate along the eastern North Pacific margin. *Global Biogeochemical Cycles* 19:GB4022, doi: 10.1029/2005GB002458.
- Vanderklift MA and Ponsard S (2003) Sources of variation in consumer-diet $\delta^{15}\text{N}$ enrichment: a meta-analysis. *Oecologia* 136:169-182.
- Vander Zanden MJ and Rasmussen JB (2001) Variation in $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ trophic fractionation: implications for aquatic food web studies. *Limnology and Oceanography* 46:2061-2066.
- Vokhshoori NL, Larsen T, McCarthy MD (2014) Reconstructing $\delta^{13}\text{C}$ isoscapes of phytoplankton production in a coastal upwelling system with amino acid isotope values of littoral mussels. *Marine Ecology Progress Series* doi:10.3354/meps10746.
- Vokhshoori NL and McCarthy MD (2014) Compound-Specific $\delta^{15}\text{N}$ Amino Acid Measurements in Littoral Mussels in the California Upwelling Ecosystem: A New Approach to Generating Baseline $\delta^{15}\text{N}$ Isoscapes for Coastal Ecosystems. *PLoS ONE* 9(6): e98087. doi:10.1371/journal.pone.0098087.
- Voss M, Dippner JW and Montoya JP (2001) Nitrogen isotope patterns in the oxygen-deficient waters of the Eastern Tropical North Pacific Ocean. *Deep-Sea Research I* 48:1905-1921.
- Wilson RM, Chanton J, Lewis G and Nowacek D (2009) Combining organic matter source and relative trophic position determination to explore trophic structure. *Estuaries and Coasts* 32:999-1010 Doi:10.1007/s12237-009-9183-7.

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Sample ID	Station	%Lipids	Location	Location	Species	Weight		d13C	d13C'	C Amount (ug)	d15N	N Amount (ug)	Amount (mg)
						C/N	C/N						
47	FHFFWC100820141013	2.19	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.8	4.5	-16.37	-15.80	552.07	17.75	143.87	1.131
48	FHOFWC100820141013	10.3	Fish Harbor - POLA	offal	White Croaker	6.4	7.5	-18.67	-15.72	618.77	17.52	96.63	1.198
49	FHFFWC10820141013	0.995	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.6	4.2	-16.15	-15.98	514.01	16.84	142.98	1.07
50	FHFFWC20820141013	0.746	Fish Harbor - POLA	fish fillet skin off	White Croaker						17.24	140.91	1.056
51	FHFFWC030820141013R1	1.44	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.4	4.0	-16.88	-16.88	487.59	16.92	143.66	1.036
52	FHFFWC030820141013R2	1.44	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.5	4.1	-16.84	-16.82	492.30	16.80	140.22	1.033
53	FHFFWC40820141013	2.85	Fish Harbor - POLA	fish fillet skin off	White Croaker	4.2	4.9	-17.28	-16.18	515.91	16.96	122.32	1.019
54	FHFFWC50820141013	3.35	Fish Harbor - POLA	fish fillet skin off	White Croaker	4.0	4.7	-16.90	-16.06	547.26	17.18	136.09	1.08
55	FHFFWC60820141013	3.48	Fish Harbor - POLA	fish fillet skin off	White Croaker	4.1	4.7	-17.14	-16.26	512.12	16.98	126.45	1.011
56	FHFFWC070820141013R1	3.79	Fish Harbor - POLA	fish fillet skin off	White Croaker	4.0	4.7	-16.81	-16.00	546.31	17.15	136.78	1.095
57	FHFFWC070820141013R2	3.79	Fish Harbor - POLA	fish fillet skin off	White Croaker	4.0	4.6	-16.77	-16.02	522.54	17.09	131.96	1.028
58	FHFFWC80820141013	2.54	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.8	4.5	-16.70	-16.11	523.49	17.07	136.09	1.052
59	FHFFWC90820141013	2.42	Fish Harbor - POLA	fish fillet skin off	White Croaker	3.7	4.3	-15.92	-15.55	528.23	17.19	142.29	1.102
73	IAFFWC90720141011	1.38	Inner POLA	fish fillet skin off	White Croaker	3.5	4.1	-15.76	-15.78	465.44	18.24	133.40	1.019
74	IAOFWC90720141011	8.9	Inner POLA	offal	White Croaker	6.1	7.1	-18.48	-15.74	567.52	17.85	93.77	1.092
75	IAFFWC80720141011	0.389	Inner POLA	fish fillet skin off	White Croaker	3.5	4.1	-16.57	-16.56	499.08	17.38	142.48	1.071
76	IAFFWC100720141011	1.55	Inner POLA	fish fillet skin off	White Croaker	3.9	4.5	-16.42	-15.77	497.16	17.67	127.79	1.044
77	IAFFWC10720141011	1.54	Inner POLA	fish fillet skin off	White Croaker	4.1	4.8	-17.37	-16.41	556.90	17.28	135.50	1.124
78	IAFFWC20720141011	1.48	Inner POLA	fish fillet skin off	White Croaker	3.5	4.1	-16.42	-16.46	510.63	17.31	146.66	1.109
79	IAFFWC30720141011	1.06	Inner POLA	fish fillet skin off	White Croaker	3.8	4.4	-17.36	-16.89	513.52	17.81	136.20	1.071
80	IAFFWC40720141011	1.27	Inner POLA	fish fillet skin off	White Croaker	3.5	4.1	-16.36	-16.39	518.33	17.81	148.74	1.126
81	IAFFWC50720141011	2.14	Inner POLA	fish fillet skin off	White Croaker	3.8	4.4	-17.13	-16.63	498.12	17.76	131.30	1.039
82	IAFFWC60720141011	2.5	Inner POLA	fish fillet skin off	White Croaker	3.7	4.3	-16.59	-16.22	487.54	17.53	131.30	1.038
83	IAFFWC70720141011	1.73	Inner POLA	fish fillet skin off	White Croaker	4.0	4.7	-16.36	-15.56	496.20	17.66	124.28	1.019
109	IBOFWC100520141012	10.8	Inner POLB	offal	White Croaker	7.2	8.4	-18.91	-15.57	640.09	17.06	88.75	1.199
110	IBFFWC20520141012	1.15	Inner POLB	fish fillet skin off	White Croaker	3.8	4.4	-16.89	-16.42	498.12	17.36	132.00	1.026
111	IBFFWC30520141012	2.24	Inner POLB	fish fillet skin off	White Croaker	4.0	4.7	-17.14	-16.29	559.80	17.55	139.00	1.165
112	IBFFWC40520141012	1.86	Inner POLB	fish fillet skin off	White Croaker	3.9	4.5	-16.70	-16.06	504.86	17.53	129.90	1.028
113	IBFFWC050520141012R1	1.57	Inner POLB	fish fillet skin off	White Croaker	3.9	4.6	-16.56	-15.89	528.93	17.72	135.50	1.085
114	IBFFWC050520141012R2	1.57	Inner POLB	fish fillet skin off	White Croaker	3.8	4.5	-16.50	-15.91	540.50	17.77	140.39	1.108
115	IBFFWC60520141012	0.895	Inner POLB	fish fillet skin off	White Croaker	3.5	4.1	-16.19	-16.10	534.71	17.75	150.82	1.152
116	IBFFWC70520141012	1.33	Inner POLB	fish fillet skin off	White Croaker	3.5	4.1	-15.74	-15.68	505.82	17.43	143.18	1.078
117	IBFFWC80520141012	2.02	Inner POLB	fish fillet skin off	White Croaker	3.8	4.4	-15.82	-15.36	512.56	18.35	136.20	1.072
118	IBFFWC920520141012	1.28	Inner POLB	fish fillet skin off	White Croaker	3.5	4.1	-15.84	-15.84	496.20	17.91	141.78	1.072
119	IBFFWC10520141012	1.09	Inner POLB	fish fillet skin off	White Croaker	3.6	4.2	-16.47	-16.35	551.08	17.65	154.69	1.137
151	OAFFWC20620141011	3.6	Outer POLA	fish fillet skin off	White Croaker	4.3	5.0	-16.72	-15.48	577.18	17.46	133.40	1.142
152	OAOFWC20620141011	11.6	Outer POLA	offal	White Croaker	7.0	8.2	-18.37	-15.11	627.49	17.12	89.47	1.196
153	OAFFWC10620141011	2.41	Outer POLA	fish fillet skin off	White Croaker	3.4	3.9	-15.81	-16.06	473.12	17.24	140.39	1.014
154	OAFFWC30620141011	1.13	Outer POLA	fish fillet skin off	White Croaker	3.7	4.3	-15.81	-15.53	441.45	16.94	120.76	1.045
155	OAFFWC40620141011	1.81	Outer POLA	fish fillet skin off	White Croaker	3.7	4.3	-16.05	-15.74	521.22	16.83	141.78	1.082
156	OAFFWC50620141011	2.97	Outer POLA	fish fillet skin off	White Croaker	3.4	3.9	-15.50	-15.77	506.78	17.47	150.82	1.108
157	OAFFWC60620141011	1.87	Outer POLA	fish fillet skin off	White Croaker	3.7	4.3	-17.28	-16.96	522.19	17.41	141.78	1.099
158	OAFFWC70620141011	3.48	Outer POLA	fish fillet skin off	White Croaker	4.1	4.8	-17.63	-16.62	547.25	17.38	132.00	1.077
159	OAFFWC80620141011	1.6	Outer POLA	fish fillet skin off	White Croaker	3.7	4.3	-16.82	-16.48	502.93	17.51	136.20	1.085

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Sample ID	Station	%Lipids	Location	Location	Species	Weight	Molar	d13C	d13C'	C Amount (ug)	d15N	N Amount (ug)	Amount (mg)
						C/N	C/N						
14	CSFFWS40320141010	0.316	Consolidated Slip - POLA	fish fillet skin off	White Surfperch	3.3	3.9	-17.77	-17.77	518.33	15.31	154.97	1.175
15	CSOFWS40320141010	8.67	Consolidated Slip - POLA	offal	White Surfperch	5.6	6.6	-20.25	-17.79	488.50	14.63	86.60	1.011
16	CSWOWS010320141010R1	6.68	Consolidated Slip - POLA	whole organism	White Surfperch	5.3	6.2	-20.95	-18.72	534.88	14.72	100.32	1.072
17	CSWOWS010320141010R2	6.68	Consolidated Slip - POLA	whole organism	White Surfperch	5.3	6.1	-20.69	-18.52	523.49	14.71	99.63	1.116
18	CSWOWS20320141010	4.1	Consolidated Slip - POLA	whole organism	White Surfperch	4.9	5.7	-19.12	-17.28	516.85	14.48	105.82	1.034
19	CSWOWS30320141010	7.62	Consolidated Slip - POLA	whole organism	White Surfperch	5.5	6.4	-20.42	-18.06	516.85	14.93	94.14	1.031
20	CSWOWS050320141010 a	6.74	Consolidated Slip - POLA	whole organism	White Surfperch	5.2	6.1	-20.64	-18.50	583.63	15.21	112.00	1.147
21	CSWOWS050320141010 b	6.74	Consolidated Slip - POLA	whole organism	White Surfperch	5.2	6.1	-20.56	-18.43	508.34	15.16	97.57	1.051
22	CSWOWS60320141010	9.2	Consolidated Slip - POLA	whole organism	White Surfperch	5.0	5.8	-20.22	-18.26	501.73	15.09	100.32	1.016
23	CSWOWS70320141010	6.26	Consolidated Slip - POLA	whole organism	White Surfperch	5.0	5.8	-20.02	-18.08	507.39	15.61	101.69	1.026
24	CSWOWS080320141010R1	6	Consolidated Slip - POLA	whole organism	White Surfperch	4.7	5.5	-19.99	-18.31	461.32	14.54	97.57	1.031
25	CSWOWS080320141010R2	6	Consolidated Slip - POLA	whole organism	White Surfperch	4.8	5.6	-20.21	-18.48	495.12	14.62	103.75	1.017
26	CSWOWS90320141010	6.33	Consolidated Slip - POLA	whole organism	White Surfperch	5.2	6.1	-19.27	-17.11	536.79	16.22	102.38	1.053
27	CSWOWS100320141010R1	7.04	Consolidated Slip - POLA	whole organism	White Surfperch	5.2	6.0	-20.14	-18.03	501.73	14.90	96.88	1.143
28	CSWOWS100320141010R2	7.04	Consolidated Slip - POLA	whole organism	White Surfperch	5.2	6.1	-20.36	-18.23	521.59	15.16	100.32	1.056
60	FHFFWS10820141013	0.207	Fish Harbor - POLA	fish fillet skin off	White Surfperch	3.4	4.0	-16.19	-16.19	539.53	17.43	158.43	1.148
61	FHOFWS10820141013	6.31	Fish Harbor - POLA	offal	White Surfperch	5.2	6.0	-18.31	-16.23	538.57	17.26	104.47	1.118
62	FHWOWS20820141013	5.12	Fish Harbor - POLA	whole organism	White Surfperch	4.8	5.6	-17.24	-15.46	483.83	17.23	100.32	1.023
63	FHWOWS30820141013	3.17	Fish Harbor - POLA	whole organism	White Surfperch	4.2	4.9	-16.91	-15.88	425.91	16.96	102.38	1.051
64	FHWOWS040820141013R1	2.08	Fish Harbor - POLA	whole organism	White Surfperch	4.1	4.7	-16.66	-15.78	453.84	17.12	112.00	1.047
65	FHWOWS040820141013R2	2.08	Fish Harbor - POLA	whole organism	White Surfperch	4.1	4.7	-16.60	-15.71	439.85	17.03	108.57	1.058
66	FHWOWS50820141013	2.65	Fish Harbor - POLA	whole organism	White Surfperch	4.1	4.7	-16.61	-15.71	432.41	16.93	106.50	1.017
67	FHWOWS60820141013	3.52	Fish Harbor - POLA	whole organism	White Surfperch	4.2	4.9	-16.66	-15.52	466.00	17.11	109.94	1.051
68	FHWOWS070820141013R1	9	Fish Harbor - POLA	whole organism	White Surfperch	5.8	6.8	-18.67	-16.08	504.56	17.12	86.59	1.02
69	FHWOWS070820141013R2	9	Fish Harbor - POLA	whole organism	White Surfperch	5.9	6.9	-18.72	-16.08	522.54	17.02	88.64	1.003
70	FHWOWS80820141013	6.72	Fish Harbor - POLA	whole organism	White Surfperch	5.3	6.1	-17.66	-15.48	516.85	17.63	98.26	1.034
71	FHWOWS100820141013R1	5.7	Fish Harbor - POLA	whole organism	White Surfperch	4.9	5.8	-18.20	-16.30	509.28	17.28	103.07	1.025
72	FHWOWS100820141013R2	5.7	Fish Harbor - POLA	whole organism	White Surfperch	4.9	5.7	-18.14	-16.30	499.84	17.08	102.38	1.025
120	IBFFWS100520141012	ND	Inner POLB	fish fillet skin off	White Surfperch	3.4	3.9	-16.23	-16.23	491.39	17.30	145.96	1.064
121	IBOFWS100520141012	6.74	Inner POLB	offal	White Surfperch	5.6	6.5	-19.07	-16.66	508.71	17.30	91.62	1.025
122	IBWOWS070520141012R1	5.35	Inner POLB	whole organism	White Surfperch	4.9	5.7	-18.08	-16.24	540.59	17.01	110.63	1.122
123	IBWOWS070520141012R2	5.35	Inner POLB	whole organism	White Surfperch	5.0	5.9	-18.11	-16.13	504.56	16.90	100.32	1.076
124	IBWOWS80520141012	4.36	Inner POLB	whole organism	White Surfperch	4.4	5.1	-17.46	-16.11	454.77	16.87	103.07	1.101
125	IBWOWS90520141012	4.62	Inner POLB	whole organism	White Surfperch	4.7	5.4	-17.82	-16.20	525.39	17.11	112.69	1.123
162	OAFFWS70620141013	0.0702	Outer POLA	fish fillet skin off	White Surfperch	3.4	3.9	-15.81	-15.81	517.37	17.13	153.59	1.145
163	OAFOWS70620141013	9.39	Outer POLA	offal	White Surfperch	5.4	6.3	-18.29	-16.01	544.36	16.34	100.91	1.128
164	OAWOWS10620141011	2.67	Outer POLA	whole organism	White Surfperch	4.0	4.7	-17.30	-16.50	427.77	16.26	107.19	1.034
165	OAWOWS020620141011R1	1.52	Outer POLA	whole organism	White Surfperch	3.7	4.3	-16.23	-15.88	419.42	16.85	113.38	1.065
166	OAWOWS020620141011R2	1.52	Outer POLA	whole organism	White Surfperch	3.7	4.3	-16.30	-16.01	424.98	16.95	116.13	1.055
167	OAWOWS30620141011	2.14	Outer POLA	whole organism	White Surfperch	3.8	4.5	-16.50	-15.97	461.32	16.67	120.94	1.086
168	OAWOWS040620141011R1	2.22	Outer POLA	whole organism	White Surfperch	3.8	4.4	-16.72	-16.22	497.01	16.55	131.27	1.129
169	OAWOWS040620141011R2	2.22	Outer POLA	whole organism	White Surfperch	3.8	4.4	-16.80	-16.30	471.62	16.48	124.38	1.127
170	OAWOWS50620141011	1.91	Outer POLA	whole organism	White Surfperch	3.8	4.4	-16.88	-16.36	438.92	16.15	115.44	1.028
171	OAWOWS060620141013R1	7.28	Outer POLA	whole organism	White Surfperch	5.3	6.2	-18.27	-16.04	482.89	16.90	90.70	1.03

Customer:
 Institution:
 Email:
 Project:
 Submission Date:
 Report Date:

Stransky, Chris
 PHYSIS Environmental Labs, Inc.
 chris.stransky@amecfw.com

03/30/15

Sample ID	Station	%Lipids	Location	Location	Species	Weight	Molar	d13C	d13C'	C Amount (ug)	d15N	N Amount (ug)	Amount (mg)
						C/N	C/N						
29	CSSTOYCOMP1032014102	1.23	Consolidated Slip - POLA	composite	Oyster	5.07	5.91	-21.56	-19.55	478.89	11.64	94.48	1.165
30	CSSTOYCOMP2032014102	1.21	Consolidated Slip - POLA	composite	Oyster	5.02	5.85	-21.70	-19.73	398.34	11.56	79.41	1.007
31	CSSTOYCOMP3032014102	0.956	Consolidated Slip - POLA	composite	Oyster	4.93	5.75	-21.47	-19.58	402.17	11.29	81.57	1.016
32	CSSTOYCOMP4032014102	0.588	Consolidated Slip - POLA	composite	Oyster	4.63	5.40	-21.30	-19.71	437.61	11.91	94.48	1.111
33	CSSTOYCOMP5032014102	1.08	Consolidated Slip - POLA	composite	Oyster	5.06	5.91	-21.72	-19.72	452.96	11.86	89.47	1.108
84	IASTMSCOMP1022014102	1.07	Inner POLA	composite	Mussel	4.16	4.86	-20.64	-19.61	464.48	11.91	111.57	1.118
85	IASTMSCOMP2022014102	1.18	Inner POLA	composite	Mussel	4.09	4.78	-20.29	-19.35	474.08	11.85	115.81	1.136
86	IASTMSCOMP3022014102	1.22	Inner POLA	composite	Mussel	3.87	4.52	-19.73	-19.10	434.73	12.32	112.28	1.043
87	IASTMSCOMP4022014102	1.23	Inner POLA	composite	Mussel	4.10	4.78	-20.25	-19.30	486.58	12.28	118.64	1.152
126	IBSTMSCOMP1042014102	1.44	Inner POLB	composite	Mussel	4.18	4.88	-20.79	-19.73	454.88	11.92	108.73	1.057
127	IBSTMSCOMP2042014102	1.5	Inner POLB	composite	Mussel	4.32	5.04	-20.90	-19.68	469.28	11.77	108.73	1.096
128	IBSTMSCOMP3042014102	1.81	Inner POLB	composite	Mussel	4.43	5.16	-20.93	-19.57	500.04	11.99	112.98	1.139
129	IBSTMSCOMP4042014102	1.78	Inner POLB	composite	Mussel	4.44	5.18	-21.09	-19.72	485.62	11.93	109.44	1.104
130	IBSTMSCOMP50420141 a	0.808	Inner POLB	composite	Mussel	4.29	5.01	-20.90	-19.70	424.19	11.42	98.77	1.095
131	IBSTMSCOMP50420141 b	0.808	Inner POLB	composite	Mussel	4.33	5.06	-20.97	-19.72	428.02	11.60	98.77	1.105
173	OASTMSCOMP1012014102	1.11	Outer POLA	composite	Mussel	4.41	5.14	-20.17	-18.83	453.92	11.73	103.05	1.107
174	OASTMSCOMP2012014102	1.43	Outer POLA	composite	Mussel	4.33	5.05	-20.07	-18.82	476.97	12.25	110.15	1.176
175	OASTMSCOMP3012014102	1.28	Outer POLA	composite	Mussel	4.21	4.92	-19.78	-18.68	446.24	12.33	105.89	1.063
176	OASTMSCOMP4012014102	1.45	Outer POLA	composite	Mussel	4.59	5.36	-20.13	-18.58	401.21	11.91	87.32	1.028
177	OASTMSCOMP5012014102	0.745	Outer POLA	composite	Mussel	4.26	4.97	-20.28	-19.12	429.94	12.04	100.91	1.126

	d13C'	stdev	d15N	stdev	C/N	Stdev
Consolidated Slip - POLA	-19.66	0.09	11.65	0.25	4.94	0.18
Inner POLA	-19.34	0.21	12.09	0.25	4.06	0.13
Inner POLB	-19.69	0.26	11.77	0.22	4.33	0.09
Outer POLA	-18.81	0.20	12.05	0.24	4.36	0.15

Customer:
 Institution:
 Email:
 Project:
 Submission Date:
 Report Date:

*Offal samples have high C/N ratio and required correction of d13C values for lipids; fillet had low C/N and no correction was necessary

Stransky, Chris
 PHYSIS Environmental Labs, Inc.
 chris.stransky@amecfw.com

03/30/15

Sample ID	Station	%Lipids	Location	Location	Species	Weight C/N	Molar C/N	d13C	d13C'	C Amount (ug)	d15N	N Amount (ug)	Amount (mg)
2	CSFFCH80320141010	0.0098	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.22	3.76	-16.75		507.74	17.40	157.74	1.064
3	CSOFC80320141010	0.513	Consolidated Slip - POLA	offal	California Halibut	3.58	4.18	-17.40	-17.25	545.32	17.62	152.21	1.218
4	CSFFCH100320141010	ND	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.35	3.91	-18.18		556.90	17.01	166.01	1.156
5	CSFFCH10320141010	0.0096	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.33	3.89	-20.42		516.41	16.77	154.97	1.141
6	CSFFCH20320141010	0.0099	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.32	3.87	-18.86		539.53	17.03	162.57	1.171
7	CSFFCH30320141010	0.187	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.34	3.90	-19.54		522.19	17.05	156.36	1.144
8	CSFFCH40320141010	0.0291	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.33	3.89	-18.97		486.58	17.31	145.96	1.081
9	CSFFCH50320141010	ND	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.35	3.91	-17.99		463.52	17.35	138.30	1.024
10	CSFFCH60320141010	ND	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.30	3.85	-17.71		498.12	17.35	150.82	1.077
11	CSFFCH70320141010	0.0096	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.33	3.88	-17.29		490.42	17.31	147.35	1.121
12	CSFFCH90320141010	0.0856	Consolidated Slip - POLA	fish fillet skin off	California Halibut	3.33	3.89	-17.12		532.79	17.62	159.81	1.145
34	FHFFCH70820141013	0.0196	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.26	3.81	-16.40		532.79	17.50	163.25	1.124
35	FHOFCH70820141013	1.2	Fish Harbor - POLA	offal	California Halibut	3.69	4.31	-17.01	-16.68	476.97	17.57	129.20	1.051
36	FHFFCH10820141013	0.0774	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.34	3.89	-16.99		488.53	17.15	146.42	1.047
37	FHFFCH20820141013	0.0196	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.38	3.94	-16.67		466.93	17.00	138.15	1.07
38	FHFFCH30820141013	0.0389	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.36	3.92	-16.36		478.19	16.77	142.29	1.046
39	FHFFCH040820141013R1	0.0195	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.35	3.91	-16.62		507.39	17.12	151.25	1.062
40	FHFFCH040820141013R2	0.0195	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.35	3.90	-16.54		466.93	17.13	139.53	1.008
41	FHFFCH50820141013	ND	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.29	3.84	-16.43		483.83	16.69	147.11	1.046
42	FHFFCH60820141013	0.058	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.32	3.87	-16.64		513.07	16.90	154.69	1.146
43	FHFFCH80820141013	0.08	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.31	3.86	-16.47		323.22	17.10	97.57	1.09
44	FHFFCH90820141013	0.254	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.35	3.91	-16.66		493.24	16.57	147.11	1.04
45	FHFFCH100820141013R1	ND	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.34	3.90	-16.55		502.67	16.78	150.56	1.06
46	FHFFCH100820141013R2	ND	Fish Harbor - POLA	fish fillet skin off	California Halibut	3.35	3.91	-16.71		467.87	16.89	139.53	1.041
89	IBFFCH10520141012	0.0191	Inner POLB	fish fillet skin off	California Halibut	3.31	3.86	-15.74		533.75	17.76	161.19	1.163
90	IBOFCH010520141012R1	0.851	Inner POLB	offal	California Halibut	4.02	4.69	-16.97	-16.13	456.80	17.70	113.69	1.077
91	IBOFCH010520141012R2	0.851	Inner POLB	offal	California Halibut	3.99	4.66	-17.02	-16.23	442.41	17.71	110.86	1.04
92	IBFFCH20520141012	0.00976	Inner POLB	fish fillet skin off	California Halibut	3.35	3.90	-16.59		497.01	17.05	148.49	1.089
132	OAFFCH60620141011	0.0687	Outer POLA	fish fillet skin off	California Halibut	3.35	3.91	-16.55		486.58	16.83	145.27	1.126
133	OAOFC80620141011	2.7	Outer POLA	offal	California Halibut	4.45	5.19	-18.20	-16.81	512.56	17.09	115.11	1.194
134	OAFFCH30620141011	0.115	Outer POLA	fish fillet skin off	California Halibut	3.38	3.95	-16.10		517.37	17.10	152.90	1.144
135	OAFFCH40620141011	0.0695	Outer POLA	fish fillet skin off	California Halibut	3.42	3.99	-16.25		503.89	17.00	147.35	1.118
136	OAFFCH50620141011	0.0399	Outer POLA	fish fillet skin off	California Halibut	3.45	4.02	-16.10		325.77	16.96	94.48	1.021
137	OAFFCH070620141011R1	0.204	Outer POLA	fish fillet skin off	California Halibut	3.43	4.00	-16.45		459.68	17.19	134.10	1.01
138	OAFFCH070620141011R2	0.204	Outer POLA	fish fillet skin off	California Halibut	3.44	4.01	-16.47		473.12	17.14	137.60	1.053
139	OAFFCH80620141011	0.127	Outer POLA	fish fillet skin off	California Halibut	3.18	3.71	-16.59		516.41	16.86	162.57	1.14
140	OAFFCH90620141011	0.127	Outer POLA	fish fillet skin off	California Halibut	3.22	3.76	-15.66		475.04	16.87	147.35	1.041
141	OAFFCH100620141011	0.158	Outer POLA	fish fillet skin off	California Halibut	3.18	3.71	-16.34		514.48	17.36	161.88	1.125
142	OAFFCH10620141011	0.146	Outer POLA	fish fillet skin off	California Halibut	3.38	3.95	-16.48		460.38	17.07	136.09	1.001
143	OAFFCH020620141011R1	0.2	Outer POLA	fish fillet skin off	California Halibut	3.40	3.97	-16.09		472.56	17.19	138.84	1.002
144	OAFFCH020620141011R2	0.2	Outer POLA	fish fillet skin off	California Halibut	3.36	3.92	-16.07		510.23	17.07	151.94	1.095

	Ave d13C	Stdev	Ave C/N	Stdev	Ave d15N	Stdev	TP
Consolidated Slip - POLA	-18.28	1.16	3.32	0.04	17.26	0.26	3.79
Fish Harbor - POLA	-16.59	0.17	3.33	0.03	16.97	0.25	3.69
Inner POLB	-16.17	0.60	3.33	0.03	17.41	0.50	3.84
Outer POLA	-16.26	0.27	3.35	0.10	17.05	0.16	3.72
					17.17	0.20	3.76
Offal	-17.32	0.52	3.95	0.34	17.54	0.26	

Sample	Trophic Position	SE	Comments	TP-d15N		Difference
Oysters	2		Based on d15N values			
Mussels	2		Based on d13C and d15N values of amino acids			
California Halibut	4.5	0.63	Based on food items	3.8	Paralichthys californicus	0.7
White Surfperch	3.4	0.5	Based on size and trophs of closest relatives	3.7	Phanerodon furcatus	-0.3
White Croaker	3.4	0.49	Based on food items	3.8	Genyonemus lineatus	-0.4
Shiner Surfperch	2.99	0.31	Based on food items	3.5	Cymatogaster aggregata	-0.5
Lizard fish	3.5	0.4	Based on size and trophs of closest relatives	3.8	Homaloptera orthogoniata	-0.3

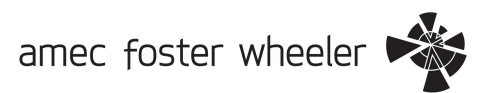
<http://www.fishbase.org/>

Wilson et al. 2009

Vokhshoori et al. 2014, Vokhshoori and McCarthy 2015

305255 G-18		424.98	-27.62	81.10	-10.43
305267 G-18		416.64	-27.64	78.35	-10.19
305268 G-18		397.24	-27.63	74.24	-10.39
305281 G-18		435.20	-27.66	81.78	-10.32
305283 G-18		404.62	-27.62	76.29	-10.33
305296 G-18		410.17	-27.55	79.04	-10.31
305298 G-18		426.84	-27.71	80.41	-10.42
305305 G-18		411.09	-27.75	78.35	-10.25
305309 G-18		413.87	-27.92	78.35	-10.34
305310 G-18		439.85	-27.86	83.15	-10.31
G-18 StdDev			0.09		0.13
305023 G-20	3981	1624.73	-16.68	379.11	
305024 G-20	183	72.67		17.22	-6.69
305038 G-20	994	412.70	-16.66	98.77	-6.76
305067 G-20	3012	1230.92	-16.75	287.20	-6.75
305100 G-20	498	202.31	-16.74	45.51	-6.79
305115 G-20	2015	816.40	-16.69	189.21	-6.70
305162 G-20	3988	1595.78	-16.58	372.85	-6.75
305163 G-20	218	94.34	-16.52	22.35	
305177 G-20	992	403.70	-16.59	94.82	-6.69
305206 G-20	3012	1259.67	-16.66	293.97	-6.77
305239 G-20	497	202.71	-16.51	47.18	-6.83
305254 G-20	2007	802.82	-16.38	186.45	-6.68
305282 G-20	3985	1641.94	-16.42	382.65	-6.66
305297 G-20	511	206.23	-16.52	47.72	-6.62
G-20 StdDev			0.12		0.06

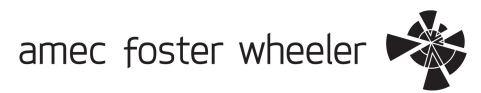
POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



APPENDIX J

COC DOCUMENTS

POLA and POLB
Final Report Harbor Toxics TMDL Special Study: Food Web Sampling
Los Angeles and Long Beach Harbors
Amec Foster Wheeler Project Nos. 1315102718 and 1315100113
February 2016



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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Track #	Field Sample ID	Collection Date/Time	Fish Type	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID - FF/OF - for Skin Off Fillets (FF) ONLY, NOT Offal (OF) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physys (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziploc bag and NEW ID tag with replicate ID number. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive: No testing / keep frozen	See notes: section at bottom. FF/OF fish are for full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
	Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				ANCHOR OEA 1400892 0.2°C, -0.3°C, -0.9°C, -2.1°C													
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x	x			x			x	Scalcs already collected. Skin-Off Fillets + Offal from this replicate.	
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x	x			x				Scalcs already collected.	
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5												x	"Lab pic 027". Contains 5 fish in 1 foil (A1-A5). Orig. Archive.	
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch.	1 -> 2	x	x	x	x	x	x			x			x	Scalcs already collected. Skin-Off Fillets + Offal from this replicate. CONFIRMED: NEEDS TO HAVE Archive A-4 ADDED to replicate + scales taken	
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch.	2	x		x	x	x			x	x				Scalcs already collected.	
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x			x	x				Scalcs already collected.	
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x			x	x				Scalcs already collected.	
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x			x	x				Scalcs already collected.	
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x			x	x				Scalcs already collected.	
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x			x	x				Scalcs already collected.	
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x			x	x				Scalcs already collected.	
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x			x	x				Scalcs already collected.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Sniner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; LA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: *Replacement page*
Signature/Printed Name: _____ Date/Time: *12/26/14 via email*


Received By: *Original rec'd 12/03/14. ASD Benedikt 12/26/14 14:27*
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

- * 1400892
- Ⓐ 1400900
- Ⓢ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				Vista Test Parameters (Sub's noted in Bold)										Comments		 1400892		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aloquet to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive, NO testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x					x			Scales already collected.
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x					x			Scales already collected.
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x	x					x			Scales already collected.
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5												x		Photo 29. Label says "OA-XX-CA-A-06-20141011"
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x		x	x	x			x	x					Scales already collected.
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x	x	x	x	x	x		x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x		
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x		x	x	x			x	x					Scales already collected.
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x		x	x	x			x	x					Scales already collected.
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x		Unknown actual number b/c of on-boat mis-ID
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected.
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x	x		x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x					Scales already collected.
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14
 Signature/Printed Name: _____ Date/Time: _____
 Company: Anchor QEA


Received By: Matthew Benedict Vista
 Signature/Printed Name: _____ Date/Time: _____
 Company: 11/20/14 1510

Relinquished By: _____
 Signature/Printed Name: _____ Date/Time: _____
 Company: _____

Received By: _____
 Signature/Printed Name: _____ Date/Time: _____
 Company: _____

* 1400892
 ~ 1400901
 ⓧ 1400906
 ⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Compensers - is conducted on sample ID "FF/OF" - sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSURIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSURIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physate (C/N Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	 1400892
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01.07 Task 1																		
Project Manager: Chris Stransky																		
Phone Number: (858) 300 4350																		
Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish														Comments/Preservation	
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x						Scales already collected.
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x			x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x			x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x			x						Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm, SL=18cm
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x			x						Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm, SL=16cm
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x			x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4												x		
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x			x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x			x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21												x		# of Archive unknown b/c of final sorting
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x		x					x	Scales already collected. TAKE FISH HEAD from TL=30cm, SL=25cm fish.
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x			x	x					Scales already collected from one fish in this rep.
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x			x	x					Scales already collected from one fish in this rep.
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from both fish in this Rep #5.
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1													x	
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x			x	x					TAKE SCALES. Note which fish taken from (size). No otolith.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: via email 12/03/14 Company: Anchor QEA

Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____

Signature/Printed Name _____ Date/Time _____

Received By: Bethnet Benedict Vista Company: 12/04/14 1059

Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____

Signature/Printed Name _____ Date/Time _____

* 1400892
 > 1400893
 ~ 1400901
 @ 1400906
 ⊕ 1400904

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time: <u>11/13/14 0849</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u>
Logged In:	Date/Time: <u>11/24/14 1328</u>	Initials: <u>UBSB</u>	Location: <u>WF-2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>	Thermometer ID: IR-1	
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input checked="" type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

Sample ID label

0A-WO-WS-02-06-20141011
 ↓ -03- ↓ 11-25-14
 -04-
 -06-
 -05-

LB-WO-SS-01-05-20141012
 ↓ -02- ↓

1B-WO-SS-03-05-20141012

COC

LB-WO-SS-03-05-20141012

Sample Login 11/2013 ckt

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

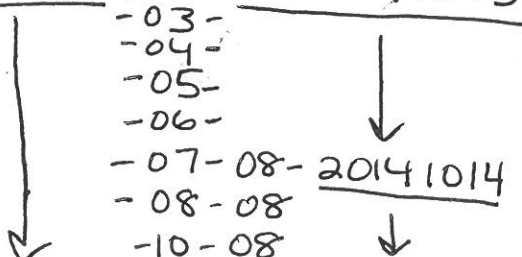
Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBSB</u>	Location: <u>WF2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>KC</u> <u>UBSB</u>	Location: <u>WF2</u> Shelf/Rack: <u>A-5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
Temp °C: <u>-0.3</u> (uncorrected)	Time: <u>0921</u>		Thermometer ID: IR-1
Temp °C: <u>-0.3</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>5099</u> Trk # <u>7718 4040 1851</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID Label

FH-WO-WS-02-08-20141013



COFC

FH-WO-WS-07-08-20141013
 FH-WO-WS-08-08-20141013
 FH-WO-WS-10-08-20141013

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A-5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C: <u>-0.9</u> (uncorrected)	Time: <u>0912</u>		Thermometer ID: IR-1
Temp °C: <u>-0.9</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>6 of 9</u> Trk # <u>7718 4040 2229</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

Sample ID label

0A-W0-WS-06-06-20141012
0A-W0-SS-08-06-20141011
 ↓ -09- ↓
 -10- ↓

CofC

0A-W0-WS-06-06-20141013
0A-W0-SS-08-06-20141013

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400892 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>11/24/14 1328</u>	Initials: <u>KE</u> <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A-5</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>-2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>7049</u> Trk # <u>7718 4046 1472</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

Sample label
CA-WO-WS-01-06-20141013

COC
CA-WO-WS-01-06-20141011

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400892
 Date Received: 24-Nov-14 13:28
 Documented by/date: B.Benedict 12/01/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|--|---|---|
| <input type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments: COC ID:

FH-WO-WS-07-08-20141013
 FH-WO-WS-08-08-20141013
 FH-WO-WS-10-08-20141013
 OA-WO-WS-01-06-20141011
 OA-WO-WS-06-06-20141013
 OA-WO-SS-08-06-20141013
 IB-WO-SS-01-05020141012
 IB-WO-SS-02-05020141012

Label ID:

FH-WO-WS-07-08-20141014
 FH-WO-WS-08-08-20141014
 FH-WO-WS-10-08-20141014
 OA-WO-WS-01-06-20141013
 OA-WO-WS-06-06-20141012
 OA-WO-SS-08-06-20141011
 LB-WO-SS-01-05020141012
 LB-WO-SS-02-05020141012

Client Authorization

Proceed with Analysis: YES NO

Signature and Date MM 12/2/14

Client Comments/Instructions per email, COC IDs are correct

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments					
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes: section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation	
Project Name: Harbor TMDL Food Web Sampling																			
Project Number: 120711-01.07 Task 1																			
Project Manager: Chris Stransky																			
Phone Number: (858) 300 4350																			
Shipment Method:																			
Track #	Field Sample ID	Collection Date/Time	Type of Fish																
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x		x							Scales already collected.
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x		x	x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x							Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x							Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x		x	x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4															
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x		x	x						TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21															# of Archive unknown b/c of final sorting
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x		x							Scales already collected. Skin-Off Fillets + Offal from this replicate.
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x									Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x			x	x						Scales already collected from one fish in this rep.
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x			x	x						Scales already collected from one fish in this rep.
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x						Scales already collected from one fish in this rep.
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x	x					TAKE SCALES. Note which fish taken from (size). No otolith.
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x						Scales already collected from both fish in this Rep #5.
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x						Scales already collected from one fish in this rep.
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1															
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x			x	x	x					TAKE SCALES. Note which fish taken from (size). No otolith.

ANCHOR QEA 1400893
0.2c, 0.4c, -2.1c

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 MKO
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (low-res) 8270 Compensate - is conducted on sample ID: FF/OF - sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish														
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch.	1	x		x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch.	1	x		x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch.	1	x	x	x	x	x		x	x	x			x	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch.	6												x	
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x			x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x			x			Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x			x			Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	1	x	x	x	x	x		x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	6												x	
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

ANCHOR QEA 1400893

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Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____

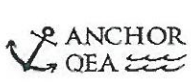

Received By: Kellie B. Woodruff Vista Company: 12/04/14 10:01
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate PCBs (high res) epa 1668C PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE % Solids (Total Solids) % Lipids (Total Lipids) Fish Fillet Prep (Maximize Issue) Offal Prep Whole Body Fish Prep Prep Sample aliquot to ship to Physis (CAN Stable Isotope) Tweezer off 10 pectoral area scales, measure and use envelope Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish. Archive: No testing / keep frozen See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire trial will be tested for chemistry and no cloth will be kept on this specific replicate.										Comments/Preservation				
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize Issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CAN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive: No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire trial will be tested for chemistry and no cloth will be kept on this specific replicate.	Comments/Preservation
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13												x		
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
128	CS-FF/OF-WS-04-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x	x	x	x	x	x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1												x		
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x		x	x	x	x		x	x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3												x		
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1												x		L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1												x		Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 1101
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments			
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270. Consensus - Is complete fish, but list Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7														Lab pic 028. Contains A1-A7. Orig. archive.
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x				x					x				TAKE SCALES. Analyze this sample only for lipids and PCBs
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x				x					Scales already collected of both fish in replicate. Note size of fish the Otolith comes from
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x				x					Scales already collected.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x				x					Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4													x	4 plus possibly another 4 more archive fish
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x				x					Scales already collected.



1400893

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/23/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: Christine Benedict Vista Company: 12/14/14 1100
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

> 1400893
 Ⓐ 1400900
 ~ 1400901
 ⊕ 1400904
 ⊗ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/03/14 1607</u>	Initials: <u>UBAB KL</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A.5</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.4</u> (uncorrected)	Time: <u>0920</u>		Thermometer ID: IR-1
Temp °C: <u>0.20.4</u> (corrected)			

UBAB 12/5/14

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>1 of 9</u> Trk # <u>7718 4040 1759</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <u>UBAB 12/5/14</u>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

COC ID
CS-W0-WS-01-03-2014 1010
 -02-
 -03- 12/5/14
 -04- UBAB
 -05-
 -06-
 -07-
 -08-
 -09-
 -10-

Sample Label ID
CS-W0-06-03

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893

TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u>
Logged In:	Date/Time <u>12/03/17 1607</u>	Initials: <u>UBAB</u> <u>KL</u>	Location: <u>WF-2</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
		<input checked="" type="radio"/> Return	<input type="radio"/> Dispose

Comments:

COC ID

Sample Label ID

LB-WD-SS-04-05-20141012
 -05-
 -06- ↓

LB-WD-SS-05-05-20141015

LB-WD-WS-07-05-20141012
 -08-
 -09- ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400893 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>CSB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/03/14 1607</u>	Initials: <u>CSB</u>	Location: <u>WF2</u> Shelf/Rack: <u>A5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
Temp °C: <u>-2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		✓ <u>12/3/14</u>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		COC	Sample Container
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

COC ID

FH-WO-SS-09-08-2014 1013

Chain of Custody Anomaly/Sample Acceptance Form



AMEC Earth & Environmental
 Chris Stransky
 chris.stransky@amec.com
 (858) 300-4350

Workorder Number: 1400893
 Date Received: 25-Nov-14 16:07
 Documented by/date: B. Benedict 12/05/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

Sample IDs on Chain of Custody do not match Sample Container Labels

Chain of Custody ID	Container Label ID
IB-WO-SS-04-05-20141012	LB-WO-SS-04-05-20141012
IB-WO-SS-05-05-20141012	LB-WO-SS-05-05-20141012
IB-WO-SS-06-05-20141012	LB-WO-SS-06-05-20141012
IB-WO-WS-07-05-20141012	LB-WO-WS-07-05-20141012
IB-WO-WS-08-05-20141012	LB-WO-WS-08-05-20141012
IB-WO-WS-09-05-20141012	LB-WO-WS-09-05-20141012
CS-WO-WS-06-03-20141010	CS-WO-06-03

Client Authorization

Proceed with Analysis: YES NO Signature and Date SM 1/19/15

Client Comments/Instructions per email, COC nomenclature is correct

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) EPA 166C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test fish file(s) (FF) ONLY (NOT Offal (OF)) - CALSCEINCE	DDTs (8270 SIM DDX WDDMU) - CALSCEINCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Filet Prep (Maximize Issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CIN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziploc bag and NEW ID tag with replica ID and fish Total Length (TL) size in cm. If multiple fish in replicate, observe fish measured to in comments or middle size fish.	Archive: No testing / keep frozen	See notes' section at bottom. FF/OF samples are analyzed for all of fish. Back view of fish, the entire fish will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca. Halibut	1	x	x	x	x	x	x								Scales already collected. SKIN Off Fillets + Offal from this replicate.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	x		x	x	x									Scales already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5														"Lab pic 027" Contains 5 fish in 1 foil (A1-A5) Orig. Archive
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch.	1-2	x	x	x	x	x	x								Scales already collected. SKIN Off Fillets + Offal from this replicate. CONFIRMED: NEEDS TO HAVE Archive A-4 ADDED to replicate + scales taken
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch.	2	x		x	x	x									Scales already collected.
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch.	3	x		x	x	x									Scales already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch.	1	x		x	x	x									Scales already collected.



1400900
-0.9°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off filet, OF = offal, WO = whole organism, CL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip, LB = Long Beach Inner Harbor, LA = Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Replacement page Rec'd 12/26/14 via email
Signature/Printed Name: _____ Date/Time: _____

Received By: Original rec'd 12/23/14. Ad Bonclit 12/26/14 1427
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

- * 1400892
- Ⓐ 1400900
- Ⓢ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments			
Date: 11/20/2014				No. of Fish in Replicate	PCBs (low-res) 8270 congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Fillets (FF ONLY) (NOT Otolith (OT)) - CALSCIENCE	DDTs (8270 SIM DOX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type														
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch.	7													
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x			x					x				Lab pic 028. Contains A1-A7. Orig. archive.
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				TAKE SCALES. Analyze this sample only for lipids and PCBs
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x				Scales already collected of both fish in replicate. Note size of fish the Otolith comes from
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x				Scales already collected.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x				Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x		x					Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4													4 plus possibly another 4 more archive fish
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x		x					Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x	x				Scales already collected.



1400900
-0.9°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email rpho Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Belle Bennett Vista Company: 12/10/14 UIC
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

> 1400893
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~ 1400901
Ⓢ 1400904
Ⓞ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400900 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 0917</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>A5</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
Temp °C: <u>-0.9</u> (uncorrected)	Time: <u>0912</u>		Thermometer ID: IR-1
Temp °C: <u>-0.9</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>6 of 9</u> Trk # <u>7718 4040 2229</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	Client	Retain
			Return
			Dispose

Comments:

Sample ID: OA-FF-CH-02-06-20141011

OA-FF-CH-01-06-20141011 *

* ID corrected per email original ID: OA-0F/FF-CH01-06-20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400900 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>YB/B</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 0917</u>	Initials: <u>YB/B</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>A5</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>-1.7</u> (uncorrected)	Time: <u>0916</u>		Thermometer ID: IR-1
Temp °C: <u>-1.7</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>0499</u> Trk # <u>7718 4040 2137</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓	✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

Sample label ID:
FH-FF-CH-01-08-20141013
 ↓
 09-08
 08-08
 04-08
 06-08
 05-08
 ↓

FH-FF-CH-10-08-20141013
 ↓
 02-08
 03-08
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1 400900 TAT _____

Samples Arrival:	Date/Time 11/13/14 0849	Initials: BBB	Location: WF2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 0917	Initials: BBB	Location: WF-2
			Shelf/Rack: A6
Delivered By:	<u>(FedEx)</u> UPS On Trac DHL Hand Delivered Other		
Preservation:	<u>(Ice)</u> Blue Ice Dry Ice None		
Temp °C: 0.3 (uncorrected)	Time: 0909	Thermometer ID: IR-1	
Temp °C: 0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	✓		
Sample Container Intact?			✓
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>(Client)</u> Retain	<u>(Return)</u> Dispose

Comments:

Sample ID:
 FH-FF-WC-06-08-20141013
 -02-08-
 -01-08-
 -05-08-
 -08-08-
 -07-08-
 -03-08-
 -04-08-
 ↓ ↓
 FH-FF-WC-09-08-20141013

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400900
 Date Received: 13-Nov-14 12:34
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|--|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____ °C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>JMM 11/15/15</u>
Client Comments/Instructions <u>COC rec'd by email</u>	

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments			
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Consensus - Is composite ID "FF/OF" - ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CN Stable isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7														
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x													
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak	2	x													Lab pic 028. Contains A1-A7. Orig. archive.
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Analyze this sample only for lipids and PCBs
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak	2	x													Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak	2	x													Scales already collected. Note gen. weight of fish.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak	2	x													Scales already collected. Note size of fish the Otolith comes from
32	FH-FF-WC-10-08-20141013	10/13/14	White Croak	1	x													Scales already collected. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak	4														Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x													4 plus possibly another 4 more archive fish
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
39	OA-FF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.



1400901

0.2°C 0.3°C, -0.3°C 0.9°C, -2.1°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Chris Stransky Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: 12/04/14

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Christina Benedict Vista Company: 12/04/14 11:06
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		Anchor QEA 1400901		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x													Scales already collected.
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5												x		Photo 29. Label says "OA-XX-CA-A-06-20141011"
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x							x	x					TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x							x	x					Scales already collected.
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x							x	x					Scales already collected.
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x							x	x					Scales already collected.
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x							x	x					Scales already collected.
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x							x	x					Scales already collected.
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x					x	x					x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x		
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x							x	x					Scales already collected.
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x							x	x					Scales already collected.
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x							x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x		Unknown actual number b/c of on-boat mis-ID
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x										x			Scales already collected.
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x						x	x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x										x			Scales already collected.
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x										x			Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH = Fish Harbor; OA = Los Angeles Outer Harbor; CS = Consolidated Slip; IB = Long Beach Inner Harbor; IA = Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Bohdan Bmedit Vista Company: 12/04/14 10:4
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CAN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x	x			Scales already collected.	
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x			x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm	
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x				Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm	
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4											x			
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21											x		# of Archive unknown b/c of final sorting	
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x			x			x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x				x			Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.	
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x			x	x				Scales already collected from one fish in this rep.	
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x			x	x				Scales already collected from one fish in this rep.	
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x				Scales already collected from one fish in this rep.	
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from (size). No otolith.	
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x				Scales already collected from both fish in this Rep #5.	
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x				Scales already collected from one fish in this rep.	
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1											x			
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from (size). No otolith.	

 1400901

11/20/2014 11:20 AM

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/03/14 Company: Anchor QEA
Signature/Printed Name: _____ Date/Time: _____


Received By: Bettie Benedict Vista Company: 12/04/14 11:26
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

* 1400892
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⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 1400901		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCEINE	DDTs (8270 SIM DDx w/DDMU) - CALSCEINE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label in jacket bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x			x	x			x	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6														
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	1	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	6														
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/03/14 Company: Anchor QEA
 Signature/Printed Name _____ Date/Time _____

Received By: Brita Benedict Vista Company: 12/04/14 1105
 Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
 Signature/Printed Name _____ Date/Time _____

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ∅ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time: <u>11/13/14 0849</u>	Initials: <u>VBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time: <u>12/10/14 1446</u>	Initials: <u>VBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>CI</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?			<input checked="" type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

Sample label ID: IB-FF-CH-02-05-20141612

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1446</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
	None		
Temp °C: <u>-0.3</u> (uncorrected)	Time: <u>0903</u>		Thermometer ID: IR-1
Temp °C: <u>-0.3</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID: OA-FF-WC-03-06-20141611
 ↓ 01-06 ↓
 04-06 ↓
 05-06 ↓
OA-FF-WC 06-06 ↓
 ↓ 07-06 ↓
 08-06 ↓
 09-06 ↓
OAFF-WC-10-06-20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBB	Location: WF 2
Logged In:	Date/Time 12/10/14 1446	Initials: UBB	Location: WF-2
Delivered By:	<u>FedEx</u>	UPS	On Trac
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
Temp °C: -0.3 (uncorrected)	Time: 0921		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill 50f9 Trk # 7718 4040 1851	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID: OA-FF-LF-01-06-20141011
 ↓ 02-06 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/10/14 1446	Initials: UBSB	Location: WF2
			Shelf/Rack: C1
Delivered By:	FedEx	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	Ice	Blue Ice	Dry Ice
			None
Temp °C: -0.9 (uncorrected)	Time: 0912		Thermometer ID: IR-1
Temp °C: -0.9 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 6 of 9 Trk # 7718 4040 2229	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	Client	Retain
		Return	Dispose

Comments:
 Sample ID: OA-FF-CH-05-06-20141011
 -07-06-
 -09-06-
 -04-06-
 -08-06-
 -10-06-
 -03-06

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400901 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>CBJB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1446</u>	Initials: <u>CBJB</u>	Location: <u>WF-2</u> Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		COC	Sample Container
		None	
Shipping Container	Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
			<input checked="" type="radio"/> Return
			<input type="radio"/> Dispose

Comments:

Sample label ID:

LB-FF-WC-01-05-20141012

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400901
 Date Received: 13-Nov-14 12:35
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | | | |
|--|---|-----|--------|
| <input type="checkbox"/> Temperature outside < 6°C Range | Samples Affected: _____ | | |
| Temperature _____°C | Ice Present? | Yes | No |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size | | Melted |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken | | |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type | | |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>MM 1/26/15</u>
Client Comments/Instructions <u>COC rec'd by email</u>	

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Szumsky
 Phone Number: (855) 300-4350
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 168C	PCBs (low res) E270 Congeners - is conducted on sample ID FF/OF - ONLY (NOT Offal (OF)) - CALSCIENCE	W/DMU) - CALSCIENCE (8270 SIM DDX)	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to	Scales, measure and use Tweezer off 10 pectoral area	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, no testing / keep frozen	See notes section at bottom, FF/OF will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfperch	1	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No otolith.
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfperch	1	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No otolith.
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfperch	1	X	X		X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfperch	6											X		Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size). 130g
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size). 130g
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=24cm, SL=21cm.
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=24cm, SL=21cm fish.
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	X	X		X	X	X	X	X	X	X			Scales already collected. Skin-Off Fillets + Offal from this replicate.
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6											X		TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	X			X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = Otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/03/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: _____ Date/Time: _____
 Received By: _____ Company: _____ Date/Time: _____
 Signature/Printed Name: _____ Date/Time: _____

1400902
 ANCHOR OEA
 0.20g, 0.30g, -2.10g

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊖ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Stransky
 Phone Number: (858) 300 4350
 Shipment Method:

ANCHOR
 QEA

1400902
 0.2°C, -0.3°C, -2.1°C

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	Vista Test Parameters (Sub's noted in Bold)				Comments								
					PBS (High res) epa 1668C	PBS (Low-res) 8270 Congeners - Is conducted on sample ID FF/OF sample fish, but test fish filets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Phys (CN Stable isotop).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label zlock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.	See notes' section at bottom, FF/OF and no otolith will be kept on this
101	IA-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2													Comments/Preservation
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfperch	3													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. Skin-Off Filets + Offal from this replicate.
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 10/20/14 Company: Anchor QEA
 Signature/Printed Name: Vista
 Date/Time: 10/14/14 10:09
 Company: _____

Received By: Christina Benedict Company: _____
 Signature/Printed Name: Vista
 Date/Time: _____

7 1400902
 ② 1400903
 ④ 1400904
 ∅ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time: 11/13/14 0849	Initials: UBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time: 12/04/14 1235	Initials: UBSB	Location: WF-2
			Shelf/Rack: C1
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
		<input type="checkbox"/> Other	
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 0.2 (uncorrected)	Time: 0854		Thermometer ID: IR-1
Temp °C: 0.2 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 3 of 9 Trk # 7718 4040 2023	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA		COC	Sample Container
			None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

Sample ID: LB-FF-LF-02-05-20141012
 03-05
 05-05
 04-05
 01-05

Note "LB" is written on one label "IB" on the other label

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: JBB	Location: WF-2 Shelf/Rack: NA
Logged In:	Date/Time 12/04/14 1235	Initials: JBB	Location: WF-2 Shelf/Rack: C1
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
	None		
Temp °C: -0.3 (uncorrected)	Time: 0903		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		JBB 1/9/15
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>		COC	Sample Container
		None	
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

Sample ID: 1A-FF-WC-01-07-20141011

04-07
 07-07
 02-07
 03-07
 06-07
 05-07

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400902 TAT 28

Samples Arrival:	Date/Time: 11/13/14 0849	Initials: PJB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time: 12/04/14 1235	Initials: PJB	Location: WF2
			Shelf/Rack: C1
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: -2.1 (uncorrected)	Time: 0906	Thermometer ID: IR-1	
Temp °C: -2.1 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>70f9</u> Trk # <u>7718 4046 1472</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		PJB/a/15
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	NA	COC	Sample Container
		None	
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain
			<input checked="" type="checkbox"/> Return
			Dispose

Comments:

Sample Label ID:

- LB-FF-WC-02-05-20141012
- LB-FF-WC-04-05-20141012
- LB-FF-WC-03-05-20141012
- LB-FF-WC-06-05-20141012
- 05-05
- 08-05
- 07-05
- 09-05

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400902
 Date Received: 13-Nov-14 12:35
 Documented by/date: B.Benedict 01/09/2015

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>MM 1/9/15</u>
Client Comments/Instructions <u>rec'd by email</u>	

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Compensers - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom: FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
	Date: 11/20/2014																	
	Project Name: Harbor TMDL Food Web Sampling																	
	Project Number: 120711-01.07 Task 1																	
	Project Manager: Chris Stransky																	
	Phone Number: (858) 300 4350																	
	Shipment Method:																	
																		ANCHOR OEA 1400903 0.1°C, 0.3°C, 0.3°C
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x		x			Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
111	IA-FF-OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x		x			Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4													x	
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 1100
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

- ≠ 1400902
- ⓑ 1400903
- ⓐ 1400904
- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whoe Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	ANCHOR QEA 1400903
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01.07 Task 1																		
Project Manager: Chris Stransky																		
Phone Number: (858) 300 4350																		
Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish															Comments/Preservation
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13														
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
128	CS-FF/OF-WS-04-03-201410101010	10/10/14	White Surfprch.	1	x	x												Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x													Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1														
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x													TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3														
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1														L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1														Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <i>YSLB 12/02/14</i>	Company: Anchor QEA	Received By: <i>Kellie Brunet</i>	Company: Vista
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time
Relinquished By:	Company:	Received By:	Company:
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time

> 1400893
 ⓑ 1400903
 ∞ 1400905
 Ⓞ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1505</u>	Initials: <u>BBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.1</u> (uncorrected)	Time: <u>0900</u>		Thermometer ID: IR-1
Temp °C: <u>0.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>299</u> Trk # <u>7718 4040 1830</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:
 Sample ID:
CS-FF-CH-10-03-20141010
-09-03-
-02-03-
-01-03-
-03-03-
-04-03-
-07-03-
-06-03-
-05-03-

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1505</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>-0.3</u> (uncorrected)	Time: <u>0903</u>	Thermometer ID: IR-1	
Temp °C: <u>-0.3</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="radio"/> COC	<input type="radio"/> Sample Container	<input type="radio"/> None
Shipping Container	<input type="radio"/> Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
			<input checked="" type="radio"/> Return
			<input type="radio"/> Dispose

Comments:

Sample ID: 1A-FF-WC-08-07-2014/011
 ↓ 10-07 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400903 TAT 28

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BBB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/10/14 1505</u>	Initials: <u>BBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>C1</u>
Delivered By:	<u>(FedEx)</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>(Ice)</u>	Blue Ice	Dry Ice
		None	
Temp °C: <u>0.3</u> (uncorrected)	Time: <u>0909</u>		Thermometer ID: IR-1
Temp °C: <u>0.3</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>	
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>(Client)</u>	Retain
		<u>(Return)</u>	Dispose

Comments:

CS-FF-LF-02-03-20141010

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400903
 Date Received: 13-Nov-14 12:36
 Documented by/date: B.Benedict 12/10/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|--|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date: <u>MM 12/3/15</u>
Client Comments/Instructions: <u>COC rec'd by email</u>	

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) rpa, 166C	PCBs (low-res) 8770 Congeners - is conducted on sample ID - FF/OF (ONLY, NOT Offal) (FF)	CALCEINCE	DDTs (8770 SIM DDx WDDNU) - CALCEINCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CIN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (oloth) and label (riboc) bag and NEW ID tag with replicate ID and fish total Length (TL) size in cm. If multiple fish components in middle size fish.	See 'notes' section at bottom. FF/OF fish packages will produce two full sets of labels. Because of this, the entire offal will be tested for chemistry and no offal will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
1	FH-FF-CH-01-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca Halibut	1	x	x		x	x	x	x							Scales already collected. Skin Off Fillets + Ortol from this replicate.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca Halibut	1	x			x	x	x								Scales already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca Halibut	5														"Lab prt 027" Contains 5 fish in 1 foil (A1-A5) Orig Archive.
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch	1-2	x	x		x	x	x	x			x				Scales already collected. Skin-Off Fillets + Offal from this replicate. CONFIRMED: NEEDS TO HAVE Archive A-4 ADDED to replicates + scales taken
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch	2	x			x	x	x								Scales already collected.
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch	3	x			x	x	x								Scales already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch	3	x			x	x	x								Scales already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch	3	x			x	x	x								Scales already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch	3	x			x	x	x								Scales already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch	1	x			x	x	x								Scales already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch	1	x			x	x	x								Scales already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch	1	x			x	x	x								Scales already collected.

ANCHOR OEA 1400904
0.2°C, 0.3°C, -0.9°C, -2.1°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID). Fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, CL = otolith, SC = scale. Location IDs: FH = Fish Harbor, CA = Los Angeles Outer Harbor, CS = Consolidated Slip, ID = Long Beach Inner Harbor, LA = Los Angeles Inner Harbor) NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Relinquished By: Replacement page
Signature/Printed Name: _____
Date/Time: 12/26/14 via email

Received By: Original rec'd 12/23/14. Ad. B...
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Date/Time: 12/26/14 14:27

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Date/Time: _____

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Signature/Printed Name: _____
Date/Time: _____

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- Ⓞ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Visla Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) EPA 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label check bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No lastling / keep frozen	Sea notes' section at bottom. FFOF fish replicates will produce two full sets of last. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Fish Type															
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7													Lab pic 028. Contains A1-A7. Ong. archive.	
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x			x					x				TAKE SCALES. Analyze this sample only for lipids and PCBs	
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish.	
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.	
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.	
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish	
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak.	2	x		x	x	x			x	x	x			Scales already collected of both fish in replicate. Note size of fish the Otolith comes from	
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x	x			Scales already collected.	
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak.	1	x		x	x	x			x	x	x			Scales already collected. Note new Sample ID. Re-label bag + tag.	
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak.	1	x	x	x	x	x	x		x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.	
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak.	4											x		4 plus possibly another 4 more archive fish	
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x	x	x	x	x		x		x			Scales already collected. Skin-Off Fillets + Offal from this replicate.	
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	

ANCHOR QEA 1400904

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____


Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Arturo Benedict Vista Company: 12/04/14 HHS
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments					
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1669C	PCBs (low res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CIN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	ANCHOR QEA  1400904	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish																
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x				Scales already collected.	
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x				Scales already collected.	
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x				Scales already collected.	
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5												x		Photo 29. Label says "OA-XX-CA-A-06-20141011"	
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.	
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.	
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.	
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x		x	x	x			x	x					Scales already collected.	
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x					Scales already collected.	
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x		x	x	x			x	x					Scales already collected.	
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x	x	x	x	x		x				x		Scales already collected. Skin-Off Fillets + Offal from this replicate.	
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x			
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x		x	x	x			x	x					Scales already collected.	
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x		x	x	x			x	x					Scales already collected.	
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x		Unknown actual number b/c of on-boat mis-ID	
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			x	Scales already collected.	
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x		x				x		Scales already collected. Skin-Off Fillets + Offal from this replicate.	
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x				Scales already collected.	
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x				Scales already collected.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal. WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Relinquished By: Via email 12/07/14 Company: Anchor QEA
Signature/Printed Name: _____ Date/Time: _____

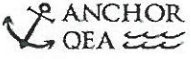
Received By: [Signature] Vista Company: 12/07/14 11:19
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				PCBs (high res) epa 1668C PCBs (low-res) 8270 Congeners - Is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE % Solids (Total Solids) % Lipids (Total Lipids) Fish Fillet Prep (Maximize tissue) Offal Prep Whole Body Fish Prep Prep Sample aliquot to ship to Physits (CN Stable Isotope) Tweezer off 10 pectoral area scales, measure and use envelope Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish. Archive. No testing / keep frozen See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire ofial will be tested for chemistry and no otolith will be kept on this specific replicate.										 1400904				
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01.07 Task 1																		
Project Manager: Chris Stransky Phone Number: (858) 309 4350 Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - Is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDT's (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physits (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire ofial will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x					x			Scales already collected.
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4												x		
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21												x		# of Archive unknown b/c of final sorting
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x	x		x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate.
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch	6	x		x	x	x			x	x					Scales already collected from one fish in this rep.
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch	4	x		x	x	x			x	x					Scales already collected from one fish in this rep.
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x			x	x					Scales already collected from both fish in this Rep #5.
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch	1												x		
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID). fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining ofial after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/20/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

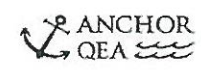
Received By: Beth A. Bredet Vista Company: 12/20/14 11:19
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

* 1400892
 > 1400893
 ~ 1400901
 @ 1400906
 ⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1698C	PCBs (low/res) 82/10 congeners - is conducted on sample ID 'FF/OF' sample fish, but test Fish Filets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep sample alcohol to ship to physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID bag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests - because of this, the entire offal will be tested for elementary and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from (size). No otolith	
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from (size). No otolith	
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x			x	x		x	TAKE SCALES Note which fish taken from. Skin-Off Filets + Offal from this replicate.	
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6														
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g	
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID lo.	
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to	
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x			Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.	
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.	
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	x	x	x	x	x	x						x	Scales already collected. Skin-Off Filets + Offal from this replicate.	
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6														
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x			TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.	



1400904

Vertical handwritten text on the left margin: 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Blue handwritten initials: BSB 12/09/14

Relinquished By: Via email 12/09/14 Company: Anchor QEA
Signature/Printed Name: _____ Date/Time: _____


Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: Antonia Bledgett Vista Company: 12/09/14 120
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Handwritten list of sample IDs:
> 1400893
~ 1400901
≠ 1400902
⊕ 1400904
⊗ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (C/N Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	 1400904
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x				x				Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.	
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
111	IA-FF-OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x						x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x				x				Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.	
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4											x			
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x				x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

Notes: YY-FF-OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____

Received By: Bella Benedict Company: Vista
 Signature/Printed Name: _____ Date/Time: 12/26/14 1458

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

- ≠ 1400 902
- Ⓟ 1400 903
- Ⓢ 1400904
- Ⓞ 1400904

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/22/14 0832</u>	Initials: <u>UBAB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>D2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.2</u> (uncorrected)	Time: <u>0854</u>		Thermometer ID: IR-1
Temp °C: <u>0.2</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>3 of 9</u> Trk # <u>7718 4040 2023</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

IB-OF/FF-CH-01-05-20141012
IB-OF/FF-WS-10-05-20141012

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT _____

Samples Arrival:	Date/Time 11/13/14 0849	Initials: BAB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: BAB	Location: WF-2
			Shelf/Rack: D2
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -0.3 (uncorrected)	Time: 0903		Thermometer ID: IR-1
Temp °C: -0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>4 of 9</u> Trk # <u>7718 4040 1461</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

OA-FF/OF-WC-02-06-2014 10 11
 IA-FF/OF-WC-09-07-2014 10 11

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1400904

TAT

Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBSP	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: UBSP	Location: WF-2
			Shelf/Rack: D2
Delivered By:	FedEx	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	Ice	Blue Ice	Dry Ice
			None
Temp °C: -0.9 (uncorrected)	Time: 0912		Thermometer ID: IR-1
Temp °C: -0.9 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 6 of 9 Trk # 7718 4040 2229	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	Client	Retain
		Return	Dispose

Comments:

Label ID: OA-FF-CH-06-06-20141011(*)
 OA-WO-WS-07-06-20141012 - COCID: Per Email 12/19/14
 OA-FF/OF-WS-07-06-20141013

(*) Email from Ms. Ahr on 12/15/14 addresses the ID to be: OA-FF/OF-CH-06-06-20141011

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/22/14 0832</u>	Initials: <u>BSB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>D2</u>
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: <u>-2.1</u> (uncorrected)	Time: <u>0906</u>		Thermometer ID: IR-1
Temp °C: <u>-2.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>7049</u> Trk # <u>7718 4046 1472</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>	
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

IB-FF/OF-WC-10-05-2014/012

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time <u>11/13/14 0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/22/14 0832</u>	Initials: <u>UBB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>D2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>-1.7</u> (uncorrected)	Time: <u>0916</u>		Thermometer ID: IR-1
Temp °C: <u>-1.7</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>0099</u> Trk # <u>F718 4040 2137</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>	
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

FH-OF/FF-WS-01-08-20141013*
FH-FF/OF-CH-07-08-20141013

* As per email transferred one fish from "FH-08 WS Archive" to Sample with Tracking # 12 ~ 20cm in length. Sample is a total of 2 fish.

Sample Logn 11/2013 ckt

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400904 TAT Std

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBB	Location: WF2
			Shelf/Rack: NA
Logged In:	Date/Time 12/22/14 0832	Initials: UBB	Location: WF2
			Shelf/Rack: D2
Delivered By:	<u>(FedEx)</u>	UPS	On Trac
		DHL	Hand Delivered
			Other
Preservation:	<u>(Ice)</u>	Blue Ice	Dry Ice
			None
Temp °C: 0.3 (uncorrected)	Time: 0909		Thermometer ID: IR-1
Temp °C: 0.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>9 of 9</u> Trk # <u>7718 4040 2230</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<u>(Client)</u>	Retain
			<u>(Return)</u>
			Dispose

Comments:

Sample ID:
FH-FF/OF-WC-10-08-20141013

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400904
 Date Received: 13-Nov-14 12:36
 Documented by/date: B.Benedict 12/22/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | | | |
|--|---|-----|-----------|
| <input type="checkbox"/> Temperature outside < 6°C Range | Samples Affected: _____ | | |
| Temperature _____°C | Ice Present? | Yes | No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size | | |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken | | |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type | | |


Comments:

COC ID:
 OA-FF/OF-CH-06-06-20141011
 OA-FF/OF-WS-07-06-20141013

Label ID:
 OA-FF-CH-06-06-20141011
 OA-WO-WS-07-06-20141012

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>MM 12/24/15</u>
Client Comments/Instructions <u>COC rec'd by email label ID correct per 12/15/14 email</u>	

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments		 1400905 0.4%, 0.1%		
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (658) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1698C	PCBs (low res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physits (C/N Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.		Archive. No testing / keep frozen.	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x	x		x	x	x	x						x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x			x	x	x	x							TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x			x	x	x	x							TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13													x	
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
128	CS-FF/OF-WS-04-03-2014101010	10/10/14	White Surfprch.	1	x	x		x	x	x	x						x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x			x	x	x			x	x				Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1													x	
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x			x	x	x	x							TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3													x	
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1													x	L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1													x	Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
140																		

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <u>Via email 12/02/14</u>	Company: <u>Anchor QEA</u>	Received By: <u>Elizabeth Benedict Vista</u>	Company: <u>12/04/14 1207</u>
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time
Relinquished By:	Company:	Received By:	Company:
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time

> 1400893
 Ⓟ 1400903
 ∞ 1400905
 Ⓟ 1400906

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400905 TAT 28

Samples Arrival:	Date/Time <u>11/13/14</u> <u>0849</u>	Initials: <u>UBB</u>	Location: <u>WF-2</u>
			Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/12/14</u> <u>0926</u>	Initials: <u>UBB</u>	Location: <u>WF2</u>
			Shelf/Rack: <u>D2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.1</u> (uncorrected)	Time: <u>0900</u>		Thermometer ID: IR-1
Temp °C: <u>0.1</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>299</u> Trk # <u>7718 4040 1830</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?		✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

Sample ID: CS-OF/FF-CH-08-03-20141010

SAMPLE LOG-IN CHECKLIST



1400905

Vista Project #: _____ TAT 28

Samples Arrival:	Date/Time 11/13/14 0849	Initials: UBAB	Location: WF 2
			Shelf/Rack: NA
Logged In:	Date/Time 12/2/14 0926	Initials: UBAB	Location: WF-2 WF-2 ^{UBAB} 12/2/14
			Shelf/Rack: D2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 0.4 (uncorrected)	Time: 0920		Thermometer ID: IR-1
Temp °C: 0.4 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>1 of 9</u> Trk # <u>7718 4040 1759</u>	✓		
Sample Container Intact?			
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓	✓	
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	<input type="checkbox"/> COC	<input type="checkbox"/> Sample Container	<input type="checkbox"/> None
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose

Comments:

Sample ID: CS-FF/OF-WS-04-03-20141010

Chain of Custody Anomaly/Sample Acceptance Form



Client: AMEC Earth & Environmental
 Contact: Chris Stransky
 Email: chris.stransky@amec.com
 Phone: (858) 300-4350

Workorder Number: 1400905
 Date Received: 13-Nov-14 13:28
 Documented by/date: B.Benedict 12/12/2014

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|--|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____ °C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input type="checkbox"/> Sample ID Discrepancy | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date: <u>MMH 1/30/15</u>
Client Comments/Instructions: <u>COC rec'd by email.</u>	

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista 1104 Windfield Way El Dorado Hills, CA 95762 Date: 12/15/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method: FedEx Overnight				Vista Test Parameters (Sub's noted in Bold)											Comments/Preservation							
Track #	Field Sample ID	Collection Date	Bivalve Type	No. of Bivalves in Replicate	PCBs (high res) epa 1668C	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Mussel Prep	Oyster Prep	Prep Sample aliquot to ship to Physics (C/N Stable Isotope)											
1	OA-ST-MS-COMP1-01-2014-10-22	10/22/14	Mussel	70	x	x	x	x	x		x											
2	OA-ST-MS-COMP2-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
3	OA-ST-MS-COMP3-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
4	OA-ST-MS-COMP4-01-2014-10-22	10/22/14	Mussel	68	x	x	x	x	x		x											
5	OA-ST-MS-COMP5-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x											
6	IA-ST-MS-COMP1-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x											
7	IA-ST-MS-COMP2-02-2014-10-22	10/22/14	Mussel	32	x	x	x	x	x		x											
8	IA-ST-MS-COMP3-02-2014-10-22	10/22/14	Mussel	49	x	x	x	x	x		x											
9	IA-ST-MS-COMP4-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x											
10	IA-ST-MS-COMP5-02-2014-10-22	10/22/14	Mussel	42	x	x	x	x	x		x											
11	CS-ST-OY-COMP1-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
12	CS-ST-OY-COMP2-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
13	CS-ST-OY-COMP3-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
14	CS-ST-OY-COMP4-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
15	CS-ST-OY-COMP5-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x											
16	IB-ST-MS-COMP1-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
17	IB-ST-MS-COMP2-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
18	IB-ST-MS-COMP3-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											
19	IB-ST-MS-COMP4-04-2014-10-27	10/27/14	Mussel	61	x	x	x	x	x		x											
20	IB-ST-MS-COMP5-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x											

1400960

Relinquished By: Michelle Bowman Company: AMEC
Signature/Printed Name: Michelle Bowman Date/Time: 12/15/2014 1547

Received By: Bella Bruchit B. Benedict Company: Vista
Signature/Printed Name: Bella Bruchit B. Benedict Date/Time: 12/16/14 0909

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT STD

Samples Arrival:	Date/Time 12/16/14 0844	Initials: BMB	Location: WF-2
Logged In:	Date/Time 12/17/14 0957	Initials: BMB	Location: WF-2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
			<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
			<input type="checkbox"/> None
Temp °C: -0.2 (uncorrected)	Time: 0910		Thermometer ID: IR-1
Temp °C: -0.2 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 1 of 5 Trk # 772245467835	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input checked="" type="checkbox"/> Return
	Retain		Dispose

Comments:

Sample Label ID: IA-ST-MS-Comp1-02-2014-10-22

↓

Comp 3

Comp 4

Comp 2 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: VBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957	Initials: VBSB	Location: WF-2
			Shelf/Rack: B4
Delivered By:	<u>FedEx</u>	UPS	On Trac
		DHL	Hand Delivered
		Other	
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C: -1.4 (uncorrected)	Time: 0915		Thermometer ID: IR-1
Temp °C: -1.4 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 2 of 5 Trk # 772245467950	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? NA	COC	Sample Container	<u>None</u>
Shipping Container	Vista	<u>Client</u>	Retain <u>Return</u> Dispose

Comments:

Sample label/ID: IB-ST-MS-Comp3-04-2014-10-27
 ↓
 Comp 4-04
 ↓
 Comp 1
 ↓
 Comp 2

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time <u>12/16/14 0844</u>	Initials: <u>YB/B</u>	Location: <u>WF-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>12/17/14 0957</u>	Initials: <u>YB/B</u>	Location: <u>WF2</u> Shelf/Rack: <u>B4</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>-0.4</u> (uncorrected)	Time: <u>0920</u>		Thermometer ID: IR-1
Temp °C: <u>0.4</u> (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill <u>3 of 5</u> Trk # <u>772245467754</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented? <u>NA</u>	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain <input checked="" type="checkbox"/> Return <input type="checkbox"/> Dispose

Comments:

Sample Label ID: CS-ST-04-Comp 4-03-2014-10-22

↓
 Comp 1-03
 Comp 3-03
 Comp 2-03
 ↓

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: YBSB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957	Initials: YBSB	Location: WF 2
			Shelf/Rack: B4
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: 0.7 (uncorrected)	Time: 0935		Thermometer ID: IR-1
Temp °C: 0.7 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill 4 of 5 Trk # 7722 4546 7489	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

Sample label ID: OA-ST-MS-Comp 3-01-2014-10-22
 ↓ Comp 4 ↓
 Comp 2
 Comp 1

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400960 TAT Std

Samples Arrival:	Date/Time 12/16/14 0844	Initials: UBB	Location: WF-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/17/14 0957 0944 UBB 12/17/14	Initials: UBB	Location: WF-2
			Shelf/Rack: B4
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: -1.8 (uncorrected)	Time: 0930		Thermometer ID: IR-1
Temp °C: -1.8 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill 5 of 5 Trk # 7722 45468393	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented? NA			
	COC	Sample Container	None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	<input checked="" type="checkbox"/> Return
		Retain	Dispose

Comments:

Sample ID Labels : IB-ST-MS-COMP05-04-~~1027-2014~~*
 CS-ST-OY-COMP5-03-2014-10-22
 OA-ST-MS-comp5-01-2014-10-22
 IA-ST-MS-COMP5-02-2014-10-22

*date wasn't listed in ID. UBB 12/17/14

Chain-of-Custody Record



Report to:
AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350
Project Manager: Chris Stransky
Project Number: 1400893
Requested TAT: Standard

Samples sent to:
Danielle Gonsman
Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0708

Sample Information

Vista Number	Sample Name	Sampled	Matrix	#Containers	
1400893-01	IB-WO-SS-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-02	IB-WO-SS-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-03	IB-WO-SS-06-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-04	IB-WO-WS-07-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-05	IB-WO-WS-08-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-06	IB-WO-WS-09-05-20141012	12-Oct-14 00:00	Tissue	1	
1400893-07	CS-WO-WS-01-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-08	CS-WO-WS-02-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-09	CS-WO-WS-03-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-10	CS-WO-WS-05-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-11	CS-WO-WS-06-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-12	CS-WO-WS-07-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-13	CS-WO-WS-08-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-14	CS-WO-WS-09-03-20141010	10-Oct-14 00:00	Tissue	1	
1400893-15	CS-WO-WS-10-03-20141010	10-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1307 1/13/15</i></p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time) <i>[Signature]</i></p>	<p>Received (Printed Name/Signature/Date/Time) <i>7. PATEL 1/14/15 1040 [Signature]</i></p>

Cal. Science	
Aliquot Weights	
1400893	
I.D.	Weight (g)
1400893-01	20.6
1400893-02	21.7
1400893-03	25.2
1400893-04	39.5
1400893-05	51.2
1400893-06	50.7
1400893-07	34.7
1400893-08	68.0
1400893-09	47.1
1400893-10	54.3
1400893-11	34.7
1400893-12	34.1
1400893-13	35.4
1400893-14	29.3
1400893-15	59.2

0708

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J142214082303uv

El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 40.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



Ref # 1400892/1400893
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494

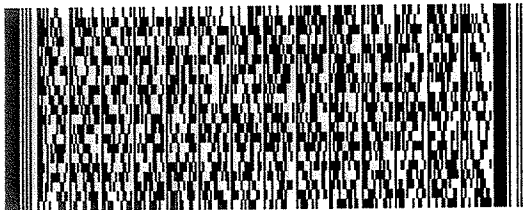
BILL SENDER

Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

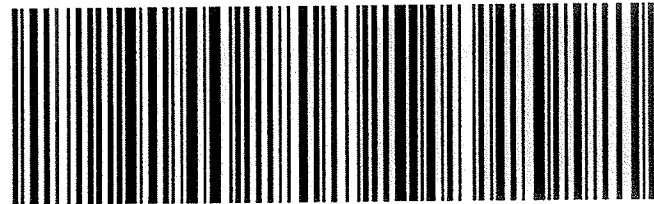
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6715 7920
0201



92 APVA

92841
CA-US
SNA



522G1/8F15/8AC9

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Calscience

WORK ORDER #: 15-01-0708

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.5 °C + 0.2 °C (CF) = 2.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 972

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 659

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** 659

Return to Contents

Chain-of-Custody Record



Report to:

AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky
Project Number: 1400892
Requested TAT: Standard

Ship to:
Danielle Gonsman
Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0709

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400892-01	FH-WO-WS-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-02	FH-WO-WS-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-03	FH-WO-WS-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-04	FH-WO-WS-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-05	FH-WO-WS-06-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-06	FH-WO-WS-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-07	FH-WO-WS-08-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-08	FH-WO-WS-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-09	OA-WO-WS-01-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-10	OA-WO-WS-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-11	OA-WO-WS-03-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-12	OA-WO-WS-04-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-13	OA-WO-WS-05-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-14	OA-WO-WS-06-06-20141013	13-Oct-14 00:00	Tissue	1		
1400892-15	OA-WO-SS-08-06-20141013	13-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time Betina Benedict, Jan.13,2015 <i>Betina Benedict 1306 1/13/15</i>)</p>	<p>Received (Printed Name/Signature/Date/Time Jan.13,2015 1530 FedEx)</p>	<p>Relinquished (Printed Name/Signature/Date/Time <i>BATEL 1/14/15 1040</i>)</p>	<p>Page 31 of 35</p>
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Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400892
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

0709

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400892-16	OA-WO-SS-09-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-17	OA-WO-SS-10-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-18	IB-WO-SS-01-05-20141012	12-Oct-14 00:00	Tissue	1		
1400892-19	IB-WO-SS-02-05-20141012	12-Oct-14 00:00	Tissue	1		
1400892-20	IB-WO-SS-03-05-20141012	12-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1307 1/13/15</p>	<p>Received (Printed Name/Signature/Date/Time) Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) <i>F. PATEL</i> 1/14/15 10:40</p>

Aliquot Weight 1400892

ID Number	C.S. (grams)
1400892-02A	25.10
1400892-03A	21.00
1400892-04A	23.30
1400892-05A	23.90
1400892-06A	54.70
1400892-07A	57.50
1400892-08A	61.30
1400892-09A	26.40
1400892-10A	27.20
1400892-11A	30.50
1400892-12A	31.40
1400892-13A	36.10
1400892-14A	50.10
1400892-15A	27.60
1400892-16A	20.10
1400892-17A	29.50
1400892-18A	29.60
1400892-19A	29.70
1400892-20A	27.00

0709

0709

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J142214092303uv

El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 40.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



Ref # 1400892/1400893
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494

BILL SENDER

Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

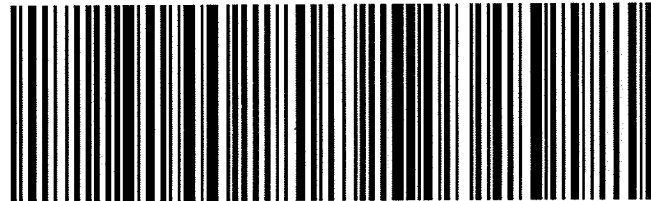
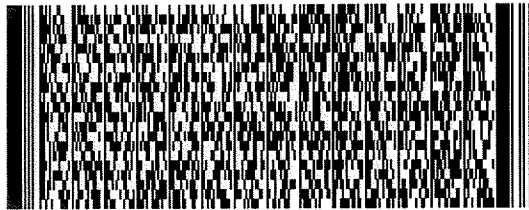
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6715 7920

0201

92841
CA-US
SNA

92 APVA



522G18F158AC9

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Calscience

WORK ORDER #: **15-01-0709**

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMBC

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.5 °C + 0.2°C (CF) = 2.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Collection date/time, matrix, and/or # of containers logged in based on sample labels.

No analysis requested. Not relinquished. No date/time relinquished.

Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------------------	--------------------------	--------------------------	-------------------------------------

Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------

Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	-------------------------------------

Aqueous samples received within 15-minute holding time

<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Unpreserved vials received for Volatiles analysis

Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBn₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJn₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 972

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 679

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 679

Return to Contents

Chain-of-Custody Record



Report to:

AMEC
9210 Sky Park Court
Suite 200

San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky

Project Number: 1400901

Requested TAT: Standard

Ship To:

Danielle Gonsman
Eurofins Calscience

7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

15-01-0710

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400901-01	OA-FF-CH-03-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-02	OA-FF-CH-04-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-03	OA-FF-CH-05-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-04	OA-FF-CH-07-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-05	OA-FF-CH-08-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-06	OA-FF-CH-09-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-07	OA-FF-CH-10-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-08	OA-FF-WC-01-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-09	OA-FF-WC-03-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-10	OA-FF-WC-04-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-11	OA-FF-WC-05-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-12	OA-FF-WC-06-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-13	OA-FF-WC-07-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-14	OA-FF-WC-08-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-15	OA-FF-WC-09-06-20141011	11-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1300 11/13/15</p>	<p>Received FedEx (Printed Name/Signature/Date/Time) Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) <i>[Signature]</i> 1/14/15 1040 J. PATEL</p>

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400901
 Requested TAT: Standard

Ship To:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400901-16	OA-FF-WC-10-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-17	OA-FF-LF-01-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-18	OA-FF-LF-02-06-20141011	11-Oct-14 00:00	Tissue	1	
1400901-19	IB-FF-CH-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400901-20	IB-FF-WC-01-05-20141012	12-Oct-14 00:00	Tissue	1	

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict</i> 1308 1/13/15</p>	<p>Received (Printed Name/Signature/Date/Time) Jan.13, 2015 1530 FedEx</p>	<p>Page 25 of 28</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) <i>[Signature]</i> 1/14/15 1040 J. PATEL</p>	<p>28</p>

Aliquot Weights	
1400901	
I.D.	Weight (g)
1400901-01	105.9
1400901-02	130.8
1400901-03	124.3
1400901-04	80.5
1400901-05	45.9
1400901-06	124.4
1400901-07	85.6
1400901-08	22.2
1400901-09	19.0
1400901-10	17.4
1400901-11	18.0
1400901-12	25.6
1400901-13	15.6
1400901-14	21.1
1400901-15	12.6
1400901-16	17.2
1400901-17	45.8
1400901-18	61.0
1400901-19	56.6
1400901-20	18.6

0710

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 43.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

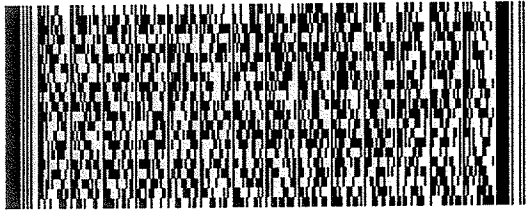
BILL SENDER

Ref # 1400900/1400901
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

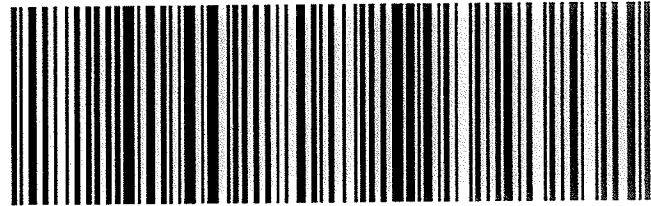
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6713 7220
0201



92 APVA

92841
CA-US
SNA



522G1/8F15/8AC9

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Calscience

WORK ORDER #: 15-01-0710

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Amec

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.1 °C + 0.2°C (CF) = 2.3 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBn₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJn₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 972

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 679

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 679

Return to Contents

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400900
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-0711

Sample Information

VistaIDNumber	SampleName	Sampled	Matrix	#Containers		
1400900-01	FH-FF-CH-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-02	FH-FF-CH-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-03	FH-FF-CH-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-04	FH-FF-CH-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-05	FH-FF-CH-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-06	FH-FF-CH-06-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-07	FH-FF-CH-08-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-08	FH-FF-CH-09-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-09	FH-FF-CH-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-10	FH-FF-WC-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-11	FH-FF-WC-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-12	FH-FF-WC-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-13	FH-FF-WC-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-14	FH-FF-WC-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400900-15	FH-FF-WC-06-08-20141013	13-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1307 1/13/15</i></p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530 Received (Printed Name/Signature/Date/Time) T. PATEL <i>[Signature]</i> 1/14/15 1040</p>
---	---

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400900
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

0711

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400900-16	FH-FF-WC-07-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-17	FH-FF-WC-08-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-18	FH-FF-WC-09-08-20141013	13-Oct-14 00:00	Tissue	1
1400900-19	OA-FF-CH-01-06-20141011	11-Oct-14 00:00	Tissue	1
1400900-20	OA-FF-CH-02-06-20141011	11-Oct-14 00:00	Tissue	1

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1307 1/13/15</i></p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530</p>	<p>Page 25 of 28</p>
<p>Relinquished (Printed Name/Signature/Date/Time) <i>[Signature]</i></p>	<p>Received (Printed Name/Signature/Date/Time) J. PATEL <i>[Signature]</i> 1/14/15 1040</p>	

(0711)

Aliquot Weight 1400900

ID Number	C.S. (grams)
1400900-01A	170.80
1400900-02A	93.40
1400900-03A	89.10
1400900-04A	89.40
1400900-05A	71.50
1400900-06A	85.00
1400900-07A	33.80
1400900-08A	37.50
1400900-09A	31.20
1400900-10A	23.90
1400900-11A	32.20
1400900-12A	32.20
1400900-13A	21.60
1400900-14A	22.70
1400900-15A	39.70
1400900-16A	45.80
1400900-17A	14.70
1400900-18A	17.40
1400900-19A	108.80
1400900-20A	145.90

0711

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 13JAN15
ActWgt: 43.0 LB
CAD: 104489254/INET3550

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

BILL SENDER

Ref # 1400900/1400901
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

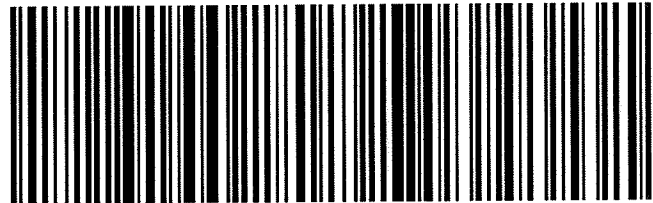
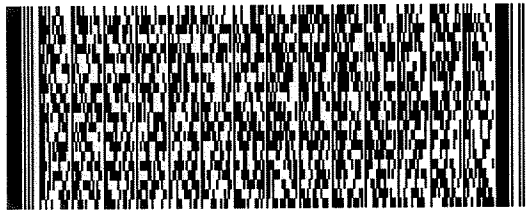
WED - 14 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 6713 7220

0201

92841
CA-US
SNA

92 APVA



522G18F158AC9

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience

WORK ORDER #: 15-01-0711

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Amec

DATE: 01/14/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.1 °C + 0.2°C (CF) = 2.3 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 15

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 15

Sample _____ No (Not Intact) Not Present Checked by: 972

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....			
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{znna} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 972

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 619

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure znna: ZnAc₂+NaOH f: Filtered Scanned by: 619

Return to Contents

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400905
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1415

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400905-01	CS-FF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1
1400905-02	CS-OF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1
1400905-03	CS-FF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1
1400905-04	CS-OF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1

Special Requests: See Original COC

<p>Relinquished Bettina Benedikt <i>Bettina Benedikt 1/22/15 1413</i></p>	<p>Received (Printed Name/Signature/Date/Time) <i>PREET SORIANO, Momo</i> EU 1/23/15 0945</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time)</p>

1415

ANCHOR OEA
1400905
0.4% O.1%

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Vista Test Parameters (Sub's noted in Bold)										Comments	Comments/Preservation	
				PCBs (high res) EPA 168C	PCBs (low res) 2270 congeners - conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF)	D/DMU - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to Phys (C/N Stable isotopes)	Weather off 10 pectoral area scales, measure and use	Save fish head (gills) and label stock bag and NEW ID tag with replicate ID and fish Total Length (TL) in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.			Archive, No testing / keep frozen
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	13	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
125	CS-WO-W5-01-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
126	CS-WO-W5-02-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
127	CS-WO-W5-03-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Offal from this replicate.
128	CS-FF/OF-W5-04-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
129	CS-WO-W5-05-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
130	CS-WO-W5-06-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
131	CS-WO-W5-07-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
132	CS-WO-W5-08-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
133	CS-WO-W5-09-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
134	CS-WO-W5-10-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
135	CS-WO-W5-Archive-03-20141010	10/10/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	L side Photo 37. Firm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3	X	X	X	X	X	X	X	X	X	X	X	Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-8
138	FH-WO-W5-Archive-08-20141014-FormerRep9	10/14/14	White Surfperch	1	X	X	X	X	X	X	X	X	X	X	X	
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via email 12/02/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: [Signature]
 Requested By: [Signature] Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: [Signature]

7 1400893
 B 1400903
 ∞ 1400905
 ∅ 1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way
El Dorado Hills, CA 95762

Origin ID: MHRA



Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

7415

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

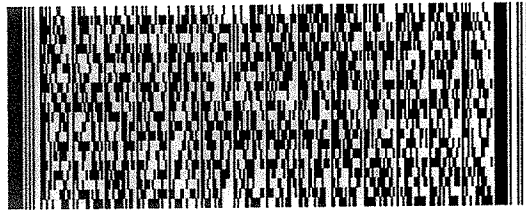
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

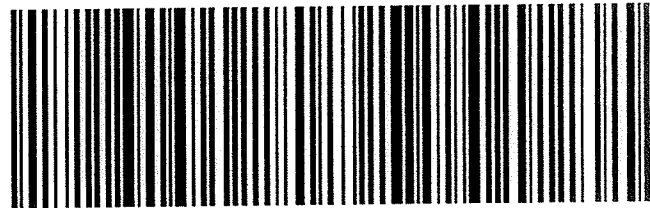
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
0201



92 APVA

92841
CA-US
SNA



537J18F15/EE4B

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience

WORK ORDER #: 15-01-1415

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2°C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: ^{tissue} 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{nna} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 802

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{nna}: ZnAc₂+NaOH f: Filtered Scanned by: 802

Return to Contents

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400903
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1416

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400903-01	IA-FF-WC-08-07-20141011	11-Oct-14 00:00	Tissue	1		
1400903-02	IA-FF-WC-10-07-20141011	11-Oct-14 00:00	Tissue	1		
1400903-03	CS-FF-CH-01-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-04	CS-FF-CH-02-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-05	CS-FF-CH-03-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-06	CS-FF-CH-04-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-07	CS-FF-CH-05-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-08	CS-FF-CH-06-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-09	CS-FF-CH-07-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-10	CS-FF-CH-09-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-11	CS-FF-CH-10-03-20141010	10-Oct-14 00:00	Tissue	1		
1400903-12	CS-FF-LF-02-03-20141010	10-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict
Bettina Benedict 1/22/15 1412

Received (Printed Name/Signature/Date/Time)

PRECI-SORIANO, PRIMO EY
 01/23/15 PC 11:23/15

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120714-01-07 Task 1
 Project Manager: Chris Stransky
 Phone Number: (858) 300 4350
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PbA (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" (NOT ORAL) - CALSCIENCE	WDDMU - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Oral Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to	Phys (CN Stable Isotope)	Tweezer off 10 pectoral area	Scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm, if multiple fish in replicate, choose fish directed to in comments or middle size fish.	Active: No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire otolith will be kept on this specific replicate.	Comments
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2															Comments/Preservation
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfperch	3															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	X														Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	X														Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	X														Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	X														Scales already collected. TAKE FISH HEAD from TL=21cm, SL=20cm fish.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	X														Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	X														Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	X														Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
111	IA-FF-OF-WC-09-07-20141011	10/11/14	White Croak.	1	X												X		Scales already collected. Skin-Off Filets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	X														Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4															TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	X														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off filet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Ship; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: *Vista* Signature/Printed Name: Vista Date/Time: 12/04/14 11:00 Company: Anchor OEA

Relinquished By: *PRECY SORAXIO* Signature/Printed Name: PRECY SORAXIO Date/Time: 11/23/14 Company: Vista

- 7 1400902
- Ⓡ 1400903
- Ⓢ 1400904
- Ⓣ 1400906

1416

ANCHOR
QEA
1400903

Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Vista Test Parameters (Sub's noted in Bold)										Comments			Comments/Preservation	
				PCBs (high res) eps 1688C	PCBs (low res) 8270 congeners - conducted on sample ID FF/OF - sample fish, but not fish file (FF ONLY) (NOT OF)	DTS (8270 SIM DDx W/D/MU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotops)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otoith) and label zpick bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire otolith will be kept on the specific replicate.		
121	CS-FF-OF-CH-08-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	13	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
124	CS-WO-CH-Archive-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
127	CS-FF/OF-WS-04-03-2014101010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Offal from this replicate.
128	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
129	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
130	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
131	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
132	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
133	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
134	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.
136	CS-FF-IF-02-03-20141010	10/10/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otoith) ID to.
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3	X	X	X	X	X	X	X	X	X	X	X	X	X	L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	Right side of "Lab Pics 036". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID; fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Michelle Panisset Company: Anchor QEA Date/Time: 10/14/14

Requested By: Michelle Panisset Company: Anchor QEA Date/Time: 10/14/14

Requested By: Michelle Panisset Company: Anchor QEA Date/Time: 10/14/14

1400893
1400903
1400905
1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J151015011403uv

El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

7416

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

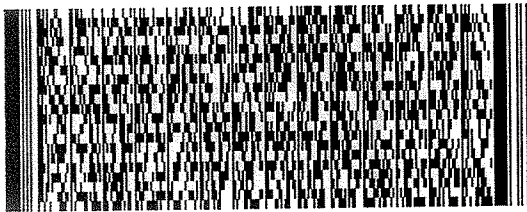
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

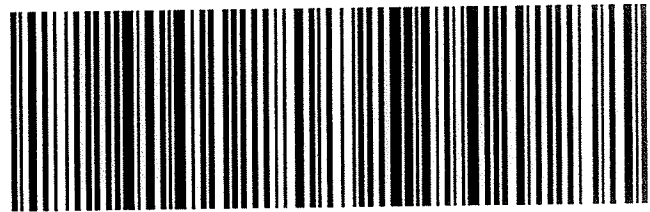
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
0201



92 APVA

92841
CA-US
SNA



537J1/8F15/EE4B

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience

WORK ORDER #: **15-01-**1416

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2 °C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_zna 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 679

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure zna: ZnAc₂+NaOH f: Filtered Scanned by: 679

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Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1417

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers	
1400902-01	IB-FF-WC-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-02	IB-FF-WC-03-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-03	IB-FF-WC-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-04	IB-FF-WC-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-05	IB-FF-WC-06-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-06	IB-FF-WC-07-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-07	IB-FF-WC-08-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-08	IB-FF-WC-09-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-09	IB-FF-LF-01-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-10	IB-FF-LF-02-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-11	IB-FF-LF-03-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-12	IB-FF-LF-04-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-13	IB-FF-LF-05-05-20141012	12-Oct-14 00:00	Tissue	1	
1400902-14	IA-FF-WC-01-07-20141011	11-Oct-14 00:00	Tissue	1	
1400902-15	IA-FF-WC-02-07-20141011	11-Oct-14 00:00	Tissue	1	

Special Requests: See Original COC

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict</i> 1/22/15 1411</p>	<p>Received (Printed Name/Signature/Date/Time) PREEY SOPHANO, Ph.D. 1/22/15</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) 0947</p>

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

1417

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400902-16	IA-FF-WC-03-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-17	IA-FF-WC-04-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-18	IA-FF-WC-05-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-19	IA-FF-WC-06-07-20141011	11-Oct-14 00:00	Tissue	1
1400902-20	IA-FF-WC-07-07-20141011	11-Oct-14 00:00	Tissue	1

Special Requests: See Original COC

Relinquished Bettina Benedict <i>Bettina Benedict</i>	Received (Printed Name/Signature/Date/Time) PRECY SORIANO, PRONIA <i>PRECY SORIANO, PRONIA</i>	Page 31 of 35 1/23/15 0945
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)	1/22/15 14U 11/22/15 14U

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista

Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Stranasy
 Phone Number: (858) 300 4360
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID FFOF (sample fish, but test Fish Filets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DTR (8270 SIM DX W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.	Comments/Preservation
101	IA-WO-1F-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfperch	3														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4														TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Received By: Via Email 10/20/14 Company: Anchor OEA Date/Time: 10/20/14 10:09
 Signature/Printed Name: Bethia Benedict Vista
 Signature/Printed Name: Walter Soriano Company: ES Date/Time: 09/11
 Signature/Printed Name: Walter Soriano Company: ES Date/Time: 11/21/14

7 1400902
 8 1400903
 9 1400904
 0 1400906

1417

ANCHOR
QEA

1400902

0.20g, 0.39g, 2.1g

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Stranady
 Phone Number: (658) 300 4350
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (High res) epa 1698C	PCBs (low res) 2270 Congeners - is conducted on sample ID FF/OF	CALSCIENCE ONLY (NOT OF) - sample fish, but test Fish Filets (FF)	DDT (2270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	FF/OF Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (CN Stable Isotope)	Twazoff 10 pectoral area Scales, measure and use envelope	Save fish head (goby) and label replicate ID and Fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes' section at bottom. FF/OF fish replicates will produce two full sets of data. Because of this, the entire data set will be kept on the specific replicate.	Comments/Preservation
81	IB-WO-WC-08-05-20141012	10/12/14	White Surfprch	1	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.	
82	IB-WO-WC-09-05-20141012	10/12/14	White Surfprch	1	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.	
83	IB-FF/OF-W5-10-05-20141012	10/12/14	White Surfprch	1		X		X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from. Skin-Off Filets + Offal from this replicate.	
84	IB-WO-WC-Archive-05-20141012	10/12/14	White Surfprch	6				X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.	
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish.	
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size), 130g	
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size), 130g	
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.	
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X	X	Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.	
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.	
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.	
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Filets + Offal from this replicate.	
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6				X	X	X	X	X	X	X	X	X	Scales already collected. TAKE FISH HEAD from TL=24cm, SL=21cm fish.	
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	X			X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#; DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfprch, WS = White Surfprch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, LA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Reviewed By: [Signature] Date: 12/03/14 Company: Anchor OEA
 Signature/Printed Name: [Signature] Date/Time: 12/03/14

Received By: [Signature] Date: 12/03/14 Company: QEA
 Signature/Printed Name: [Signature] Date/Time: 12/03/14

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊖ 1400906

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



J151015011403uv

El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

1417

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

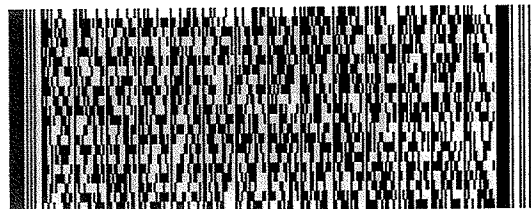
BILL SENDER

Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

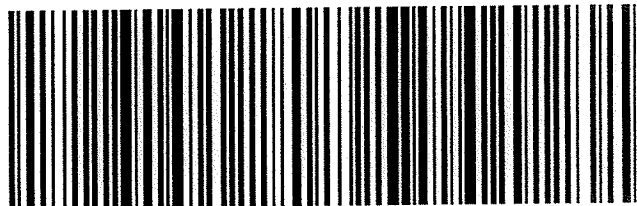
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 2400
0201



92 APVA

92841
CA-US
SNA



537J1/8F15/EE4B

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Calscience

WORK ORDER #: 15-01-1417

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2 °C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A

Checked by: 836

Sample _____ No (Not Intact) Not Present

Checked by: 965

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: ^{Tissue} 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{z_{na}} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 659

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** 659

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Chain-of-Custody Record

15-01-1418

1418

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers
1400960-01	OA-ST-MS-COMP1-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-02	OA-ST-MS-COMP2-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-03	OA-ST-MS-COMP3-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-04	OA-ST-MS-COMP4-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-05	OA-ST-MS-COMP5-01-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-06	IA-ST-MS-COMP1-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-07	IA-ST-MS-COMP2-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-08	IA-ST-MS-COMP3-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-09	IA-ST-MS-COMP4-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-10	IA-ST-MS-COMP5-02-2014-10-22	22-Oct-14 00:00	Tissue	1
1400960-11	CS-ST-OY-COMP1-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-12	CS-ST-OY-COMP2-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-13	CS-ST-OY-COMP3-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-14	CS-ST-OY-COMP4-03-2014-10-2	22-Oct-14 00:00	Tissue	1
1400960-15	CS-ST-OY-COMP5-03-2014-10-2	22-Oct-14 00:00	Tissue	1

Special Requests: See Original COC

<p>Relinquished Bettina Benedict <i>Bettina Benedict</i> 1/22/15 1413</p>	<p>Received (Printed Name/Signature/Date/Time) <i>PRECY SORIANO</i> 11/23/15 BY 0988</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time) (Printed Name/Signature/Date/Time)</p>

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

5114

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400960-16	IB-ST-MS-COMP1-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-17	IB-ST-MS-COMP2-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-18	IB-ST-MS-COMP3-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-19	IB-ST-MS-COMP4-04-2014-10-27	27-Oct-14 00:00	Tissue	1		
1400960-20	IB-ST-MS-COMP5-04-2014-10-27	27-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished Bettina Benedict <i>Bettina Benedict</i>	(Printed Name/Signature/Date/Time) 11/23/15 0945	Page 27 of 30
Relinquished (Printed Name/Signature/Date/Time)	(Printed Name/Signature/Date/Time) PREY SPRAXO	(Printed Name/Signature/Date/Time) 11/23/15 0945

1418

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 1104 Windfield Way El Dorado Hills, CA 95762
 Date: 12/16/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Strainsky
 Phone Number: (858) 300 4350
 Shipment Method: FedEx Overnight

Track #	Field Sample ID	Collection Date	Bivalve Type	Vista Test Parameters (Sub's noted in Bold)						Comments/Preservation		
				PCBs (high res) epa 1668C	D/Ts (8270 SIM DDx W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Mussel Prep	Oyster Prep		Prep Sample aliquot to ship to Physis (C/N Stable isotope)	
1	OA-ST-MS-COMP1-01-2014-10-22	10/22/14	Mussel	70	X	X	X	X	X	X		1400960
2	OA-ST-MS-COMP2-01-2014-10-22	10/22/14	Mussel	60	X	X	X	X	X	X		
3	OA-ST-MS-COMP3-01-2014-10-22	10/22/14	Mussel	60	X	X	X	X	X	X		
4	OA-ST-MS-COMP4-01-2014-10-22	10/22/14	Mussel	68	X	X	X	X	X	X		
5	OA-ST-MS-COMP5-01-2014-10-22	10/22/14	Mussel	60	X	X	X	X	X	X		
6	IA-ST-MS-COMP1-02-2014-10-22	10/22/14	Mussel	50	X	X	X	X	X	X		
7	IA-ST-MS-COMP2-02-2014-10-22	10/22/14	Mussel	32	X	X	X	X	X	X		
8	IA-ST-MS-COMP3-02-2014-10-22	10/22/14	Mussel	49	X	X	X	X	X	X		
9	IA-ST-MS-COMP4-02-2014-10-22	10/22/14	Mussel	50	X	X	X	X	X	X		
10	IA-ST-MS-COMP5-02-2014-10-22	10/22/14	Mussel	42	X	X	X	X	X	X		
11	CS-ST-OY-COMP1-03-2014-10-22	10/22/14	Oyster	12	X	X	X	X	X	X		
12	CS-ST-OY-COMP2-03-2014-10-22	10/22/14	Oyster	12	X	X	X	X	X	X		
13	CS-ST-OY-COMP3-03-2014-10-22	10/22/14	Oyster	12	X	X	X	X	X	X		
14	CS-ST-OY-COMP4-03-2014-10-22	10/22/14	Oyster	12	X	X	X	X	X	X		
15	CS-ST-OY-COMP5-03-2014-10-22	10/22/14	Oyster	12	X	X	X	X	X	X		
16	IB-ST-MS-COMP1-04-2014-10-27	10/27/14	Mussel	60	X	X	X	X	X	X		
17	IB-ST-MS-COMP2-04-2014-10-27	10/27/14	Mussel	60	X	X	X	X	X	X		
18	IB-ST-MS-COMP3-04-2014-10-27	10/27/14	Mussel	60	X	X	X	X	X	X		
19	IB-ST-MS-COMP4-04-2014-10-27	10/27/14	Mussel	61	X	X	X	X	X	X		
20	IB-ST-MS-COMP5-04-2014-10-27	10/27/14	Mussel	60	X	X	X	X	X	X		

Relinquished By: Dickie C. Cowman
 Signature/Printed Name
 Company: AmEC
 Date/Time: 12/15/2014 15:17

Received By: Arthur Benedict
 Signature/Printed Name
 Company: Vista
 Date/Time: 12/16/14 0909

Relinquished By: _____
 Signature/Printed Name
 Company: _____
 Date/Time: _____

Received By: Dreino Trech Sorimo
 Signature/Printed Name
 Company: _____
 Date/Time: 12/31/14 0958

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Return to Contents

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

El Dorado Hills, CA 95762

Origin ID: MHRA



Ship Date: 22JAN15
ActWgt: 61.0 LB
CAD: 104489254/INET3610

1418

Delivery Address Bar Code



Ref # 1400902,903,904,905
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

GARDEN GROVE, CA 92841

BILL SENDER

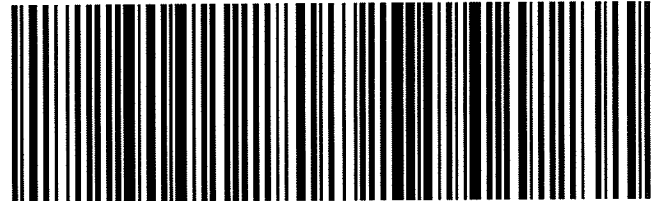
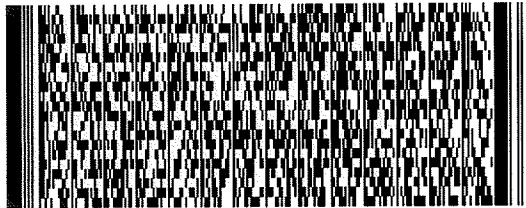
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Calscience

WORK ORDER #: 15-01-1418

SAMPLE RECEIPT FORM

Cooler / of /

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature - 0 . 7 °C + 0.2 °C (CF) = - 0 . 5 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 836

Sample _____ No (Not Intact) Not Present Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....			
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{z_{na}} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 962

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 962

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Chain-of-Custody Record

AMEC

9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

15-01-1419

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400904-01	FH-FF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-02	FH-OF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-03	FH-FF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-04	FH-OF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-05	FH-FF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-06	FH-OF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400904-07	OA-FF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-08	OA-OF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-09	OA-FF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1		
1400904-10	OA-OF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1		
1400904-11	OA-FF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-12	OA-OF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400904-13	IB-FF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-14	IB-OF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-15	IB-FF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict

Bettina Benedict 1/22/15 1412

Received (Printed Name/Signature/Date/Time)

Memo, Kelly Saraso 09/15

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record

1119

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Danielle Gonsman
 Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400904-16	IB-OF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-17	IB-FF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-18	IB-OF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1		
1400904-19	IA-FF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1		
1400904-20	IA-OF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1		

Special Requests: See Original COC

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict</i> 11/22/15 142</p>	<p>Received (Printed Name/Signature/Date/Time) <i>J. Moreno, PREGY SORIANO</i> 1/23/15 0945</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time)</p>

Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Fish Type	Visia Test Parameters (Sub's noted in Bold)													Comments	Preservation
				POB (High res) EPA 888C	POB (Low res) EPA 888C	PCBs (High res) EPA 888C	PCBs (Low res) EPA 888C	DDT's (270 SIM DDX CALSCIENCE)	DDT's (270 SIM DDX ONLY (NOT ON FPI) - CALSCIENCE)	w/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	FRP Fillet Prep (Maximize tissue)	FRP Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample Method to Ship to Physic (CN Snake scope)		
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected. Skin Off Fillets - Offal from this replicate.
7	FH-FF-OF-07-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5	5	5	5	X	X	X	X	X	X	X	X	X	X	Lab 01c-027. Contains 5 fish in 1 foil (A1-A5). OJig. Archive.
12	FH-WO-WS-01-08-20141013	10/13/13	White Surfperch	1-2	1-2	1-2	1-2	X	X	X	X	X	X	X	X	X	X	Scalets already collected. Skin Off Fillets - Offal from this replicate. CONFIRMED. NEEDS TO HAVE ANHW-A-4 ADDED TO replicate - scales taken
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfperch	2	2	2	2	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfperch	3	3	3	3	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfperch	3	3	3	3	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfperch	3	3	3	3	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfperch	3	3	3	3	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfperch	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfperch	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfperch	1	1	1	1	X	X	X	X	X	X	X	X	X	X	Scalets already collected.

Notes: YY-FF-OF-ZZ samples (where YY is the location ID, and ZZ is the species ID), fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep-Sub-Location-DateCode while the remaining after filleting this sample should have the identification code of YY-OR-ZZ-Rep-Sub-Location-DateCode. Please apply this identification code scheme to every FF/OF- example. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: HC = White Crabs; CH = California Halibut; LF = Leard Fish; SS = Shiner Surfperch; WS = White Surfperch; Fish Tissue Type IDs: FF = Skin off fillet; OF = offal; WO = whole organism; OL = otolith; SC = scale; Location IDs: FH=Fish Harbor, CA=Los Angeles Outer Harbor CS=Consolidated Ship; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor) NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Replacement page Date: 10/26/14 via sample Date Time: 12:06 PM
 Signature: [Signature] Company: Seawater Date/Time: 10/26/14
 Requested By: Joeey Soriano Company: [Signature] Date/Time: 11/21/15

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 0.2 °C, 0.3 °C, -0.9 °C, -2.1 °C, -1.7 °C, 0.3 °C

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Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Fish Type	Visita Test Parameters (Sub's noted in Bold)										Comments	Comments/Preservation		
				PCBs (high res) EPA 1689C	PBBs (low res) 8270 Congeners - is sample fish, but test for fish fillets (FF) ONLY (NOT Otolith ORF)	CALSCIENCE (WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize Tissue)	Crab Prep	Whole Body Fish Prep	Prep Sample amount to ship to Phys (CM Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use			Save fish head (ototh) and label envelope	Check bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicates, choose fish directed to in comments
21	FH-WO-WC-Archive-08-20141014	10/14/14	White Surfperch														Lab pic 028. Contains A1-A7. Orig. archive.
22	FH-WO-WC-08-20141013	10/13/14	Shiner Surfperch														TAKE SCALES: Analyze this sample only for lipids and PCBs
23	FH-WO-WC-01-08-20141013	10/13/14	White Croak														TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.
24	FH-WO-WC-02-08-20141013	10/13/14	White Croak														TAKE SCALES: Note which fish taken from and match fish head (Otolith) ID to.
25	FH-WO-WC-03-08-20141013	10/13/14	White Croak														Scales already collected. TAKE FISH HEAD from TL=21cm. SL=19cm fish.
26	FH-WO-WC-04-08-20141013	10/13/14	White Croak														Scales already collected. TAKE FISH HEAD from TL=21cm. SL=18cm fish.
27	FH-WO-WC-05-08-20141013	10/13/14	White Croak														Scales already collected. TAKE FISH HEAD from TL=21cm. SL=18cm fish.
28	FH-WO-WC-06-08-20141013	10/13/14	White Croak														Scales already collected of both fish in replicate. Same lengths. Note girth, weight of fish.
29	FH-WO-WC-07-08-20141013	10/13/14	White Croak														Scales already collected of both fish in replicate. Note size of fish the Otolith comes from
30	FH-WO-WC-08-08-20141013	10/13/14	White Croak														Scales already collected.
31	FH-WO-WC-09-08-20141013	10/13/14	White Croak														Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-WO-WC-10-08-20141013	10/13/14	White Croak														Scales already collected. Skin-Off Fillets + Offal from this replicate.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak														4 plus possibly another 4 more archive fish
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
39	OA-FF-CH-06-06-20141011	10/11/14	Ca. Halibut														Scales already collected.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut														Scales already collected.

Notes: YY-FF-FF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF-OF" sample. These two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH-Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Ship, LB=Long Beach Inner Harbor, A=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOTLOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/04/14 Company: Anchor OEA Date/Time: _____
 Signature/Printed Name: Benedict

Received By: Thomson, Peter Company: ES Date/Time: 11/23/14
 Signature/Printed Name: _____

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Chain of Custody Record & Laboratory Analysis Request
Laboratory Number: Vista

Date: 11/20/2014
Project Name: Harbor TMDL Food Web Sampling
Project Number: 120711-01.07.Task 1
Project Manager: Chris Stransky
Phone Number: (858) 300 4350
Shipment Method:

ANCHOR QEA
1400904

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) EPA 1688C	PCBs (low res) 8270 Congeners - conducted on sample ID FF/OF - enable fish, but test Fish Fillets (FF)	ONLY (NOT Otolith) - CALSCIENCE	DTPs (8270 SIM DDX	W/DMMU - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Otolith Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Phys (C/N Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label otolith in on. If replicate, replicate in bag and tag with (TL) size in cm. If replicate, include fish directed to in comments or middle like fish.	Archive, No testing / keep frozen	See notes, section at bottom, FF/OF fish replicates will produce two fillets of fish. Because of this, the entire otolith will be kept on this specific replicate.	Comments	Comments/Preservation
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Archives, No testing / keep frozen	Scales already collected.	
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Archives, No testing / keep frozen	Scales already collected.	
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Archives, No testing / keep frozen	Scales already collected.	
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Photo 29. Label says "OA-XX-CA-A-06-20141011"	Photo 29. Label says "OA-XX-CA-A-06-20141011"	
45	OA-WO-W5-01-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.	TAKE SCALES. Note which fish taken from (size). No otolith. Unknown # fish.	
46	OA-WO-W5-02-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
47	OA-WO-W5-03-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
48	OA-WO-W5-04-06-20141011	10/11/14	White Surfprch.	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
49	OA-WO-W5-05-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
50	OA-WO-W5-06-06-20141011	10/13/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
51	OA-FF/OF-W5-07-06-20141013	10/13/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Otolith from this replicate.	Scales already collected.	
52	OA-WO-W5-Archive-06-20141011	10/11/14	White Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
53	OA-WO-S5-08-06-20141013	10/13/14	Shiner Surfprch.	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
54	OA-WO-S5-09-06-20141011	10/11/14	Shiner Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No otolith.	TAKE SCALES. Note which fish taken from (size). No otolith.	
55	OA-WO-S5-10-06-20141011	10/11/14	Shiner Surfprch.	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Unknown actual number b/c of on-boat mis-ID	Unknown actual number b/c of on-boat mis-ID	
56	OA-WO-S5-Archive-06-20141013	10/13/14	Shiner Surfprch.	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected. Skin-Off Fillets + Otolith from this replicate.	Scales already collected.	
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Scales already collected.	Scales already collected.	

Notes: YY, FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of YY, FF-ZZ, Rep#: Location#, DateCode while the remaining otolith after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#: Location#-Date. Please apply this identification code scheme to every FF/OF sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfprch, WS = White Surfprch, Fish Tissue Type IDs: FF = Skin off fillet, OF = otolith, SC = scale. Location IDs: FF=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOUQUOTS ARE TAKEN FOR TESTING.

Requested By: Vista Company: Anchor QEA Date/Time: _____
Signature/Printed Name: _____

Retrieved By: Phano, Pacy Soriano Company: Anchor QEA Date/Time: 11/21/15
Signature/Printed Name: _____

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Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Visits/Test Parameters (Sub's noted in Bold)										Comments				Comments/Preservation
				TCBS (high res) epa 1688C	PCBs (low res) 8270 Congeners - is conducted on sample ID FF/CF/OF	DTS (8270 SIM DOX W/DMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Phys (CN Stable isotopes)	Tweezer off 10 pectoral area scales, measure and use envelope	Seal fish head (oleith) and label replicate bag and NEW ID tag with replicate ID and fish Total Length (TL) in cm. If multiple fish in replicate or choose fish directed to in comments or middle size fish.	Archive/No testing / Keep frozen	See notes/section at bottom. FF/CF/OF fish replicates will produce two full sets of tests. Because of this, the entire oleith will be tested for chemistry and no oleith will be kept on this specific replicate.		
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected.	Scopes already collected.
62	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	3	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected, TAKE FISH HEAD. Both fish same size. TL=21cm, SL=18cm	Scopes already collected, TAKE FISH HEAD. Both fish same size. TL=21cm, SL=18cm
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected, TAKE FISH HEAD. Both fish same size. TL=19cm, SL=16cm	Scopes already collected, TAKE FISH HEAD. Both fish same size. TL=19cm, SL=16cm
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4													Scopes already collected.	Scopes already collected.
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.	TAKE SCALES. Note which fish taken from and match fish head (Oleith) ID to.
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21	X	X	X	X	X	X	X	X	X	X	X	X	# of Archive unknown b/c of final sorting	# of Archive unknown b/c of final sorting
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected.	Scopes already collected.
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected.	Scopes already collected.
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch	6	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No oleith.	TAKE SCALES. Note which fish taken from (size). No oleith.
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch	4	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected from one fish in this rep.	Scopes already collected from one fish in this rep.
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected from one fish in this rep.	Scopes already collected from one fish in this rep.
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No oleith.	TAKE SCALES. Note which fish taken from (size). No oleith.
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected from both fish in this Rep #5.	Scopes already collected from both fish in this Rep #5.
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch	2	X	X	X	X	X	X	X	X	X	X	X	X	Scopes already collected from one fish in this rep.	Scopes already collected from one fish in this rep.
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch	1	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No oleith.	TAKE SCALES. Note which fish taken from (size). No oleith.
80	IB-WO-WS-07-05-20141012	10/12/14	White Surfprch.	1	X	X	X	X	X	X	X	X	X	X	X	X	TAKE SCALES. Note which fish taken from (size). No oleith.	TAKE SCALES. Note which fish taken from (size). No oleith.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#; DateCode while the remaining offal after milling this sample should have the identification code of YY-OF-ZZ-Rep#-Location# Date. Please apply this identification code scheme to every FF/OF sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WG = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfprch, WS = White Surfprch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = oleith, SC = scale. Location IDs: FF=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Via Email 12/24/14 Company: Anchor OEA Date/Time: _____

Signature/Printed Name: [Signature] Signature/Printed Name: _____ Date/Time: _____

Received By: [Signature] Company: Anchor OEA Date/Time: _____

Signature/Printed Name: [Signature] Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista
 Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 12071-01-07 Task 1
 Project Manager: Chris Strzansky
 Phone Number: (859) 300 4330
 Shipment Method:

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) EPA 1698C	PCBs (low res) EPA 220 Congeners - is sample fish, but not fish filets (FF)	ONLY (NOT OTHER) CALSCIENCE	DTRs (8270 SIM DDX W/DDMU) CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Filet Prep (Maximize Tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (C/N Stable Isotope)	Tweezer off 10 pectoral area Scales, measure end use envelope	Save fish head (cont) and label zeploc bag and NEW ID tag with replicate ID and fish total length (TL) size in cm. If multiple fish in replicate, size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive, No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two fish filets. Because of this, the entire fish will be kept on this specific replicate.	Comments/Preservation
81	18-WO-W5-08-05-20141012	10/12/14	White Surfperch	1	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No ololith.	
82	18-WO-W5-09-05-20141012	10/12/14	White Surfperch	1	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from (size). No ololith.	
83	18-WO-W5-10-05-20141012	10/12/14	White Surfperch	1	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from. Skin-Off Filets + Offal from this replicate.	
84	18-WO-W5-Archive-05-20141012	10/12/14	White Surfperch	6															
85	18-FF-WC-01-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=20cm SL=18cm fish.	
86	18-FF-WC-02-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=20cm SL=18cm fish.	
87	18-FF-WC-03-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=21cm SL=19cm fish (both same size). 130g	
88	18-FF-WC-04-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
89	18-FF-WC-05-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
90	18-FF-WC-06-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			Scales already collected from both. TAKE FISH HEAD from TL=24cm SL=21cm.	
91	18-FF-WC-07-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			Scales already collected from both. TAKE FISH HEAD from TL=24cm SL=21cm.	
92	18-FF-WC-08-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=24cm SL=21cm fish.	
93	18-FF-WC-09-05-20141012	10/12/14	White Croak	1	X			X	X	X	X	X	X	X	X			Scales already collected. TAKE FISH HEAD from TL=25cm SL=22cm fish.	
94	18-FF-WC-Archive-05-20141012	10/12/14	White Croak	6														Scales already collected. Skin-Off Filets + Offal from this replicate.	
95	18-FF-WC-10-05-20141012	10/12/14	White Croak	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
96	18-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
97	18-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
98	18-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
99	18-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	
100	18-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	X			X	X	X	X	X	X	X	X			TAKE SCALES. Note which fish taken from and match fish head (Ololith) ID to.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after fileting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off filets, OF = offal, WO = whole organism, OL = ololith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, LB=Long Beach Inner Harbor, LA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requested By: Chris Strzansky Company: Anchor OEA Date/Time: 12/08/14
 Signature/Printed Name: Chris Strzansky Signature/Printed Name: Justin Signature/Printed Name: 12/08/14 Date/Time: 12/08/14
 Received By: Justin Company: Anchor OEA Date/Time: 12/08/14
 Signature/Printed Name: Justin Signature/Printed Name: 12/08/14 Date/Time: 12/08/14

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊙ 1400906

1419

Chain of Custody Record & Laboratory Analysis Request

Track #	Field Sample ID	Collection Date/Time	Type of Fish	Vista Test Parameters (Sub's noted in Bold)											Comments	Comments/Preservation									
				PCBs (high res) epa 1688C	PCBs (low res) 8270 Congeners - is	conducted on sample ID FF/OF sample fish, but test fish fillets (FF) ONLY (NOT Offal (CF)) - CALSCIENCE	DDTs (8270 SIM DDX W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable isotope)	Tweezer off to pectoral area scales, measure and use envelope			Save fish head (otoolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments, or middle size fish.	See notes' section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be kept on this specific replicate.							
101	IA-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2																					
102	IA-WO-W5-Archive-07-20141011	10/11/14	White Surfperch	3																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to. Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
103	IA-FF-WC-07-20141011	10/11/14	White Croak	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-07-20141011	10/11/14	White Croak	2																					Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
105	IA-FF-WC-04-07-20141011	10/11/14	White Croak	2																					Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.
106	IA-FF-WC-05-07-20141011	10/11/14	White Croak	2																					Scales already collected. TAKE FISH HEAD from TL=23cm, SL=20cm fish.
107	IA-FF-WC-06-07-20141011	10/11/14	White Croak	1																					Scales already collected. TAKE FISH HEAD from TL=20cm fish.
108	IA-FF-WC-07-20141011	10/11/14	White Croak	1																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
109	IA-FF-WC-08-07-20141011	10/11/14	White Croak	1																					Scales already collected. Skin-Off Fillets + Offal from this replicate.
110	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak	1																					Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
111	IA-FF/OF-WC-10-07-20141011	10/11/14	White Croak	1																					Scales already collected. TAKE FISH HEAD from TL=27cm, SL=23cm fish.
112	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak	4																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
113	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
114	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	2																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-08-03-20141010	10/10/14	Ca. Halibut	1																					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#. DateCode while the remaining offal after fileting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests: Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Requisitioned By: Via email 12/03/14 Company: Anchor OEA Date/Time: _____

Signature/Printed Name: _____ Date/Time: _____

Requisitioned By: Vista Company: BEI Date/Time: 09/11

Signature/Printed Name: Maria PREZY SOBANO Date/Time: 11/23/14

- 7 1400 902
- Ⓢ 1400 903
- Ⓢ 1400 904
- Ⓢ 1400 904

From: (916) 673-1520
Bettina Benedict
Vista Analytical Lab
1104 Windfield Way

Origin ID: MHRA



El Dorado Hills, CA 95762

Ship Date: 22JAN15
ActWgt: 38.0 LB
CAD: 104489254/INET3610

TH19

Delivery Address Bar Code



SHIP TO: (714) 895-5494
Danielle Gonsman
Eurofins Calscience
7440 LINCOLN WAY

BILL SENDER

Ref # 1400960
Invoice #
PO #
Dept #

GARDEN GROVE, CA 92841

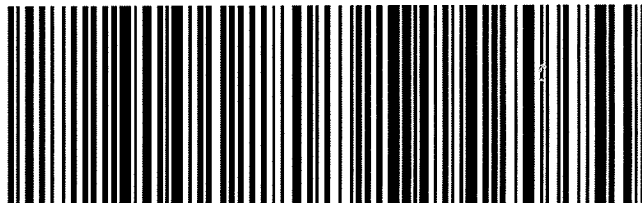
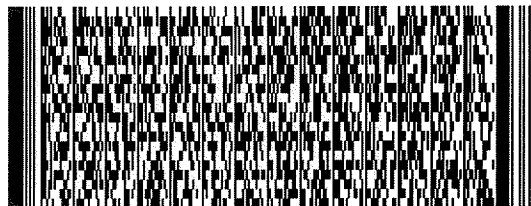
FRI - 23 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7726 8130 8534

0201

92841
CA-US
SNA

92 APVA



537J10F15/EE4B

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Return to Contents

Calscience

WORK ORDER #: 15-01-1419

SAMPLE RECEIPT FORM

Cooler / of /

CLIENT: AMEC

DATE: 01/23/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature -0.9 °C + 0.2°C (CF) = -0.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A

Checked by: 836

Sample _____ No (Not Intact) Not Present

Checked by: 965

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Collection date/time, matrix, and/or # of containers logged in based on sample labels.

No analysis requested. Not relinquished. No date/time relinquished.

Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------------------	--------------------------	--------------------------	-------------------------------------

Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------

Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Aqueous samples received within 15-minute holding time

<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Unpreserved vials received for Volatiles analysis

Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------

CONTAINER TYPE:

^{Tissue} Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOAna₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{nna} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 965

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 862

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{nna}: ZnAc₂+NaOH f: Filtered Scanned by: 862

CHAIN of CUSTODY

COMPANY NAME PHYSIS				EMAIL mistymercier@physislabs.com		PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 3 of 24											
PROJECT MANAGER Misty Mercier				FAX (714) 602-5321		PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY											
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806				PHONE 714-602-5320 office cell		SAMPLED BY Chris Stransky / AMEC				SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other											
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days						<h2 style="margin: 0;">REQUESTED ANALYSES</h2> <p style="font-size: small; margin: 0;">PLEASE SEE PHYSIS SOS</p>															
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																					
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan						¹³ C/ ¹² C and ¹⁵ N/ ¹⁴ N Stable Isotopes (EA-IRMS)															
PHYSIS MATRIX CODES SW = seawater FW = freshwater RW = rainwater WW = wastewater DW = drinking water S = sediment T = tissue E = extract O = other (specify)																					
SAMPLE ID		Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles															
1	CS-FF-CH-08-03-20141010	1400905-01	10-Oct-14	0:00	T	1	X														
2	CS-OF-CH-08-03-20141010	1400905-02	10-Oct-14	0:00	T	1	X														
3	CS-FF-WS-04-03-20141010	1400905-03	10-Oct-14	0:00	T	1	X														
4	CS-OF-WS-04-03-20141010	1400905-04	10-Oct-14	0:00	T	1	X														
5	CS-FF-CH-10-03-20141010	1400903-11	10-Oct-14	0:00	T	1	X														
6	CS-FF-LF-02-03-20141010	1400903-12	10-Oct-14	0:00	T	1	X														
7																					
8																					
9																					
10																					
RELINQUISHED BY						RECEIVED BY															
print		signature		company		date & time		print		signature		company		date & time							
Richard Hanken				Physis		3/19/15 14:00						UC Davis									

CHAIN of CUSTODY

COMPANY NAME PHYSIS	EMAIL mistymercier@physislabs.com	PROJECT NAME / NUMBER POLA/POLB Food Web Tissue		COC PAGE 5 of 24
PROJECT MANAGER Misty Mercier	FAX (714) 602-5321	PO #	PHYSIS SOS #	TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806	PHONE 714-602-5320 office cell	SAMPLED BY Chris Stransky / AMEC		SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other

TURNAROUND TIME
 STANDARD (15-20 business days) RUSH business days

REPORT FORMAT
 PHYSIS PDF/EDD SWAMP EDD other

SPECIAL INSTRUCTIONS
UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses.
Also confirm testing with attached excerpt from work plan

PHYSIS MATRIX CODES
SW = seawater FW = freshwater RW = rainwater
WW = wastewater DW = drinking water
S = sediment I = tissue E = extract O = other (specify)

REQUESTED ANALYSES

PLEASE SEE PHYSIS SOS

SAMPLE ID	Vista Sample ID	SAMPLE		physis matrix code	# of bottles		13C/12C and 15N/14N Stable Isotopes (EA-IRMS)																
		date	time																				
1	OA-FF-WC-02-06-20141011	1400904-11	11-Oct-14	0:00	T	1	X																
2	OA-OF-WC-02-06-20141011	1400904-12	11-Oct-14	0:00	T	1	X																
3	IB-FF-CH-01-05-20141012	1400904-13	12-Oct-14	0:00	T	1	X																
4	IB-OF-CH-01-05-20141012	1400904-14	12-Oct-14	0:00	T	1	X																
5	IB-FF-WS-10-05-20141012	1400904-15	12-Oct-14	0:00	T	1	X																
6	IB-OF-WS-10-05-20141012	1400904-16	12-Oct-14	0:00	T	1	X																
7	IB-FF-WC-10-05-20141012	1400904-17	12-Oct-14	0:00	T	1	X																
8	IB-OF-WC-10-05-20141012	1400904-18	12-Oct-14	0:00	T	1	X																
9	IA-FF-WC-09-07-20141011	1400904-19	11-Oct-14	0:00	T	1	X																
10	IA-OF-WC-09-07-20141011	1400904-20	11-Oct-14	0:00	T	1	X																

RELINQUISHED BY				RECEIVED BY			
print	signature	company	date & time	print	signature	company	date & time
Richard Hanken		Physis	3/19/15 14:00			UC Davis	



CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue						COC PAGE 6 of 24									
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY											
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 <small>office</small> <small>cell</small>			SAMPLED BY Chris Stransky / AMEC			SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other												
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH <small>business days</small>					REQUESTED ANALYSES <small>PLEASE SEE PHYSIS SOS</small>																
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																					
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan					13C/12C and 15N/14N Stable Isotopes (EA-IRMS)																
PHYSIS MATRIX CODES <u>SW</u> = seawater <u>FW</u> = freshwater <u>RW</u> = rainwater <u>WW</u> = wastewater <u>DW</u> = drinking water <u>S</u> = sediment <u>I</u> = tissue <u>E</u> = extract <u>O</u> = other (specify)																					
SAMPLE ID		Vista Sample ID		SAMPLE date time									<small>physis matrix code</small>		<small># of bottles</small>						
1	IA-FF-WC-08-07-20141011	1400903-01	11-Oct-14	0:00									T	1	X						
2	IA-FF-WC-10-07-20141011	1400903-02	11-Oct-14	0:00	T	1	X														
3	CS-FF-CH-01-03-20141010	1400903-03	10-Oct-14	0:00	T	1	X														
4	CS-FF-CH-02-03-20141010	1400903-04	10-Oct-14	0:00	T	1	X														
5	CS-FF-CH-03-03-20141010	1400903-05	10-Oct-14	0:00	T	1	X														
6	CS-FF-CH-04-03-20141010	1400903-06	10-Oct-14	0:00	T	1	X														
7	CS-FF-CH-05-03-20141010	1400903-07	10-Oct-14	0:00	T	1	X														
8	CS-FF-CH-06-03-20141010	1400903-08	10-Oct-14	0:00	T	1	X														
9	CS-FF-CH-07-03-20141010	1400903-09	10-Oct-14	0:00	T	1	X														
10	CS-FF-CH-09-03-20141010	1400903-10	10-Oct-14	0:00	T	1	X														
RELINQUISHED BY					RECEIVED BY																
<small>print</small>		<small>signature</small>		<small>company</small>		<small>date & time</small>		<small>print</small>		<small>signature</small>		<small>company</small>		<small>date & time</small>							
Richard Hanken				Physis		3/19/15 14:00						UC Davis									

CHAIN of CUSTODY

COMPANY NAME <p style="text-align: center;">PHYSIS</p>	EMAIL <p style="text-align: center;">mistymercier@physislabs.com</p>	PROJECT NAME / NUMBER <p style="text-align: center;">POLA/POLB Food Web Tissue</p>	COC PAGE 7 of 24
PROJECT MANAGER <p style="text-align: center;">Misty Mercier</p>	FAX <p style="text-align: center;">(714) 602-5321</p>	PO # 	PHYSIS SOS #
COMPANY ADDRESS <p>1904 East Wright Circle, Anaheim, CA 92806</p>		PHONE <p>714-602-5320 office cell</p>	SAMPLED BY <p style="text-align: center;">Chris Stransky / AMEC</p>
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY	
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other		SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other	

REQUESTED ANALYSES

PLEASE SEE PHYSIS SOS

SPECIAL INSTRUCTIONS

UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses.

Also confirm testing with attached excerpt from work plan

PHYSIS MATRIX CODES
SW = seawater FW = freshwater RW = rainwater
WW = wastewater DW = drinking water
S = sediment I = tissue E = extract O = other (specify)

13C/12C and 15N/14N Stable Isotopes (EA-IRMS)																			

	SAMPLE ID	Vista Sample ID	SAMPLE		physis matrix code	# of bottles		
			date	time				
1	IB-FF-WC-02-05-20141012	1400902-01	12-Oct-14	0:00	T	1	X	
2	IB-FF-WC-03-05-20141012	1400902-02	12-Oct-14	0:00	T	1	X	
3	IB-FF-WC-04-05-20141012	1400902-03	12-Oct-14	0:00	T	1	X	
4	IB-FF-WC-05-05-20141012	1400902-04	12-Oct-14	0:00	T	1	X	
5	IB-FF-WC-06-05-20141012	1400902-05	12-Oct-14	0:00	T	1	X	
6	IB-FF-WC-07-05-20141012	1400902-06	12-Oct-14	0:00	T	1	X	
7	IB-FF-WC-08-05-20141012	1400902-07	12-Oct-14	0:00	T	1	X	
8	IB-FF-WC-09-05-20141012	1400902-08	12-Oct-14	0:00	T	1	X	
9	IB-FF-LF-01-05-20141012	1400902-09	12-Oct-14	0:00	T	1	X	
10	IB-FF-LF-02-05-20141012	1400902-10	12-Oct-14	0:00	T	1	X	

RELINQUISHED BY				RECEIVED BY			
print	signature	company	date & time	print	signature	company	date & time
Richard Hanken		Physis	3/19/15 14:00			UC Davis	

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com		PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 8 of 24										
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321		PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY										
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell		SAMPLED BY Chris Stransky / AMEC				SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other										
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days			<h2 style="margin: 0;">REQUESTED ANALYSES</h2> <p style="font-size: small; margin: 0;">PLEASE SEE PHYSIS SOS</p>																
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																			
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan																			
PHYSIS MATRIX CODES SW = seawater FW = freshwater RW = rainwater WW = wastewater DW = drinking water S = sediment I = tissue E = extract O = other (specify)			¹³C/¹²C and ¹⁵N/¹⁴N Stable Isotopes (EA-IRMS)																
SAMPLE ID		Vista Sample ID											SAMPLE date time		physis matrix code	# of bottles			
1	IB-FF-LF-03-05-20141012	1400902-11											12-Oct-14	0:00	T	1	X		
2	IB-FF-LF-04-05-20141012	1400902-12											12-Oct-14	0:00	T	1	X		
3	IB-FF-LF-05-05-20141012	1400902-13											12-Oct-14	0:00	T	1	X		
4	IA-FF-WC-01-07-20141011	1400902-14											11-Oct-14	0:00	T	1	X		
5	IA-FF-WC-02-07-20141011	1400902-15											11-Oct-14	0:00	T	1	X		
6	IA-FF-WC-03-07-20141011	1400902-16											11-Oct-14	0:00	T	1	X		
7	IA-FF-WC-04-07-20141011	1400902-17											11-Oct-14	0:00	T	1	X		
8	IA-FF-WC-05-07-20141011	1400902-18											11-Oct-14	0:00	T	1	X		
9	IA-FF-WC-06-07-20141011	1400902-19	11-Oct-14	0:00	T	1	X												
10	IA-FF-WC-07-07-20141011	1400902-20	11-Oct-14	0:00	T	1	X												
RELINQUISHED BY				RECEIVED BY															
print		signature		company		date & time						print		signature		company		date & time	
Richard Hanken				Physis		3/19/15 14:00										UC Davis			

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 9 of 24											
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY											
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell			SAMPLED BY Chris Stransky / AMEC				SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other											
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days			REQUESTED ANALYSES PLEASE SEE PHYSIS SOS																		
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																					
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan																					
PHYSIS MATRIX CODES SW = seawater FW = freshwater RW = rainwater WW = wastewater DW = drinking water S = sediment I = tissue E = extract O = other (specify)																					
SAMPLE ID		Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles	13C/12C and 15N/14N Stable Isotopes (EA-IRMS)														
1	OA-FF-CH-03-06-20141011	1400901-01	11-Oct-14	0:00	T	1	X														
2	OA-FF-CH-04-06-20141011	1400901-02	11-Oct-14	0:00	T	1	X														
3	OA-FF-CH-05-06-20141011	1400901-03	11-Oct-14	0:00	T	1	X														
4	OA-FF-CH-07-06-20141011	1400901-04	11-Oct-14	0:00	T	1	X														
5	OA-FF-CH-08-06-20141011	1400901-05	11-Oct-14	0:00	T	1	X														
6	OA-FF-CH-09-06-20141011	1400901-06	11-Oct-14	0:00	T	1	X														
7	OA-FF-CH-10-06-20141011	1400901-07	11-Oct-14	0:00	T	1	X														
8	OA-FF-WC-01-06-20141011	1400901-08	11-Oct-14	0:00	T	1	X														
9	OA-FF-WC-03-06-20141011	1400901-09	11-Oct-14	0:00	T	1	X														
10	OA-FF-WC-04-06-20141011	1400901-10	11-Oct-14	0:00	T	1	X														
RELINQUISHED BY							RECEIVED BY														
print		signature		company		date & time		print		signature		company		date & time							
Richard Hanken				Physis		3/19/15 14:00						UC Davis									

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 10 of 24										
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY										
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell			SAMPLED BY Chris Stransky / AMEC			SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other											
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days			REQUESTED ANALYSES PLEASE SEE PHYSIS SOS			13C/12C and 15N/14N Stable Isotopes (EA-IRMS)														
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																				
SPECIAL INSTRUCTIONS <p style="color: red;">UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses.</p> <p style="color: red;">Also confirm testing with attached excerpt from work plan</p>																				
PHYSIS MATRIX CODES <u>SW</u> = seawater <u>FW</u> = freshwater <u>RW</u> = rainwater <u>WW</u> = wastewater <u>DW</u> = drinking water <u>S</u> = sediment <u>I</u> = tissue <u>E</u> = extract <u>O</u> = other (specify)																				
SAMPLE ID		Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles														
1	OA-FF-WC-05-06-20141011	1400901-11	11-Oct-14	0:00	T	1	X													
2	OA-FF-WC-06-06-20141011	1400901-12	11-Oct-14	0:00	T	1	X													
3	OA-FF-WC-07-06-20141011	1400901-13	11-Oct-14	0:00	T	1	X													
4	OA-FF-WC-08-06-20141011	1400901-14	11-Oct-14	0:00	T	1	X													
5	OA-FF-WC-09-06-20141011	1400901-15	11-Oct-14	0:00	T	1	X													
6	OA-FF-WC-10-06-20141011	1400901-16	11-Oct-14	0:00	T	1	X													
7	OA-FF-LF-01-06-20141011	1400901-17	11-Oct-14	0:00	T	1	X													
8	OA-FF-LF-02-06-20141011	1400901-18	11-Oct-14	0:00	T	1	X													
9	IB-FF-CH-02-05-20141012	1400901-19	12-Oct-14	0:00	T	1	X													
10	IB-FF-WC-01-05-20141012	1400901-20	12-Oct-14	0:00	T	1	X													
RELINQUISHED BY							RECEIVED BY													
print		signature		company		date & time		print		signature		company		date & time						
Richard Hanken			Physis		3/19/15 14:00				UC Davis											

CHAIN of CUSTODY

COMPANY NAME PHYSIS		EMAIL mistymercier@physislabs.com	PROJECT NAME / NUMBER POLA/POLB Food Web Tissue		COC PAGE 11 of 24		
PROJECT MANAGER Misty Mercier		FAX (714) 602-5321	PO #	PHYSIS SOS #	TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY		
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806		PHONE 714-602-5320	SAMPLED BY Chris Stransky / AMEC		SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other		
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days		REQUESTED ANALYSES PLEASE SEE PHYSIS SOS					
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other							
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan			13C/12C and 15N/14N Stable Isotopes (EA-IRMS)				
PHYSIS MATRIX CODES <u>SW</u> = seawater <u>FW</u> = freshwater <u>RW</u> = rainwater <u>WW</u> = wastewater <u>DW</u> = drinking water <u>S</u> = sediment <u>I</u> = tissue <u>E</u> = extract <u>O</u> = other (specify)							
SAMPLE ID	Vista Sample ID	SAMPLE date	SAMPLE time	physis matrix code	# of bottles		
1	FH-FF-CH-01-08-20141013	1400900-01	13-Oct-14	0:00	T	1	X
2	FH-FF-CH-02-08-20141013	1400900-02	13-Oct-14	0:00	T	1	X
3	FH-FF-CH-03-08-20141013	1400900-03	13-Oct-14	0:00	T	1	X
4	FH-FF-CH-04-08-20141013	1400900-04	13-Oct-14	0:00	T	1	X
5	FH-FF-CH-05-08-20141013	1400900-05	13-Oct-14	0:00	T	1	X
6	FH-FF-CH-06-08-20141013	1400900-06	13-Oct-14	0:00	T	1	X
7	FH-FF-CH-08-08-20141013	1400900-07	13-Oct-14	0:00	T	1	X
8	FH-FF-CH-09-08-20141013	1400900-08	13-Oct-14	0:00	T	1	X
9	FH-FF-CH-10-08-20141013	1400900-09	13-Oct-14	0:00	T	1	X
10	FH-FF-WC-01-08-20141013	1400900-10	13-Oct-14	0:00	T	1	X
RELINQUISHED BY print				RECEIVED BY print			
signature		company	date & time		signature		company
Richard Hanken		Physis	3/19/15 14:00				UC Davis

CHAIN of CUSTODY

COMPANY NAME PHYSIS		EMAIL mistymercier@physislabs.com		PROJECT NAME / NUMBER POLA/POLB Food Web Tissue					COC PAGE 12 of 24							
PROJECT MANAGER Misty Mercier		FAX (714) 602-5321		PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY								
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806		PHONE 714-602-5320 office cell		SAMPLED BY Chris Stransky / AMEC		SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other										
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days		<h2>REQUESTED ANALYSES</h2> <p>PLEASE SEE PHYSIS SOS</p>														
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan																
PHYSIS MATRIX CODES SW = seawater FW = freshwater RW = rainwater WW = wastewater DW = drinking water S = sediment I = tissue E = extract O = other (specify)		13C/12C and 15N/14N Stable Isotopes (EA-IRMS)														
SAMPLE ID											Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles	X
1	FH-FF-WC-02-08-20141013										1400900-11	13-Oct-14	0:00	T	1	
2	FH-FF-WC-03-08-20141013										1400900-12	13-Oct-14	0:00	T	1	
3	FH-FF-WC-04-08-20141013										1400900-13	13-Oct-14	0:00	T	1	
4	FH-FF-WC-05-08-20141013										1400900-14	13-Oct-14	0:00	T	1	
5	FH-FF-WC-06-08-20141013										1400900-15	13-Oct-14	0:00	T	1	
6	FH-FF-WC-07-08-20141013										1400900-16	13-Oct-14	0:00	T	1	
7	FH-FF-WC-08-08-20141013										1400900-17	13-Oct-14	0:00	T	1	
8	FH-FF-WC-09-08-20141013										1400900-18	13-Oct-14	0:00	T	1	
9	OA-FF-CH-01-06-20141011	1400900-19	11-Oct-14	0:00	T	1										
10	OA-FF-CH-02-06-20141011	1400900-20	11-Oct-14	0:00	T	1										
RELINQUISHED BY					RECEIVED BY											
print		signature		company		date & time		print		signature		company		date & time		
Richard Hanken				Physis		3/19/15 14:00						UC Davis				

CHAIN of CUSTODY

COMPANY NAME PHYSIS		EMAIL mistymercier@physislabs.com	PROJECT NAME / NUMBER POLA/POLB Food Web Tissue	COC PAGE 13 of 24
PROJECT MANAGER Misty Mercier	FAX (714) 602-5321	PO #	PHYSIS SOS #	TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806		PHONE 714-602-5320 office cell	SAMPLED BY Chris Stransky / AMEC	
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days		SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> LPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other		

REQUESTED ANALYSES

PLEASE SEE PHYSIS SOS

REPORT FORMAT
 PHYSIS PDF/EDD SWAMP EDD other

SPECIAL INSTRUCTIONS
UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses.

Also confirm testing with attached excerpt from work plan

PHYSIS MATRIX CODES
SW = seawater **FW** = freshwater **RW** = rainwater
WW = wastewater **DW** = drinking water
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13C/12C and 15N/14N Stable Isotopes (EA-IRMS)

	SAMPLE ID	Vista Sample ID	SAMPLE		physis matrix code	# of bottles																	
			date	time																			
1	IB-WO-SS-04-05-20141012	1400893-01	12-Oct-14	0:00	T	1	X																
2	IB-WO-SS-05-05-20141012	1400893-02	12-Oct-14	0:00	T	1	X																
3	IB-WO-SS-06-05-20141012	1400893-03	12-Oct-14	0:00	T	1	X																
4	IB-WO-WS-07-05-20141012	1400893-04	12-Oct-14	0:00	T	1	X																
5	IB-WO-WS-08-05-20141012	1400893-05	12-Oct-14	0:00	T	1	X																
6	IB-WO-WS-09-05-20141012	1400893-06	12-Oct-14	0:00	T	1	X																
7	CS-WO-WS-01-03-20141010	1400893-07	10-Oct-14	0:00	T	1	X																
8	CS-WO-WS-02-03-20141010	1400893-08	10-Oct-14	0:00	T	1	X																
9	CS-WO-WS-03-03-20141010	1400893-09	10-Oct-14	0:00	T	1	X																
10	CS-WO-WS-05-03-20141010	1400893-10	10-Oct-14	0:00	T	1	X																

RELINQUISHED BY

print Richard Hanken	signature	company Physis	date & time 3/19/15 14:00

RECEIVED BY

print	signature	company UC Davis	date & time

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 14 of 24					
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #		PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY					
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell			SAMPLED BY Chris Stransky / AMEC				SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other					
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days						REQUESTED ANALYSES <small>PLEASE SEE PHYSIS SOS</small>									
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other															
SPECIAL INSTRUCTIONS <p style="color: red; margin: 0;">UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses.</p> <p style="color: red; margin: 0;">Also confirm testing with attached excerpt from work plan</p>															
PHYSIS MATRIX CODES <u>SW</u> = seawater <u>FW</u> = freshwater <u>RW</u> = rainwater <u>WW</u> = wastewater <u>DW</u> = drinking water <u>S</u> = sediment <u>I</u> = tissue <u>E</u> = extract <u>O</u> = other (specify)						13C/12C and 15N/14N Stable Isotopes (EA-IRMS)									
SAMPLE ID		Vista Sample ID		SAMPLE date time		physis matrix code	# of bottles								
1	CS-WO-WS-06-03-20141010	1400893-11	10-Oct-14	0:00	T	1	X								
2	CS-WO-WS-07-03-20141010	1400893-12	10-Oct-14	0:00	T	1	X								
3	CS-WO-WS-08-03-20141010	1400893-13	10-Oct-14	0:00	T	1	X								
4	CS-WO-WS-09-03-20141010	1400893-14	10-Oct-14	0:00	T	1	X								
5	CS-WO-WS-10-03-20141010	1400893-15	10-Oct-14	0:00	T	1	X								
6															
7															
8															
9															
10															
RELINQUISHED BY						RECEIVED BY									
print		signature		company		date & time		print		signature		company		date & time	
Richard Hanken				Physis		3/19/15 14:00						UC Davis			

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue						COC PAGE 15 of 24																							
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #	PHYSIS SOS #		TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY																										
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell			SAMPLED BY Chris Stransky / AMEC			SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other																										
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days						<div style="background-color: #d4edda; text-align: center; padding: 5px;">REQUESTED ANALYSES</div> <p style="font-size: small; text-align: center;">PLEASE SEE PHYSIS SOS</p> <table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: x-small;">13C/12C and 15N/14N Stable Isotopes (EA-IRMS)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>							13C/12C and 15N/14N Stable Isotopes (EA-IRMS)																						
13C/12C and 15N/14N Stable Isotopes (EA-IRMS)																																			
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																																			
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan																																			
PHYSIS MATRIX CODES SW = seawater FW = freshwater RW = rainwater WW = wastewater DW = drinking water S = sediment I = tissue E = extract O = other (specify)																																			
SAMPLE ID		Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles																													
1	FH-WO-WS-02-08-20141013	1400892-01	13-Oct-14	0:00	T	1	X																												
2	FH-WO-WS-03-08-20141013	1400892-02	13-Oct-14	0:00	T	1	X																												
3	FH-WO-WS-04-08-20141013	1400892-03	13-Oct-14	0:00	T	1	X																												
4	FH-WO-WS-05-08-20141013	1400892-04	13-Oct-14	0:00	T	1	X																												
5	FH-WO-WS-06-08-20141013	1400892-05	13-Oct-14	0:00	T	1	X																												
6	FH-WO-WS-07-08-20141013	1400892-06	13-Oct-14	0:00	T	1	X																												
7	FH-WO-WS-08-08-20141013	1400892-07	13-Oct-14	0:00	T	1	X																												
8	FH-WO-WS-10-08-20141013	1400892-08	13-Oct-14	0:00	T	1	X																												
9	OA-WO-WS-01-06-20141011	1400892-09	11-Oct-14	0:00	T	1	X																												
10	OA-WO-WS-02-06-20141011	1400892-10	11-Oct-14	0:00	T	1	X																												
RELINQUISHED BY							RECEIVED BY																												
print		signature		company		date & time		print		signature				company				date & time																	
Richard Hanken				Physis		3/19/15 14:00								UC Davis																					

CHAIN of CUSTODY

COMPANY NAME PHYSIS			EMAIL mistymercier@physislabs.com			PROJECT NAME / NUMBER POLA/POLB Food Web Tissue				COC PAGE 17 of 24						
PROJECT MANAGER Misty Mercier			FAX (714) 602-5321			PO #	PHYSIS SOS #			TYPE OF ICE USED <input type="checkbox"/> WET <input type="checkbox"/> BLUE <input checked="" type="checkbox"/> DRY						
COMPANY ADDRESS 1904 East Wright Circle, Anaheim, CA 92806			PHONE 714-602-5320 office cell			SAMPLED BY Chris Stransky / AMEC			SHIPPED VIA <input type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Physis <input type="checkbox"/> other							
TURNAROUND TIME <input checked="" type="checkbox"/> STANDARD (15-20 business days) <input type="checkbox"/> RUSH business days							REQUESTED ANALYSES <small>PLEASE SEE PHYSIS SOS</small>									
REPORT FORMAT <input checked="" type="checkbox"/> PHYSIS PDF/EDD <input type="checkbox"/> SWAMP EDD <input type="checkbox"/> other																
SPECIAL INSTRUCTIONS UCD: Please confirm final plan with PHYSIS PM Misty Mercier before conducting testing. Move samples to freezer immediately upon receipt until testing directive from PHYSIS is finalized. QA/QC to be conducted on 25 samples. UC Davis SIF to determine the 25 samples to do. Also included are 3 SRM samples to be tested as well for same isotope analyses. Also confirm testing with attached excerpt from work plan							<small>¹³C/¹²C and ¹⁵N/¹⁴N Stable Isotopes (EA-IRMS)</small>									
PHYSIS MATRIX CODES <u>SW</u> = seawater <u>FW</u> = freshwater <u>RW</u> = rainwater <u>WW</u> = wastewater <u>DW</u> = drinking water <u>S</u> = sediment <u>T</u> = tissue <u>E</u> = extract <u>O</u> = other (specify)																
SAMPLE ID		Vista Sample ID	SAMPLE date time		physis matrix code	# of bottles										
1	T1 WMT A	1400856-01	12-Nov-14	0:00	T	1	X									
2	T2 WMT A	1400856-02	12-Nov-14	0:00	T	1	X									
3	02-34 B2	1400856-03	12-Nov-14	0:00	T	1	X									
4																
5																
6																
7																
8																
9																
10																
RELINQUISHED BY							RECEIVED BY									
print		signature		company		date & time		print		signature		company		date & time		
Richard Hanken				Physis		3/19/15 14:00						UC Davis				

QA/QC	Sample ID	Vista Sample ID	Plate #	Well Placement	Weight of tin capsule (mg)	Weight of capsule + sample (mg)	Weight of sample (mg)	Scale Calibration (10mg)	Date weighed
	OA-ST-MS-COMP1-01-2014-10-22	1400960-01	1	A1	35.125	36.232	1.107	9.998	3/6/2015
	OA-ST-MS-COMP2-01-2014-10-22	1400960-02	1	A2	33.249	34.425	1.176		
	OA-ST-MS-COMP3-01-2014-10-22	1400960-03	1	A3	34.125	35.188	1.063		
	OA-ST-MS-COMP4-01-2014-10-22	1400960-04	1	A4	85.008	86.036	1.028		
	OA-ST-MS-COMP5-01-2014-10-22	1400960-05	1	A5	33.278	34.404	1.126		
	IA-ST-MS-COMP1-02-2014-10-22	1400960-06	1	A6	34.752	35.87	1.118		
	IA-ST-MS-COMP2-02-2014-10-22	1400960-07	1	A7	34.141	35.277	1.136		
	IA-ST-MS-COMP3-02-2014-10-22	1400960-08	1	A8	33.771	34.814	1.043		
	IA-ST-MS-COMP4-02-2014-10-22	1400960-09	1	A9	35.423	36.575	1.152		
	IA-ST-MS-COMP5-02-2014-10-22	1400960-10	1	A10	34.259	35.274	1.015		
	CS-ST-OY-COMP1-03-2014-10-22	1400960-11	1	A11	34.702	35.867	1.165		
	CS-ST-OY-COMP2-03-2014-10-22	1400960-12	1	A12	34.625	35.632	1.007		
	CS-ST-OY-COMP3-03-2014-10-22	1400960-13	1	B1	34.569	35.585	1.016		
	CS-ST-OY-COMP4-03-2014-10-22	1400960-14	1	B2	34.889	36	1.111		
	CS-ST-OY-COMP5-03-2014-10-22	1400960-15	1	B3	33.967	35.075	1.108		
	IB-ST-MS-COMP1-04-2014-10-27	1400960-16	1	B4	34.473	35.53	1.057		
	IB-ST-MS-COMP2-04-2014-10-27	1400960-17	1	B5	34.046	35.142	1.096		
	IB-ST-MS-COMP3-04-2014-10-27	1400960-18	1	B6	34.106	35.245	1.139		
	IB-ST-MS-COMP4-04-2014-10-27	1400960-19	1	B7	34.274	35.378	1.104		
R1	IB-ST-MS-COMP5-04-2014-10-27	1400960-20	1	B8	34.37	35.465	1.095		
Replicate (R2)	IB-ST-MS-COMP5-04-2014-10-27	1400960-20	1	B9	33.924	35.029	1.105		
	CS-FF-CH-08-03-20141010	1400905-01	1	B10	85.362	86.426	1.064		
	CS-OF-CH-08-03-20141010	1400905-02	1	B11	85.154	86.372	1.218	9.994	3/9/2015
	CS-FF-WS-04-03-20141010	1400905-03	1	B12	85.755	86.93	1.175		
	CS-OF-WS-04-03-20141010	1400905-04	1	C1	85.307	86.318	1.011		
	CS-FF-CH-10-03-20141010	1400903-11	1	C2	85.812	86.968	1.156		
	CS-FF-LF-02-03-2014010	1400903-12	1	C3	83.811	84.882	1.071		
	FH-FF-CH-07-08-20141013	1400904-01	1	C4	85.966	87.09	1.124		
	FH-OF-CH-07-08-20141013	1400904-02	1	C5	84.374	85.425	1.051		
	FH-FF-WS-01-08-20141013	1400904-03	1	C6	81.835	82.983	1.148		
	FH-OF-WS-01-08-20141013	1400904-04	1	C7	83.555	84.673	1.118		
	FH-FF-WC-10-08-20141013	1400904-05	1	C8	83.216	84.347	1.131	9.995	3/10/2015
	FH-OF-WC-10-08-20141013	1400904-06	1	C9	83.406	84.604	1.198		
	OA-FF-CH-06-06-20141011	1400904-07	1	C10	84.349	85.475	1.126		
	OA-OF-CH-06-06-20141011	1400904-08	1	C11	85.49	86.684	1.194		
	OA-FF-WS-07-06-20141013	1400904-09	1	C12	84.925	86.07	1.145		
	OA-OF-WS-07-06-20141013	1400904-10	1	D1	84.299	85.427	1.128		
	OA-FF-WC-02-06-20141011	1400904-11	1	D2	84.378	85.52	1.142		
	OA-OF-WC-02-06-20141011	1400904-12	1	D3	83.926	85.122	1.196		
	IB-FF-CH-01-05-20141012	1400904-13	1	D4	85.894	87.057	1.163		
R1	IB-OF-CH-01-05-20141012	1400904-14	1	D5	85.194	86.271	1.077	10.013	3/11/2015
Replicate (R2)	IB-OF-CH-01-05-20141012	1400904-14	1	D6	85.457	86.497	1.04		
	IB-FF-WS-10-05-20141012	1400904-15	1	D7	84.887	85.951	1.064		
	IB-OF-WS-10-05-20141012	1400904-16	1	D8	86.014	87.039	1.025		
	IB-FF-WC-10-05-20141012	1400904-17	1	D9	85.826	86.966	1.14		
	IB-OF-WC-10-05-20141012	1400904-18	1	D10	84.123	85.322	1.199		
	IA-FF-WC-09-07-20141011	1400904-19	1	D11	84.185	85.204	1.019		
	IA-OF-WC-09-07-20141011	1400904-20	1	D12	85.716	86.808	1.092		

QA/QC	Sample ID	Vista Sample ID	Plate #	Well Placement	Weight of tin capsule (mg)	Weight of capsule + sample (mg)	Weight of sample (mg)	Scale Calibration (10mg)	Date weighed
	IA-FF-WC-08-07-20141011	1400903-01	1	E1	84.951	86.022	1.071		
	IA-FF-WC-10-07-20141011	1400903-02	1	E2	85.852	86.896	1.044		
	CS-FF-CH-01-03-20141010	1400903-03	1	E3	85.899	87.04	1.141		
	CS-FF-CH-02-03-20141010	1400903-04	1	E4	83.324	84.495	1.171		
	CS-FF-CH-03-03-20141010	1400903-05	1	E5	85.264	86.408	1.144		
	CS-FF-CH-04-03-20141010	1400903-06	1	E6	84.853	85.934	1.081		
	CS-FF-CH-05-03-20141010	1400903-07	1	E7	84.053	85.077	1.024		
	CS-FF-CH-06-03-20141010	1400903-08	1	E8	84.077	85.154	1.077		
	CS-FF-CH-07-03-20141010	1400903-09	1	E9	86.054	87.175	1.121		
	CS-FF-CH-09-03-20141010	1400903-10	1	E10	85.649	86.794	1.145		
	IB-FF-WC-02-05-20141012	1400902-01	1	E11	86.194	87.22	1.026	10.002	3/13/2015
	IB-FF-WC-03-05-20141012	1400902-02	1	E12	85.117	86.282	1.165		
	IB-FF-WC-04-05-20141012	1400902-03	1	F1	83.366	84.394	1.028		
R1	IB-FF-WC-05-05-20141012	1400902-04	1	F2	86.814	87.899	1.085		
(Replicate) R2	IB-FF-WC-05-05-20141012	1400902-04	1	F3	84.633	85.741	1.108		
	IB-FF-WC-06-05-20141012	1400902-05	1	F4	84.608	85.76	1.152		
	IB-FF-WC-07-05-20141012	1400902-06	1	F5	84.5	85.578	1.078		
	IB-FF-WC-08-05-20141012	1400902-07	1	F6	84.58	85.652	1.072		
	IB-FF-WC-92-05-20141012	1400902-08	1	F7	85.916	86.988	1.072		
	IB-FF-LF-01-05-20141012	1400902-09	1	F8	84.582	85.689	1.107		
	IB-FF-LF-02-05-20141012	1400902-10	1	F9	84.385	85.388	1.003		
	IB-FF-LF-03-05-20141012	1400902-11	1	F10	84.737	85.852	1.115		
	IB-FF-LF-04-05-20141012	1400902-12	1	F11	84.029	85.108	1.079		
	IB-FF-LF-05-05-20141012	1400902-13	1	F12	84.628	85.769	1.141	10	3/12/2015
	IA-FF-WC-01-07-20141011	1400902-14	1	G1	84.809	85.933	1.124		
	IA-FF-WC-02-07-20141011	1400902-15	1	G2	82.897	84.006	1.109		
	IA-FF-WC-03-07-20141011	1400902-16	1	G3	85.732	86.803	1.071		
	IA-FF-WC-04-07-20141011	1400902-17	1	G4	85.663	86.789	1.126	10.002	3/13/2015
	IA-FF-WC-05-07-20141011	1400902-18	1	G5	85.406	86.445	1.039		
	IA-FF-WC-06-07-20141011	1400902-19	1	G6	84.948	85.986	1.038		
	IA-FF-WC-07-07-20141011	1400902-20	1	G7	83.278	84.297	1.019		
	OA-FF-CH-03-06-20141011	1400901-01	1	G8	85.124	86.268	1.144		
	OA-FF-CH-04-06-20141011	1400901-02	1	G9	83.265	84.383	1.118		
	OA-FF-CH-05-06-20141011	1400901-03	1	G10	85.578	86.599	1.021	10.004	3/16/2015
R1	OA-FF-CH-07-06-20141011	1400901-04	1	G11	84.12	85.13	1.01		
Replicate (R2)	OA-FF-CH-07-06-20141011	1400901-04	1	G12	84.885	85.938	1.053		
	OA-FF-CH-08-06-20141011	1400901-05	1	H1	85.795	86.935	1.14		
	OA-FF-CH-09-06-20141011	1400901-06	1	H2	83.283	84.324	1.041		
	OA-FF-CH-10-06-20141011	1400901-07	1	H3	83.696	84.821	1.125		
	OA-FF-WC-01-06-20141011	1400901-08	1	H4	83.108	84.122	1.014		
	OA-FF-WC-03-06-20141011	1400901-09	1	H5	83.342	84.387	1.045		
	OA-FF-WC-04-06-20141011	1400901-10	1	H6	84.822	85.904	1.082		
	OA-FF-WC-05-06-20141011	1400901-11	1	H7	84.287	85.395	1.108		
	OA-FF-WC-06-06-20141011	1400901-12	1	H8	83.328	84.427	1.099		
	OA-FF-WC-07-06-20141011	1400901-13	1	H9	84.766	85.843	1.077		
	OA-FF-WC-08-06-20141011	1400901-14	1	H10	82.209	83.294	1.085		
	OA-FF-WC-09-06-20141011	1400901-15	1	H11	83.989	85.053	1.064		
	OA-FF-WC-10-06-20141011	1400901-16	1	H12	83.668	84.777	1.109		

QA/QC	Sample ID	Vista Sample ID	Plate #	Well Placement	Weight of tin capsule (mg)	Weight of capsule + sample (mg)	Weight of sample (mg)	Scale Calibration (10mg)	Date weighed
	OA-FF-LF-01-06-20141011	1400901-17	2	A1	85.887	86.932	1.045		
	OA-FF-LF-02-06-20141011	1400901-18	2	A2	84.336	85.39	1.054		
	IB-FF-CH-02-05-20141012	1400901-19	2	A3	83.793	84.882	1.089		
	IB-FF-WC-01-05-20141012	1400901-20	2	A4	84.817	85.954	1.137		
	FH-FF-CH-01-08-20141013	1400900-01	2	A5	84.09	85.137	1.047		
	FH-FF-CH-02-08-20141013	1400900-02	2	A6	84.326	85.396	1.07		
	FH-FF-CH-03-08-20141013	1400900-03	2	A7	85.092	86.138	1.046		
R1	FH-FF-CH-04-08-20141013	1400900-04	2	A8	84.752	85.814	1.062		
Replicate (R2)	FH-FF-CH-04-08-20141013	1400900-04	2	A9	84.107	85.115	1.008		
	FH-FF-CH-05-08-20141013	1400900-05	2	A10	83.401	84.447	1.046		
	FH-FF-CH-06-08-20141013	1400900-06	2	A11	82.941	84.087	1.146		
	FH-FF-CH-08-08-20141013	1400900-07	2	A12	84.123	85.213	1.09		
	FH-FF-CH-09-08-20141013	1400900-08	2	B1	84.465	85.505	1.04		
R1	FH-FF-CH-10-08-20141013	1400900-09	2	B2	84.693	85.753	1.06		
Replicate (R2)	FH-FF-CH-10-08-20141013	1400900-09	2	B3	84.002	85.043	1.041		
	FH-FF-WC-01-08-20141013	1400900-10	2	B4	84.36	85.43	1.07		
	FH-FF-WC-02-08-20141013	1400900-11	2	B5	85.961	87.017	1.056		
R1	FH-FF-WC-03-08-20141013	1400900-12	2	B6	84.243	85.279	1.036		
Replicate (R2)	FH-FF-WC-03-08-20141013	1400900-12	2	B7	84.301	85.334	1.033		
	FH-FF-WC-04-08-20141013	1400900-13	2	B8	83.566	84.585	1.019	10.006	3/17/2015
	FH-FF-WC-05-08-20141013	1400900-14	2	B9	85.004	86.084	1.08	10.004	3/16/2015
	FH-FF-WC-06-08-20141013	1400900-15	2	B10	85.159	86.17	1.011		
R1	FH-FF-WC-07-08-20141013	1400900-16	2	B11	82.92	84.015	1.095		
Replicate (R2)	FH-FF-WC-07-08-20141013	1400900-16	2	B12	84.083	85.111	1.028		
	FH-FF-WC-08-08-20141013	1400900-17	2	C1	83.287	84.339	1.052		
	FH-FF-WC-09-08-20141013	1400900-18	2	C2	84.598	85.7	1.102		
	OA-FF-CH-01-06-20141011	1400900-19	2	C3	83.365	84.366	1.001		
R1	OA-FF-CH-02-06-20141011	1400900-20	2	C4	84.481	85.483	1.002		
Replicate (R2)	OA-FF-CH-02-06-20141011	1400900-20	2	C5	86.362	87.457	1.095		
	IB-WO-SS-04-05-20141012	1400893-01	2	C6	83.484	84.563	1.079	10.006	3/17/2015
R1	IB-WO-SS-05-05-20141012	1400893-02	2	C7	85.954	86.977	1.023		
Replicate (R2)	IB-WO-SS-05-05-20141012	1400893-02	2	C8	84.849	85.918	1.069		
	IB-WO-SS-06-05-20141012	1400893-03	2	C9	82.399	83.475	1.076		
R1	IB-WO-WS-07-05-20141012	1400893-04	2	C10	85.905	87.027	1.122		
Replicate (R2)	IB-WO-WS-07-05-20141012	1400893-04	2	C11	84.037	85.113	1.076		
	IB-WO-WS-08-05-20141012	1400893-05	2	C12	86.047	87.148	1.101		
	IB-WO-WS-09-05-20141012	1400893-06	2	D1	83.921	85.044	1.123	10.005	3/18/2015
R1	CS-WO-WS-01-03-20141010	1400893-07	2	D2	85.935	87.007	1.072		
Replicate (R2)	CS-WO-WS-01-03-20141010	1400893-07	2	D3	84.35	85.466	1.116		
	CS-WO-WS-02-03-20141010	1400893-08	2	D4	85.492	86.526	1.034		
	CS-WO-WS-03-03-20141010	1400893-09	2	D5	85.286	86.317	1.031		
R1	CS-WO-WS-05-03-20141010	1400893-10	2	D6	85.851	86.998	1.147		
Replicate (R2)	CS-WO-WS-05-03-20141010	1400893-10	2	D7	84.084	85.135	1.051		
	CS-WO-WS-06-03-20141010	1400893-11	2	D8	85.004	86.02	1.016		
	CS-WO-WS-07-03-20141010	1400893-12	2	D9	85.844	86.87	1.026		
R1	CS-WO-WS-08-03-20141010	1400893-13	2	D10	84.75	85.781	1.031		
Replicate (R2)	CS-WO-WS-08-03-20141010	1400893-13	2	D11	83.041	84.058	1.017		
	CS-WO-WS-09-03-20141010	1400893-14	2	D12	84.958	86.011	1.053		

QA/QC	Sample ID	Vista Sample ID	Plate #	Well Placement	Weight of tin capsule (mg)	Weight of capsule + sample (mg)	Weight of sample (mg)	Scale Calibration (10mg)	Date weighed
R1	CS-WO-WS-10-03-20141010	1400893-15	2	E1	84.811	85.954	1.143		
Replicate (R2)	CS-WO-WS-10-03-20141010	1400893-15	2	E2	84.976	86.032	1.056		
	FH-WO-WS-02-08-20141013	1400892-01	2	E3	83.27	84.293	1.023		
	FH-WO-WS-03-08-20141013	1400892-02	2	E4	83.157	84.208	1.051		
R1	FH-WO-WS-04-08-20141013	1400892-03	2	E5	83.374	84.421	1.047		
Replicate (R2)	FH-WO-WS-04-08-20141013	1400892-03	2	E6	83.629	84.687	1.058		
	FH-WO-WS-05-08-20141013	1400892-04	2	E7	83.621	84.638	1.017		
	FH-WO-WS-06-08-20141013	1400892-05	2	E8	83.825	84.876	1.051		
R1	FH-WO-WS-07-08-20141013	1400892-06	2	E9	85.79	86.81	1.02		
Replicate (R2)	FH-WO-WS-07-08-20141013	1400892-06	2	E10	83.478	84.481	1.003		
	FH-WO-WS-08-08-20141013	1400892-07	2	E11	85.049	86.083	1.034		
R1	FH-WO-WS-10-08-20141013	1400892-08	2	E12	87.264	88.289	1.025		
Replicate (R2)	FH-WO-WS-10-08-20141013	1400892-08	2	F1	86.087	87.112	1.025		
	OA-WO-WS-01-06-20141011	1400892-09	2	F2	85.104	86.138	1.034		
R1	OA-WO-WS-02-06-20141011	1400892-10	2	F3	85.029	86.094	1.065		
Replicate (R2)	OA-WO-WS-02-06-20141011	1400892-10	2	F4	86.15	87.205	1.055		
	OA-WO-WS-03-06-20141011	1400892-11	2	F5	84.588	85.674	1.086		
R1	OA-WO-WS-04-06-20141011	1400892-12	2	F6	85.21	86.339	1.129		
Replicate (R2)	OA-WO-WS-04-06-20141011	1400892-12	2	F7	84.006	85.133	1.127		
	OA-WO-WS-05-06-20141011	1400892-13	2	F8	85.061	86.089	1.028		
R1	OA-WO-WS-06-06-20141013	1400892-14	2	F9	83.614	84.644	1.03		
Replicate (R2)	OA-WO-WS-06-06-20141013	1400892-14	2	F10	83.911	84.99	1.079		
	OA-WO-SS-08-06-20141013	1400892-15	2	F11	83.988	85.016	1.028		
R1	OA-WO-SS-09-06-20141011	1400892-16	2	F12	84.642	85.682	1.04		
Replicate (R2)	OA-WO-SS-09-06-20141011	1400892-16	2	G1	83.948	84.98	1.032		
	OA-WO-SS-10-06-20141011	1400892-17	2	G2	84.119	85.164	1.045		
R1	IB-WO-SS-01-05-20141012	1400892-18	2	G3	84.101	85.121	1.02		
Replicate (R2)	IB-WO-SS-01-05-20141012	1400892-18	2	G4	83.822	84.858	1.036		
R1	IB-WO-SS-02-05-20141012	1400892-19	2	G5	83.889	84.921	1.032		
Replicate (R2)	IB-WO-SS-02-05-20141012	1400892-19	2	G6	84.695	85.766	1.071		
R1	IB-WO-SS-03-05-20141012	1400892-20	2	G7	87.137	88.144	1.007		
Replicate (R2)	IB-WO-SS-03-05-20141012	1400892-20	2	G8	84.345	85.36	1.015		
	T1 WMT A	1400856-01	2	G9	84.678	85.699	1.021		
	T2 WMT A	1400856-02	2	G10	84.607	85.634	1.027		
	02-34 B2	1400856-03	2	G11	85.129	86.139	1.01		

Table 3
Tissue Analytical Methods and Target Reporting Limits

Parameter^a	Analytical Method^{b,c}	Target Reporting Limit^d
Conventionals (%)		
Lipids	NOAA 1993a / Gravimetric	0.5
Total solids (% wet weight)	SM 2540G / USEPA 160.3	0.1
Organochlorine Pesticides (ng/g or µg/kg wet weight) - Low Resolution Analytical Methods		
2,4'-DDD	USEPA 8081A / 8270C / 8270D TQ	4.0
2,4'-DDE	USEPA 8081A / 8270C / 8270D TQ	4.0
2,4'-DDT	USEPA 8081A / 8270C / 8270D TQ	6.0
4,4'-DDD	USEPA 8081A / 8270C / 8270D TQ	4.0
4,4'-DDE	USEPA 8081A / 8270C / 8270D TQ	4.0
4,4'-DDT	USEPA 8081A / 8270C / 8270D TQ	10.0
4,4'-DDMU	USEPA 8081A / 8270C / 8270D TQ	10.0
Stable Isotopes		
¹³ C/ ¹² C and ¹⁵ N/ ¹⁴ N	EA-IRMS	N/A
PCB Congeners (ng/g or µg/kg)^e - High Resolution Analytical Methods		
All 209 PCB congeners	USEPA 1668	0.001
PCB Congeners (ng/g or µg/kg)^e - Low Resolution Analytical Methods		
All 209 PCB congeners	USEPA 8270C / 8270D	0.4

Notes:

µg/g = micrograms per gram

CFR = Code of Federal Regulations

EA-IRMS = Elemental Analysis - Isotope Ratio Mass Spectrometry

EDL = estimated

detection limit MDL =

method detection

limit N/A = not

applicable

ng/g = nanograms per gram

PCB = polychlorinated biphenyl

QA/QC = quality assurance/quality control

QAPP = Quality Assurance Project Plan

USEPA = U.S. Environmental Protection Agency

- Data will be reported uncorrected for lipids or moisture content.
- Laboratory reporting limits are revised periodically and may change over the duration of this project. Reporting limits should be verified by each laboratory when writing Sampling and Analysis Plans.
- Laboratories may use different versions of recommended methods (i.e., USEPA 8270C) as long as the quality assurance/quality control (QA/QC) elements identified in this QAPP are met.
- Matrix interference, total solid concentrations, and/or dilutions due to non-target analytes may increase actual reporting limits. The MDL should be at least three times lower than the reporting limit (40 CFR Part 136) but will vary per instrument by MDL study.
- PCB co-elutions will vary by instrument and column, and may increase reporting limits for some congeners.

Please include this form with any samples shipped to the Stable Isotope Facility. E-mail a copy to sif@ucdavis.edu

Mail samples to:
UC Davis Stable Isotope Facility
Department of Plant Sciences
One Shields Ave, Mail Stop 1
Davis, CA 95616 USA

Phone: 530-752-8100
 Fax: 530-752-4361
 E-mail: sif@ucdavis.edu

OFFICE USE ONLY	SLog <input type="checkbox"/> LProj <input type="checkbox"/> LTemp <input type="checkbox"/> AdTT: <input type="checkbox"/> IRREPLACEABLE
	G#
	MS: Stds:
	Run:
	Data:
Date: Invoice:	

Principal Investigator: Chris Stransky

E-mail: PAGE 18 of 19

Researcher Name: Chris Stransky

E-mail:
chris.stransky@amecfw.com

Shipping Address: 9210 Sky Park Ct., Suite # 200

Phone: 858-775-5547
 Fax: 858-300-4301

City: San Diego

State: CA

Zip: 92123

Country: USA

Billing Information (the person or department issuing payment):

Fed ID#

Billing Contact: Mark Baker / Misty Mercier

Billing E-mail:
MarkBaker@physislabs.com

Billing Address: 1904 East Wright Circle

Billing Phone: 714-602-5320
 Billing Fax: 714-602-5321

City: Anaheim

State: CA

Zip: 92806

Country: USA

Name of Institution: PHYSIS Environmental Labs, Inc.

Department:

PO Required Before Invoicing? Yes No - **Purchase Order #:**

I intend to pay by: Check Bank/Wire Transfer (EFT) Credit Card (DO NOT supply CC info)

Invoices are delivered by e-mail from ekngo@ucdavis.edu. Please check box if you require a hardcopy by mail: Mail

Terms & Conditions: The university, its officers, employees, and agents shall not be accountable for any loss, expense (including attorneys' fees), damage, or liability of any kind resulting from or arising out of services provided hereunder unless caused by negligent or willful acts or omissions by the university, its officers, employees, or agents.

I have read and accept these terms (initial here):

Sample information - Please also complete a *Sample List*, and e-mail a copy to sif@ucdavis.edu

Tray/Project name(s): POLA/POLB Food Web Tissue Study

Total # Samples: 151+3
SRM (Plus 25 addt.
QAQC by UCD SIF)

Analysis Requested – (select one) Please print a separate Analysis Order Form for each analysis ordered	
<p style="text-align: center;">Solid Sample Analysis</p> <input type="checkbox"/> ¹³ C natural abundance only <input type="checkbox"/> ¹⁵ N natural abundance only <input checked="" type="checkbox"/> Dual (¹³ C & ¹⁵ N) natural abundance <input type="checkbox"/> ¹³ C Enriched only ____atom% <input type="checkbox"/> ¹⁵ N Enriched only ____atom% <input type="checkbox"/> Dual (¹³ C & ¹⁵ N) Enriched ____atom% ¹³ C &/or ____atom% ¹⁵ N <input type="checkbox"/> ¹⁵ N Wood (Tree-Ring) <input type="checkbox"/> ³⁴ Sulfur <input type="checkbox"/> D/H Hydrogen in solid <input type="checkbox"/> ¹⁸ Oxygen in solid	<p style="text-align: center;">Water Sample Analysis</p> <input type="checkbox"/> D/H Hydrogen in water ____‰ <input type="checkbox"/> ¹⁸ Oxygen in water ____‰ <input type="checkbox"/> D/H & ¹⁸ O in water ____‰D + ____‰ ¹⁸ O <input type="checkbox"/> NO ₃ in water, plus bacteria prep – Select: Select NO ₃ isotope(s) <input type="checkbox"/> ¹³ C in DOC - Freshwater ____‰ <p style="text-align: center;">Dissolved Gas Preparation</p> <input type="checkbox"/> Select: Click to select an item Estimated concentration range ____ Enrichment ____atom% Preservation method ____
	<p style="text-align: center;">Gas Sample Analysis</p> <input type="checkbox"/> ¹⁵ N of N ₂ gas <input type="checkbox"/> Select N ₂ O isotope(s) of N ₂ O gas <input type="checkbox"/> Select N ₂ +N ₂ O isotope(s) of N ₂ & N ₂ O gas <p style="text-align: center;">Client prepared DIC</p> <input type="checkbox"/> ¹³ C of DIC, headspace in 12mL Exetainer w/H ₃ PO ₄
	<input type="checkbox"/> ¹³ C of CO ₂ gas <input type="checkbox"/> Select isotope of CH ₄ gas <p style="text-align: center;">Gas Ratios</p> <input type="checkbox"/> N ₂ /O ₂ /Ar <p style="text-align: center;">Compound Specific Isotope Analysis</p> <input type="checkbox"/> Fatty Acid Methyl Esters <input type="checkbox"/> Amino Acids – Select: Click to select <input type="checkbox"/> Other CSIA – ____

* **Prices are available on our website. Additional charges may apply.**
 Brief Description of Material: Frozen homogenized fish tissue was Dried/grinded by PHYSIS for Delivery to UCD SIF. (Cont on page 2) :
 Notes:

Check box if samples are IRREPLACEABLE (this option will delay analysis)

(Cont. from page 1):

1. Please see attached COC's for addition instructions as well as the attached workplan summary pages.
2. Please confirm that this statement from the workplan is correct for the UCD SIF procedures: "Isotope dilution quantitation technique accounts for matrix interferences thus MS/MSD are not required."
3. Total # of samples submitted: 151 samples plus 3 SRM samples (T1 WMT A, T2 WMT A, and 02-34 B2) which are being provided by the University of Hawaii as an independent 3rd party QA/QC. Please treat these 3 SRM samples the same as the original 151 tissue samples.
4. PHYSIS (and AMEC) requests that of these 151 tissue samples, UCD SIF choose 25 of them to take additional volume aliquots from and run QAQC test replicates.
5. As noted on Page 1 of this analysis order form, conduct 13C/12C and 15N/14N via method EA-IRMS. This is also shown in the attached Table 3 from the sampling work plan.

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400856-01	T1 WMT A	NA	Solid				
1400856-02	T2 WMT A	NA	Solid				
1400856-03	02-34 B2	NA	Solid				

Special Requests: These samples are to be added to the tissue group being prepped for UCD Stable Isotope Analysis.

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan.13, 2015 <i>Bettina Benedict 1400 1/13/15</i>	Received (Printed Name/Signature/Date/Time) FedEx 1/13/15 1530
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



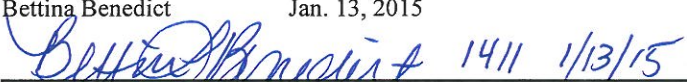
Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400892
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers		
1400892-01	FH-WO-WS-02-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-02	FH-WO-WS-03-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-03	FH-WO-WS-04-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-04	FH-WO-WS-05-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-05	FH-WO-WS-06-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-06	FH-WO-WS-07-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-07	FH-WO-WS-08-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-08	FH-WO-WS-10-08-20141013	13-Oct-14 00:00	Tissue	1		
1400892-09	OA-WO-WS-01-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-10	OA-WO-WS-02-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-11	OA-WO-WS-03-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-12	OA-WO-WS-04-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-13	OA-WO-WS-05-06-20141011	11-Oct-14 00:00	Tissue	1		
1400892-14	OA-WO-WS-06-06-20141013	13-Oct-14 00:00	Tissue	1		
1400892-15	OA-WO-SS-08-06-20141013	13-Oct-14 00:00	Tissue	1		

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 	Received (Printed Name/Signature/Date/Time) FedEx Jan. 13 2015 1530
Relinquished (Printed Name/Signature/Date/Time) 	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400892
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400892-16	OA-WO-SS-09-06-20141011	11-Oct-14 00:00	Tissue	1			
1400892-17	OA-WO-SS-10-06-20141011	11-Oct-14 00:00	Tissue	1			
1400892-18	IB-WO-SS-01-05-20141012	12-Oct-14 00:00	Tissue	1			
1400892-19	IB-WO-SS-02-05-20141012	12-Oct-14 00:00	Tissue	1			
1400892-20	IB-WO-SS-03-05-20141012	12-Oct-14 00:00	Tissue	1			

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan.13 2015  1411 1/13/15	Received (Printed Name/Signature/Date/Time) FedEx Jan.13, 2015 1530
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400902-01	IB-FF-WC-02-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-02	IB-FF-WC-03-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-03	IB-FF-WC-04-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-04	IB-FF-WC-05-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-05	IB-FF-WC-06-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-06	IB-FF-WC-07-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-07	IB-FF-WC-08-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-08	IB-FF-WC-09-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-09	IB-FF-LF-01-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-10	IB-FF-LF-02-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-11	IB-FF-LF-03-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-12	IB-FF-LF-04-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-13	IB-FF-LF-05-05-20141012	12-Oct-14 00:00	Tissue	1			
1400902-14	IA-FF-WC-01-07-20141011	11-Oct-14 00:00	Tissue	1			
1400902-15	IA-FF-WC-02-07-20141011	11-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict

Bettina Benedict 1/22/15 1414

Received (Printed Name/Signature/Date/Time)

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record




Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400902
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400902-16	IA-FF-WC-03-07-20141011	11-Oct-14 00:00	Tissue	1			
1400902-17	IA-FF-WC-04-07-20141011	11-Oct-14 00:00	Tissue	1			
1400902-18	IA-FF-WC-05-07-20141011	11-Oct-14 00:00	Tissue	1			
1400902-19	IA-FF-WC-06-07-20141011	11-Oct-14 00:00	Tissue	1			
1400902-20	IA-FF-WC-07-07-20141011	11-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict 	Received (Printed Name/Signature/Date/Time)
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)											Comments			
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) aka 1688C	PCBs (low-res) 1270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test fish filets (FF) ONLY (NOT Offal (OF)) - CALSINECE	DDTs (8270 SIM DDX w/DDMU) - CALSINECE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample eluent to ship to Physia (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Seve fish head (otolith) and label ziplock bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See 'notes' section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x	x	x	x			x	TAKE SCALES. Note which fish taken from. Skin-Off Fillets + Offal from this replicate.	
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6											x			
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=20cm,SL=18cm fish.	
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=19cm fish (both same size). 130g	
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak.	2	x		x	x	x		x	x	x				Scales already collected from both. TAKE FISH HEAD from TL=24cm,SL=21cm.	
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=24cm,SL=21cm fish.	
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak.	1	x		x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=25cm,SL=22cm fish.	
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak.	1	x	x	x	x	x	x	x	x	x			x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak.	6											x			
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

ANCHOR OEA
 1400902
 0.20C, 0.30C, -2.10C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip; IB = Long Beach Inner Harbor; IA = Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via Email 12/03/14 Company: Anchor OEA
 Signature/Printed Name: _____ Date/Time: _____
 Received By: Bethan Benedict Vista Company: 12/04/14 1109
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____
 Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

> 1400893
 ~ 1400901
 ≠ 1400902
 ⊕ 1400904
 ⊘ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista

Date: 11/20/2014
 Project Name: Harbor TMDL Food Web Sampling
 Project Number: 120711-01.07 Task 1
 Project Manager: Chris Stransky
 Phone Number: (858) 300 4360
 Shipment Method:

Vista Test Parameters (Subs noted in **Bold**)

Comments

ANCHOR QEA 1400902
 0.2°C, -0.3°C, -2.1°C

Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (low-res) 8270 Compensated - is conducted on sample ID. "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Otolith (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize Issue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physala (Q/N Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on the specific replicates.	Comments/Preservation
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2													
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3													
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x	x	x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x	x	x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x	x	x	x	x		x	x	x				Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x	x	x	x			x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x		x	x	x				Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4												x	
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x		x	x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 1/03/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____

Received By: Bettina Benedict Vista Company: 12/04/14 1109
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

- 7 1400902
- 8 1400903
- 9 1400904
- 0 1400906

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400903
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400903-01	IA-FF-WC-08-07-20141011	11-Oct-14 00:00	Tissue	1			
1400903-02	IA-FF-WC-10-07-20141011	11-Oct-14 00:00	Tissue	1			
1400903-03	CS-FF-CH-01-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-04	CS-FF-CH-02-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-05	CS-FF-CH-03-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-06	CS-FF-CH-04-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-07	CS-FF-CH-05-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-08	CS-FF-CH-06-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-09	CS-FF-CH-07-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-10	CS-FF-CH-09-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-11	CS-FF-CH-10-03-20141010	10-Oct-14 00:00	Tissue	1			
1400903-12	CS-FF-LF-02-03-20141010	10-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict <i>Bettina Benedict 1/22/15 1414</i>	Received (Printed Name/Signature/Date/Time)
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low res) 8270 Compens. - Incomplete fish but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physics (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.	
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x			x		x			Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.	
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.	
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x		x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.	
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4												x		
114	CS-FF-CH-01-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
115	CS-FF-CH-02-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
116	CS-FF-CH-03-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
117	CS-FF-CH-04-03-20141010	10/10/14	Ca. Halibut	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
118	CS-FF-CH-05-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
119	CS-FF-CH-06-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
120	CS-FF-CH-07-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	

ANCHOR QEA 1400903
0.1c, -0.3c, 0.3c

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/05/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: [Signature] Vista Company: 12/04/14 1100
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

- ≠ 1400902
- ⊕ 1400903
- ⊕ 1400904
- ⊕ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista			Vista Test Parameters (Sub's noted in Bold)														Comments	
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (low-res) (2270 Congener - is conducted on sample ID "FF/OF" sample fish, but test from Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fillet Prep (Maximize tissue)	Whole Body Fish Prep	Prep Sample aliquot to ship to Physia (CIN Stable isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation		
	Date: 11/20/2014																	
	Project Name: Harbor TMDL Food Web Sampling																	
	Project Number: 120711-01.07 Task 1																	
	Project Manager: Chris Stransky																	
	Phone Number: (858) 309 4350																	
	Shipment Method:																	
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.		
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.		
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.		
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13														
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
128	CS-FF/OF-WS-04-03-2014101010	10/10/14	White Surfprch.	1	x	x	x	x	x	x	x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.		
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x	x	x	x		x	x					Scales already collected.		
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1											x			
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x	x	x	x		x	x		x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.		
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3											x			
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1											x	L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.		
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1											x	Right side of "Lab Pics 038". 1 fish. 1/2 of Old Rep 10. 23cm TL. Old A-6		
140																		

ANCHOR QEA 1400903

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Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID); fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor; OA=Los Angeles Outer Harbor; CS=Consolidated Slip; IB=Long Beach Inner Harbor; IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <i>Vista via email 12/03/14</i> Signature/Printed Name: _____ Date/Time: _____	Company: Anchor QEA	Received By: <i>Michelle Bonuciet</i> Signature/Printed Name: _____ Date/Time: _____	Company: Vista
Relinquished By: _____ Signature/Printed Name: _____ Date/Time: _____	Company: _____	Received By: _____ Signature/Printed Name: _____ Date/Time: _____	Company: _____

> 1400893
 B 1400903
 ∞ 1400905
 ∅ 1400906

Chain-of-Custody Record


AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400904-01	FH-FF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-02	FH-OF-CH-07-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-03	FH-FF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-04	FH-OF-WS-01-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-05	FH-FF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-06	FH-OF-WC-10-08-20141013	13-Oct-14 00:00	Tissue	1			
1400904-07	OA-FF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1			
1400904-08	OA-OF-CH-06-06-20141011	11-Oct-14 00:00	Tissue	1			
1400904-09	OA-FF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1			
1400904-10	OA-OF-WS-07-06-20141013	13-Oct-14 00:00	Tissue	1			
1400904-11	OA-FF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1			
1400904-12	OA-OF-WC-02-06-20141011	11-Oct-14 00:00	Tissue	1			
1400904-13	IB-FF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1			
1400904-14	IB-OF-CH-01-05-20141012	12-Oct-14 00:00	Tissue	1			
1400904-15	IB-FF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict  1/22/15 1415	Received (Printed Name/Signature/Date/Time)
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record


AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400904
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400904-16	IB-OF-WS-10-05-20141012	12-Oct-14 00:00	Tissue	1			
1400904-17	IB-FF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1			
1400904-18	IB-OF-WC-10-05-20141012	12-Oct-14 00:00	Tissue	1			
1400904-19	IA-FF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1			
1400904-20	IA-OF-WC-09-07-20141011	11-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict 	Received (Printed Name/Signature/Date/Time)
Relinquished (Printed Name/Signature/Date/Time) 	Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Strzawsky Phone Number: (658) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (sum of 9 PCB congeners - 1a through 10) (ppb) (FF)	PCBs (sum of 9 PCB congeners - 1a through 10) (ppb) (FF) ONLY (NOT ORN) (FF) CALSCIENCE	DDTs (0276 SIM/DDX WDDDDU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Tissue Prep (Maximum tissue)	Offal Prep	Whole Body Fish Prep	Fish Storage (to ship to Physic (CN Stable Isotope)	Tweezer off 10 dorsal area scales, measure and use envelope	Save fish head (label) and label 'spike' bag and NEW ID tag with replicate ID and fish total length (TL) use in cm. If multiple fish in replicate, then use the length of the longest fish. Report in comments or middle size fish.	Archive: No freezing/keep frozen	See 'head' section at bottom. PFOF fish replicate will proceed live but will be tagged for chemistry and no fish will be kept on this specific replicate.	Comments/Preservation
1	FH-FF-CH-01-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
2	FH-FF-CH-02-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
3	FH-FF-CH-03-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
4	FH-FF-CH-04-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
5	FH-FF-CH-05-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
6	FH-FF-CH-06-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
7	FH-FF/OF-CH-07-08-20141013	10/13/13	Ca. Halibut	1	X	X	X	X	X	X	X				X		Scales already collected. Skin Off Fillets + Offal from this replicate.	
8	FH-FF-CH-08-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
9	FH-FF-CH-09-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
10	FH-FF-CH-10-08-20141013	10/13/13	Ca. Halibut	1	X		X	X	X	X				X			Scales already collected.	
11	FH-WO-CH-Archive-08-20141013	10/13/13	Ca. Halibut	5											X		'Lab pic: 02?' Contains 5 fish in 1 foil (A1-A5) Orig. Archive.	
12	FH-FF/OF-WS-01-08-20141013	10/13/13	White Surfprch	1-2	X	X	X	X	X	X	X			X	X		Scales already collected. Skin Off Fillets + Offal from this replicate. CONFIRMED NEEDS TO HAVE A CHINA A-4 ADDED TO replicate + scales taken	
13	FH-WO-WS-02-08-20141013	10/13/13	White Surfprch	2	X		X	X	X	X	X						Scales already collected.	
14	FH-WO-WS-03-08-20141013	10/13/13	White Surfprch	3	X		X	X	X	X	X						Scales already collected.	
15	FH-WO-WS-04-08-20141013	10/13/13	White Surfprch	3	X		X	X	X	X	X						Scales already collected.	
16	FH-WO-WS-05-08-20141013	10/13/13	White Surfprch	3	X		X	X	X	X	X						Scales already collected.	
17	FH-WO-WS-06-08-20141013	10/13/13	White Surfprch	3	X		X	X	X	X	X						Scales already collected.	
18	FH-WO-WS-07-08-20141013	10/13/13	White Surfprch	1	X		X	X	X	X	X						Scales already collected.	
19	FH-WO-WS-08-08-20141013	10/13/13	White Surfprch	1	X		X	X	X	X	X						Scales already collected.	
20	FH-WO-WS-10-08-20141013	10/13/13	White Surfprch	1	X		X	X	X	X	X						Scales already collected.	

ANCHOR OEA 1400904
0.2°C, 0.3°C, -0.9°C, -2.1°C, -1.7°C, 0.3°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID) fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every FF/OF sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, CL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip, LB = Long Beach Inner Harbor, LA = Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

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- ⊕ 1400904
- ⊕ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120714-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate PCBs (high res) EPA 1668C PCBs (low res) 8270 Congeners - is condensed on sample ID "FF/OF" sample fish, but list Fish Fillets (FF) ONLY (NOT Chnl (OF)) - CALSCIENCE DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE % Solids (Total Solids) % Lipids (Total Lipids) Fish Fillet Prep (Maximize Issue) Whole Body Fish Prep Offal Prep Prep Sample amount to ship to Physis (CN Stable Isotope) Tweezer off 10 pectoral area scales, measure and use envelope Save fish head (girth) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) mm in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish. Archive: No freezing / keep frozen See index: 1 column at bottom. FF/OF fish replicates will include two full sets of organs. Barcodes of fish, the entire offal will be sealed for chemistry and no alcohol will be kept on this specific replicate.										ANCHOR OEA 1400904				
Track #	Field Sample ID	Collection Date/Time	Fish Type	No. of Fish in Replicate	PCBs (high res) EPA 1668C	PCBs (low res) 8270 Congeners - is condensed on sample ID "FF/OF" sample fish, but list Fish Fillets (FF) ONLY (NOT Chnl (OF)) - CALSCIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize Issue)	Whole Body Fish Prep	Offal Prep	Prep Sample amount to ship to Physis (CN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (girth) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) mm in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive: No freezing / keep frozen	See index: 1 column at bottom. FF/OF fish replicates will include two full sets of organs. Barcodes of fish, the entire offal will be sealed for chemistry and no alcohol will be kept on this specific replicate.	Comments/Preservation
21	FH-WO-WS-Archive-08-20141014	10/14/14	White Surfprch	7														Lab pic 028. Contains A1-A7. Ong archive.
22	FH-WO-SS-09-08-20141013	10/13/14	Shiner Surfprch	1	x									x				TAKE SCALES. Analyze this sample only for lipids and PCBs
23	FH-FF-WC-01-08-20141013	10/13/14	White Croak	2	x								x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
24	FH-FF-WC-02-08-20141013	10/13/14	White Croak	2	x								x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
25	FH-FF-WC-03-08-20141013	10/13/14	White Croak	2	x								x					Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish.
26	FH-FF-WC-04-08-20141013	10/13/14	White Croak	2	x								x					Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
27	FH-FF-WC-05-08-20141013	10/13/14	White Croak	2	x								x					Scales already collected. TAKE FISH HEAD from TL=21cm, SL=18cm fish.
28	FH-FF-WC-06-08-20141013	10/13/14	White Croak	2	x								x					Scales already collected of both fish in replicate. Same lengths. Note gen. weight of fish.
29	FH-FF-WC-07-08-20141013	10/13/14	White Croak	2	x								x					Scales already collected of both fish in replicate. Note size of fish the Otolith comes from.
30	FH-FF-WC-08-08-20141013	10/13/14	White Croak	1	x								x					Scales already collected.
31	FH-FF-WC-09-08-20141013	10/13/14	White Croak	1	x								x					Scales already collected. Note new Sample ID. Re-label bag + tag.
32	FH-FF/OF-WC-10-08-20141013	10/13/14	White Croak	1	x	x							x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate. Note new Sample ID. Re-label bag + tag.
33	FH-WO-WC-Archive-08-20141013	10/13/14	White Croak	4													x	4 plus possibly another 4 more archive fish.
34	OA-FF-CH-01-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.
35	OA-FF-CH-02-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.
36	OA-FF-CH-03-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.
37	OA-FF-CH-04-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.
38	OA-FF-CH-05-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.
39	OA-FF/OF-CH-06-06-20141011	10/11/14	Ca. Halibut	1	x	x							x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.
40	OA-FF-CH-07-06-20141011	10/11/14	Ca. Halibut	1	x								x					Scales already collected.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID). Fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip, IB = Long Beach Inner Harbor, IA = Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Relinquished By: Via email 11/20/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____


Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: Christina Benedetti Vista Company: 11/20/14 11:00
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

> 1400893
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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) aka 16B&C	PCBs (low res) B270 Congeners - is conducted on sample ID "FF/OF" sample fish, but not Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (B270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (CAN Stable Isotope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (ololith) and label ziplock bag and NEW ID bag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See "notes" section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no ololith will be kept on this specific replicate.	 ANCHOR QEA 1400904
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
41	OA-FF-CH-08-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
42	OA-FF-CH-09-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
43	OA-FF-CH-10-06-20141011	10/11/14	Ca. Halibut	1	x		x	x	x			x		x			Scales already collected.	
44	OA-WO-CH-Archive-06-20141011	10/11/14	Ca. Halibut	5												x	Photo 29. Label says "OA-XX-CA-A-06-20141011"	
45	OA-WO-WS-01-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from (size). No ololith. Unknown # fish.	
46	OA-WO-WS-02-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x				Scales already collected.	
47	OA-WO-WS-03-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x				Scales already collected.	
48	OA-WO-WS-04-06-20141011	10/11/14	White Surfprch.	5	x		x	x	x			x	x				Scales already collected.	
49	OA-WO-WS-05-06-20141011	10/11/14	White Surfprch.	4	x		x	x	x			x	x				Scales already collected.	
50	OA-WO-WS-06-06-20141013	10/13/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
51	OA-FF/OF-WS-07-06-20141013	10/13/14	White Surfprch.	1	x	x	x	x	x	x	x	x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
52	OA-WO-WS-Archive-06-20141011	10/11/14	White Surfprch.	4												x		
53	OA-WO-SS-08-06-20141013	10/13/14	Shiner Surfprch.	6	x		x	x	x			x	x				Scales already collected.	
54	OA-WO-SS-09-06-20141011	10/11/14	Shiner Surfprch.	4	x		x	x	x			x	x				Scales already collected.	
55	OA-WO-SS-10-06-20141011	10/11/14	Shiner Surfprch.	7	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from (size). No ololith.	
56	OA-WO-SS-Archive-06-20141013	10/13/14	Shiner Surfprch.	4												x	Unknown actual number b/c of on-boat mis-ID	
57	OA-FF-WC-01-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected.	
58	OA-FF/OF-WC-02-06-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x	x	x				x	Scales already collected. Skin-Off Fillets + Offal from this replicate.	
59	OA-FF-WC-03-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected.	
60	OA-FF-WC-04-06-20141011	10/11/14	White Croak.	1	x		x	x	x			x		x			Scales already collected.	

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = ololith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip, IB = Long Beach Inner Harbor, IA = Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Relinquished By: Via Email 12/03/14 Company: Anchor QEA
 Signature/Printed Name: _____ Date/Time: _____


Received By: [Signature] Vista Company: 12/04/14 119
 Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
 Signature/Printed Name: _____ Date/Time: _____

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Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments					
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (658) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low-res) 8270 congeners - is conducted on sample ID FF/OF (FF = sample fish, but test fish filets (FF) ONLY (NOT Otolith (OT) - CALSCLIENCE	DDTs (8270 SIM DDX w/DDMU) - CALSCLIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physic (CN Stable Isootope)	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otoith) and label - detach bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate choose fish directed to in comments or media size fish.	Archive: No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this the entire of fish will be tested for chemistry and of fish will be kept on this specific replicate	 ANCHOR QEA	1400904
Track #	Field Sample ID	Collection Date/Time	Type of Fish																
61	OA-FF-WC-05-06-20141011	10/11/14	White Croak.	1	x		x	x	x	x								Scales already collected.	
62	OA-FF-WC-06-06-20141011	10/11/14	White Croak.	3	x		x	x	x	x			x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
63	OA-FF-WC-07-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
64	OA-FF-WC-08-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x								Scales already collected. TAKE FISH HEAD. Both fish same size. TL=21cm,SL=18cm	
65	OA-FF-WC-09-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x								Scales already collected. TAKE FISH HEAD. Both fish same size. TL=19cm,SL=16cm	
66	OA-FF-WC-10-06-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
67	OA-WO-WC-Archive-06-20141011	10/11/14	White Croak.	4												x			
68	OA-FF-LF-01-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
69	OA-FF-LF-02-06-20141011	10/11/14	Lizard Fish	2	x		x	x	x	x			x					TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.	
70	OA-WO-LF-Archive-06-20141011	10/11/14	Lizard Fish	21												x		# of Archive unknown b/c of final sorting	
71	IB-OF/FF-CH-01-05-20141012	10/12/14	Ca. Halibut	1	x	x	x	x	x	x			x				x	Scales already collected. Skin-Off Filets + Offal from this replicate.	
72	IB-FF-CH-02-05-20141012	10/12/14	Ca. Halibut	1	x		x	x	x	x							x	Scales already collected. TAKE FISH HEAD from TL=30cm,SL=25cm fish.	
73	IB-WO-SS-01-05-20141012	10/12/14	Shiner Surfprch.	6	x		x	x	x			x	x					Scales already collected from one fish in this rep.	
74	IB-WO-SS-02-05-20141012	10/12/14	Shiner Surfprch.	4	x		x	x	x			x	x					Scales already collected from one fish in this rep.	
75	IB-WO-SS-03-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.	
76	IB-WO-SS-04-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	
77	IB-WO-SS-05-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from both fish in this Rep #5.	
78	IB-WO-SS-06-05-20141012	10/12/14	Shiner Surfprch.	2	x		x	x	x			x	x					Scales already collected from one fish in this rep.	
79	IB-WO-SS-Archive-05-20141012	10/12/14	Shiner Surfprch.	1													x		
80	IB-WO-W5-07-05-20141012	10/12/14	White Surfprch.	1	x		x	x	x			x	x	x				TAKE SCALES. Note which fish taken from (size). No otolith.	

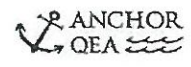
Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID) filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining of fish after filleting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch. WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: <i>Via Email 12/23/14</i> Signature/Printed Name Date/Time	Company: Anchor QEA	Received By: <i>Beth A. Bredet</i> Signature/Printed Name Date/Time	Company: Vista 12/24/14 11:19
Relinquished By: Signature/Printed Name Date/Time	Company:	Received By: Signature/Printed Name Date/Time	Company:

* 1400892
 > 1400893
 ~ 1400901
 @ 1400906
 ⊕ 1400904

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:				No. of Fish in Replicate	PCBs (high res) epa 1698C	PCBs (low-res) 4270 Congeners - Is conducted on sample ID "FF/OF" sample fish, but test Fish Fillet (FF) ONLY (NOT Otolith (OF)) - CALSCIENCE	DDTs (8270 SIM DDX WIDDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physix (CN State Jurispe)	Tweezer off: 10 pectoral area scales; measure and use envelope	Save fish head (otolith) and label project bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive: No testing / keep frozen	See notes section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
Track #	Field Sample ID	Collection Date/Time	Type of Fish															
81	IB-WO-WS-08-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x			TAKE SCALES Note which fish taken from (size) No otolith		
82	IB-WO-WS-09-05-20141012	10/12/14	White Surfprch	1	x		x	x	x		x	x	x			TAKE SCALES Note which fish taken from (size) No otolith		
83	IB-FF/OF-WS-10-05-20141012	10/12/14	White Surfprch	1	x	x	x	x	x	x		x	x		x	TAKE SCALES Note which fish taken from Skin-Off Filets + Offal from this replicate		
84	IB-WO-WS-Archive-05-20141012	10/12/14	White Surfprch	6											x			
85	IB-FF-WC-01-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x		Scales already collected. TAKE FISH HEAD from TL=20cm, SL=18cm fish		
86	IB-FF-WC-02-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x		Scales already collected. TAKE FISH HEAD from TL=20cm SL=18cm fish		
87	IB-FF-WC-03-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x		Scales already collected. TAKE FISH HEAD from TL=21cm, SL=19cm fish (both same size) 130g		
88	IB-FF-WC-04-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
89	IB-FF-WC-05-05-20141012	10/12/14	White Croak	2	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
90	IB-FF-WC-06-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x		Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm.		
91	IB-FF-WC-07-05-20141012	10/12/14	White Croak	2	x		x	x	x			x		x		Scales already collected from both. TAKE FISH HEAD from TL=24cm, SL=21cm		
92	IB-FF-WC-08-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x		Scales already collected. TAKE FISH HEAD from TL=24cm SL=21cm fish.		
93	IB-FF-WC-09-05-20141012	10/12/14	White Croak	1	x		x	x	x			x		x		Scales already collected. TAKE FISH HEAD from TL=25cm, SL=22cm fish.		
94	IB-FF/OF-WC-10-05-20141012	10/12/14	White Croak	1	x	x	x	x	x	x		x			x	Scales already collected. Skin-Off Filets + Offal from this replicate.		
95	IB-WO-WC-Archive-05-20141012	10/12/14	White Croak	6											x			
96	IB-FF-LF-01-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
97	IB-FF-LF-02-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
98	IB-FF-LF-03-05-20141012	10/12/14	Lizard Fish	2	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
99	IB-FF-LF-04-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		
100	IB-FF-LF-05-05-20141012	10/12/14	Lizard Fish	1	x		x	x	x			x	x	x		TAKE SCALES Note which fish taken from and match fish head (Otolith) ID to.		



1400904

MAY 2014

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID) filets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH = Fish Harbor, OA = Los Angeles Outer Harbor, CS = Consolidated Slip; IB = Long Beach Inner Harbor; LA = Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING

Bob 12/01/14

Relinquished By: Via email 12/01/14 Company: Anchor QEA
Signature/Printed Name: _____ Date/Time: _____

Received By: Bob Blue ditt Vista Company: 12/01/14 12
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

> 1400893
~ 1400901
≠ 1400902
⊕ 1400904
⊖ 1400906

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014				No. of Fish in Replicate	PCBs (high res) epa 1688C	PCBs (low-res) 8270 Congeners - is conducted on sample ID "FF/OF" sample fish, but test Fish Fillets (FF) ONLY (NOT Offal (OF)) - CALSCIENCE	DDTs (8270 SIM DDx w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope).	Tweezer off 10 pectoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and Newby ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or middle size fish.	Archive. No testing / keep frozen	See "notes" section at bottom. FF/OF fish replicates will produce two full sets of tests. Because of this, the entire offal will be tested for chemistry and no otolith will be kept on this specific replicate.	ANCHOR QEA 1400904
Project Name: Harbor TMDL Food Web Sampling																		
Project Number: 120711-01_07 Task 1																		
Project Manager: Chris Stransky																		
Phone Number: (858) 300 4350																		
Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish															Comments/Preservation
101	IB-WO-LF-Archive-05-20141012	10/12/14	Lizard Fish	2														
102	IA-WO-WS-Archive-07-20141011	10/11/14	White Surfprch.	3														
103	IA-FF-WC-01-07-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
104	IA-FF-WC-02-07-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
105	IA-FF-WC-03-07-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
106	IA-FF-WC-04-07-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x					Scales already collected. TAKE FISH HEAD from TL=21cm,SL=18cm fish.
107	IA-FF-WC-05-07-20141011	10/11/14	White Croak.	2	x		x	x	x	x			x					Scales already collected of both fish in replicate. Same lengths. TAKE FISH HEAD.
108	IA-FF-WC-06-07-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x					Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
109	IA-FF-WC-07-07-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x					Scales already collected. TAKE FISH HEAD from TL=23cm,SL=20cm fish.
110	IA-FF-WC-08-07-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
111	IA-FF/OF-WC-09-07-20141011	10/11/14	White Croak.	1	x	x	x	x	x	x			x					Scales already collected. Skin-Off Fillets + Offal from this replicate.
112	IA-FF-WC-10-07-20141011	10/11/14	White Croak.	1	x		x	x	x	x			x					Scales already collected. TAKE FISH HEAD from TL=27cm,SL=23cm fish.
113	IA-WO-WC-Archive-07-20141011	10/11/14	White Croak.	4														
114	CS-FF-CH-01-03-20141010	10/10/14	Ca Halibut	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
115	CS-FF-CH-02-03-20141010	10/10/14	Ca Halibut	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
116	CS-FF-CH-03-03-20141010	10/10/14	Ca Halibut	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
117	CS-FF-CH-04-03-20141010	10/10/14	Ca Halibut	2	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
118	CS-FF-CH-05-03-20141010	10/10/14	Ca Halibut	1	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
119	CS-FF-CH-06-03-20141010	10/10/14	Ca Halibut	1	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.
120	CS-FF-CH-07-03-20141010	10/10/14	Ca Halibut	1	x		x	x	x	x			x	x				TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to.

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of: YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch, Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip, IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor). NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/03/14 Company: Anchor QEA
Signature/Printed Name _____ Date/Time _____

Received By: Bella Benedict Company: Vista Date/Time: 12/26/14 1758
Signature/Printed Name _____ Date/Time _____

Relinquished By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

Received By: _____ Company: _____
Signature/Printed Name _____ Date/Time _____

- ≠ 1400 902
- Ⓟ 1400 903
- Ⓢ 1400 904
- Ⓣ 1400 906

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400905
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400905-01	CS-FF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1			
1400905-02	CS-OF-CH-08-03-20141010	10-Oct-14 00:00	Tissue	1			
1400905-03	CS-FF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1			
1400905-04	CS-OF-WS-04-03-20141010	10-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict

Bettina Benedict 1/22/15 1415

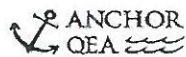
Received (Printed Name/Signature/Date/Time)

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista				Vista Test Parameters (Sub's noted in Bold)										Comments				
Date: 11/20/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method:																		
Track #	Field Sample ID	Collection Date/Time	Type of Fish	No. of Fish in Replicate	PCBs (high res) epa 1668C	PCBs (low res) 0270 Congeners -ie conducted on sample ID "FF/OF" - a sample fish, but test Fish Fillets (FF) ONLY (NOT Otolith) - CALSCIENCE	DDTs (0270 SIM DDx W/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Fish Fillet Prep (Maximize tissue)	Offal Prep	Whole Body Fish Prep	Prep Sample aliquot to ship to physals (CN State Isotope)	Tweezer off 10 peccoral area scales, measure and use envelope	Save fish head (otolith) and label ziplock bag and NEW ID tag with replicate ID and fish Total Length (TL) size in cm. If multiple fish in replicate, choose fish directed to in comments or media size fish.	Archive. No testing / keep frozen	See notes section at bottom. FFOF fish replicates will produce two full sets of tests. Because of this, the entire otolith will be tested for chemistry and no otolith will be kept on this specific replicate.	Comments/Preservation
121	CS-FF/OF-CH-08-03-20141010	10/10/14	Ca. Halibut	1	x	x	x	x	x	x	x	x	x	x		x	TAKE SCALES. Skin-Off Fillets + Offal from this replicate.	
122	CS-FF-CH-09-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to	
123	CS-FF-CH-10-03-20141010	10/10/14	Ca. Halibut	1	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to	
124	CS-WO-CH-Archive-03-20141010	10/10/14	Ca. Halibut	13											x			
125	CS-WO-WS-01-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
126	CS-WO-WS-02-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
127	CS-WO-WS-03-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
128	CS-FF/OF-WS-04-03-2014101010	10/10/14	White Surfprch.	1	x	x	x	x	x	x		x			x		Scales already collected. Skin-Off Fillets + Offal from this replicate.	
129	CS-WO-WS-05-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
130	CS-WO-WS-06-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
131	CS-WO-WS-07-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
132	CS-WO-WS-08-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
133	CS-WO-WS-09-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
134	CS-WO-WS-10-03-20141010	10/10/14	White Surfprch.	1	x		x	x	x			x	x				Scales already collected.	
135	CS-WO-WS-Archive-03-20141010	10/10/14	White Surfprch.	1											x			
136	CS-FF-LF-02-03-20141010	10/10/14	Lizard Fish	2	x		x	x	x			x	x	x			TAKE SCALES. Note which fish taken from and match fish head (Otolith) ID to	
137	CS-WO-LF-Archive-03-20141010	10/10/14	Lizard Fish	3											x			
138	FH-WO-WS-Archive-08-20141014-FormerRep9	10/14/14	White Surfprch.	1											x		L side Photo 37. Frm Rep. 9 (TL=22cm; SL=17cm) that was moved to archive.	
139	FH-WO-CH-Archive-08-20141013-A6	10/13/14	Ca. Halibut	1											x		Right side of "Lab Pics 038" 1 fish 1/2 of Old Rep 10 23cm TL Old A-6	



1400905
0.4°C, 0.1°C

Notes: YY-FF/OF-ZZ samples (where YY is the location ID, and ZZ is the species ID): fillets (FF) from this sample should have the final identification code after processing of YY-FF-ZZ-Rep#-Location#-DateCode while the remaining offal after filleting this sample should have the identification code of: YY-OF-ZZ-Rep#-Location#-Date. Please apply this identification code scheme to every "FF/OF" sample. These two samples / two sample IDs (that came from one fish) will produce two full sets of chemical tests. Species IDs: WC = White Croaker, CH = California Halibut, LF = Lizard Fish, SS = Shiner Surfperch, WS = White Surfperch. Fish Tissue Type IDs: FF = Skin off fillet, OF = offal, WO = whole organism, OL = otolith, SC = scale. Location IDs: FH=Fish Harbor, OA=Los Angeles Outer Harbor, CS=Consolidated Slip; IB=Long Beach Inner Harbor, IA=Los Angeles Inner Harbor. NOTE: CONFIRM THAT ALL REQUIRED COMPONENT SEGMENTS OF ALL FISH ARE HOMOGENIZED TOGETHER AS APPLICABLE BEFORE ALLOQUOTS ARE TAKEN FOR TESTING.

Relinquished By: Via email 12/02/14 Company: Anchor OEA
Signature/Printed Name: _____ Date/Time: _____

Received By: Betha Benedict Vista Company: 12/01/14 1207
Signature/Printed Name: _____ Date/Time: _____

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

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∞ 1400905
Ⓞ 1400906

Chain-of-Custody Record


AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400960-01	OA-ST-MS-COMP1-01-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-02	OA-ST-MS-COMP2-01-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-03	OA-ST-MS-COMP3-01-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-04	OA-ST-MS-COMP4-01-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-05	OA-ST-MS-COMP5-01-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-06	IA-ST-MS-COMP1-02-2014-10-22	22-Oct-14 00:00	Tissue	1			
1400960-07	IA-ST-MS-COMP2-02-2014-10-22	22-Oct-14 00:00	Tissue	1			
1400960-08	IA-ST-MS-COMP3-02-2014-10-22	22-Oct-14 00:00	Tissue	1			
1400960-09	IA-ST-MS-COMP4-02-2014-10-22	22-Oct-14 00:00	Tissue	1			
1400960-10	IA-ST-MS-COMP5-02-2014-10-22	22-Oct-14 00:00	Tissue	1			
1400960-11	CS-ST-OY-COMP1-03-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-12	CS-ST-OY-COMP2-03-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-13	CS-ST-OY-COMP3-03-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-14	CS-ST-OY-COMP4-03-2014-10-2	22-Oct-14 00:00	Tissue	1			
1400960-15	CS-ST-OY-COMP5-03-2014-10-2	22-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict 	Received (Printed Name/Signature/Date/Time)
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record

AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400960
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400960-16	IB-ST-MS-COMP1-04-2014-10-27	27-Oct-14 00:00	Tissue	1			
1400960-17	IB-ST-MS-COMP2-04-2014-10-27	27-Oct-14 00:00	Tissue	1			
1400960-18	IB-ST-MS-COMP3-04-2014-10-27	27-Oct-14 00:00	Tissue	1			
1400960-19	IB-ST-MS-COMP4-04-2014-10-27	27-Oct-14 00:00	Tissue	1			
1400960-20	IB-ST-MS-COMP5-04-2014-10-27	27-Oct-14 00:00	Tissue	1			

Special Requests: See Original COC

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict

Bettina Benedict 1/22/15 14/16

Received (Printed Name/Signature/Date/Time)

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: Vista 1104 Windfield Way El Dorado Hills, CA 95762 Date: 12/15/2014 Project Name: Harbor TMDL Food Web Sampling Project Number: 120711-01.07 Task 1 Project Manager: Chris Stransky Phone Number: (858) 300 4350 Shipment Method: FedEx Overnight				Vista Test Parameters (Sub's noted in Bold)													Comments/Preservation		
Track #	Field Sample ID	Collection Date	Bivalve Type	No. of Bivalves in Replicate	PCBs (high res) epa 1688C	DDTs (8270 SIM DDX w/DDMU) - CALSCIENCE	% Solids (Total Solids)	% Lipids (Total Lipids)	Mussel Prep	Oyster Prep	Prep Sample aliquot to ship to Physis (C/N Stable Isotope)								
1	OA-ST-MS-COMP1-01-2014-10-22	10/22/14	Mussel	70	x	x	x	x	x		x								
2	OA-ST-MS-COMP2-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x								
3	OA-ST-MS-COMP3-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x								
4	OA-ST-MS-COMP4-01-2014-10-22	10/22/14	Mussel	68	x	x	x	x	x		x								
5	OA-ST-MS-COMP5-01-2014-10-22	10/22/14	Mussel	60	x	x	x	x	x		x								
6	IA-ST-MS-COMP1-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x								
7	IA-ST-MS-COMP2-02-2014-10-22	10/22/14	Mussel	32	x	x	x	x	x		x								
8	IA-ST-MS-COMP3-02-2014-10-22	10/22/14	Mussel	49	x	x	x	x	x		x								
9	IA-ST-MS-COMP4-02-2014-10-22	10/22/14	Mussel	50	x	x	x	x	x		x								
10	IA-ST-MS-COMP5-02-2014-10-22	10/22/14	Mussel	42	x	x	x	x	x		x								
11	CS-ST-OY-COMP1-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x								
12	CS-ST-OY-COMP2-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x								
13	CS-ST-OY-COMP3-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x								
14	CS-ST-OY-COMP4-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x								
15	CS-ST-OY-COMP5-03-2014-10-22	10/22/14	Oyster	12	x	x	x	x		x	x								
16	IB-ST-MS-COMP1-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x								
17	IB-ST-MS-COMP2-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x								
18	IB-ST-MS-COMP3-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x								
19	IB-ST-MS-COMP4-04-2014-10-27	10/27/14	Mussel	61	x	x	x	x	x		x								
20	IB-ST-MS-COMP5-04-2014-10-27	10/27/14	Mussel	60	x	x	x	x	x		x								

1400960

Relinquished By: Michelle Bowman Company: AMEC
Signature/Printed Name: Michelle Bowman Date/Time: 12/15/2014 1547

Received By: Bella Benedict B. Benedict Company: Vista
Signature/Printed Name: Bella Benedict B. Benedict Date/Time: 12/16/14 0909

Relinquished By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Received By: _____ Company: _____
Signature/Printed Name: _____ Date/Time: _____

Chain-of-Custody Record



Report to:
AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky
Project Number: 1400893
Requested TAT: Standard

Ship to:
Misty Mercier
Physis Environmental Laboratories, Inc.
1904 East Wright Circle
Anaheim, CA 92806
714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400893-01	IB-WO-SS-04-05-20141012	12-Oct-14 00:00	Tissue				
1400893-02	IB-WO-SS-05-05-20141012	12-Oct-14 00:00	Tissue				
1400893-03	IB-WO-SS-06-05-20141012	12-Oct-14 00:00	Tissue				
1400893-04	IB-WO-WS-07-05-20141012	12-Oct-14 00:00	Tissue				
1400893-05	IB-WO-WS-08-05-20141012	12-Oct-14 00:00	Tissue				
1400893-06	IB-WO-WS-09-05-20141012	12-Oct-14 00:00	Tissue				
1400893-07	CS-WO-WS-01-03-20141010	10-Oct-14 00:00	Tissue				
1400893-08	CS-WO-WS-02-03-20141010	10-Oct-14 00:00	Tissue				
1400893-09	CS-WO-WS-03-03-20141010	10-Oct-14 00:00	Tissue				
1400893-10	CS-WO-WS-05-03-20141010	10-Oct-14 00:00	Tissue				
1400893-11	CS-WO-WS-06-03-20141010	10-Oct-14 00:00	Tissue				
1400893-12	CS-WO-WS-07-03-20141010	10-Oct-14 00:00	Tissue				
1400893-13	CS-WO-WS-08-03-20141010	10-Oct-14 00:00	Tissue				
1400893-14	CS-WO-WS-09-03-20141010	10-Oct-14 00:00	Tissue				
1400893-15	CS-WO-WS-10-03-20141010	10-Oct-14 00:00	Tissue				

Special Requests: See Original Chain of Custody

<p>Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1412 1/13/15</i></p>	<p>Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530</p>
<p>Relinquished (Printed Name/Signature/Date/Time)</p>	<p>Received (Printed Name/Signature/Date/Time)</p>

Chain-of-Custody Record



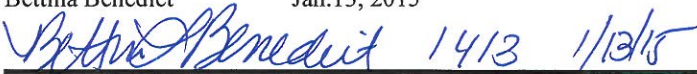
Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400900
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400900-01	FH-FF-CH-01-08-20141013	13-Oct-14 00:00	Tissue				
1400900-02	FH-FF-CH-02-08-20141013	13-Oct-14 00:00	Tissue				
1400900-03	FH-FF-CH-03-08-20141013	13-Oct-14 00:00	Tissue				
1400900-04	FH-FF-CH-04-08-20141013	13-Oct-14 00:00	Tissue				
1400900-05	FH-FF-CH-05-08-20141013	13-Oct-14 00:00	Tissue				
1400900-06	FH-FF-CH-06-08-20141013	13-Oct-14 00:00	Tissue				
1400900-07	FH-FF-CH-08-08-20141013	13-Oct-14 00:00	Tissue				
1400900-08	FH-FF-CH-09-08-20141013	13-Oct-14 00:00	Tissue				
1400900-09	FH-FF-CH-10-08-20141013	13-Oct-14 00:00	Tissue				
1400900-10	FH-FF-WC-01-08-20141013	13-Oct-14 00:00	Tissue				
1400900-11	FH-FF-WC-02-08-20141013	13-Oct-14 00:00	Tissue				
1400900-12	FH-FF-WC-03-08-20141013	13-Oct-14 00:00	Tissue				
1400900-13	FH-FF-WC-04-08-20141013	13-Oct-14 00:00	Tissue				
1400900-14	FH-FF-WC-05-08-20141013	13-Oct-14 00:00	Tissue				
1400900-15	FH-FF-WC-06-08-20141013	13-Oct-14 00:00	Tissue				

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan.13, 2015 	Received (Printed Name/Signature/Date/Time) FedEx Jan.13,2015 1530
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



Report to:
AMEC
9210 Sky Park Court
Suite 200
San Diego, CA 92123
858-300-4350

Project Manager: Chris Stransky
Project Number: 1400900
Requested TAT: Standard

Ship to:
Misty Mercier
Physis Environmental Laboratories, Inc.
1904 East Wright Circle
Anaheim, CA 92806
714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400900-16	FH-FF-WC-07-08-20141013	13-Oct-14 00:00	Tissue				
1400900-17	FH-FF-WC-08-08-20141013	13-Oct-14 00:00	Tissue				
1400900-18	FH-FF-WC-09-08-20141013	13-Oct-14 00:00	Tissue				
1400900-19	OA-FF-CH-01-06-20141011	11-Oct-14 00:00	Tissue				
1400900-20	OA-FF-CH-02-06-20141011	11-Oct-14 00:00	Tissue				

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time)

Bettina Benedict Jan. 13, 2015

Bettina Benedict 1413 1/13/15

Relinquished (Printed Name/Signature/Date/Time)

Received (Printed Name/Signature/Date/Time)

FedEx Jan. 13, 2015 1530

Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



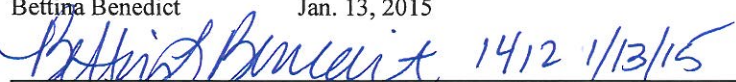
Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400901
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400901-01	OA-FF-CH-03-06-20141011	11-Oct-14 00:00	Tissue				
1400901-02	OA-FF-CH-04-06-20141011	11-Oct-14 00:00	Tissue				
1400901-03	OA-FF-CH-05-06-20141011	11-Oct-14 00:00	Tissue				
1400901-04	OA-FF-CH-07-06-20141011	11-Oct-14 00:00	Tissue				
1400901-05	OA-FF-CH-08-06-20141011	11-Oct-14 00:00	Tissue				
1400901-06	OA-FF-CH-09-06-20141011	11-Oct-14 00:00	Tissue				
1400901-07	OA-FF-CH-10-06-20141011	11-Oct-14 00:00	Tissue				
1400901-08	OA-FF-WC-01-06-20141011	11-Oct-14 00:00	Tissue				
1400901-09	OA-FF-WC-03-06-20141011	11-Oct-14 00:00	Tissue				
1400901-10	OA-FF-WC-04-06-20141011	11-Oct-14 00:00	Tissue				
1400901-11	OA-FF-WC-05-06-20141011	11-Oct-14 00:00	Tissue				
1400901-12	OA-FF-WC-06-06-20141011	11-Oct-14 00:00	Tissue				
1400901-13	OA-FF-WC-07-06-20141011	11-Oct-14 00:00	Tissue				
1400901-14	OA-FF-WC-08-06-20141011	11-Oct-14 00:00	Tissue				
1400901-15	OA-FF-WC-09-06-20141011	11-Oct-14 00:00	Tissue				

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 	Received (Printed Name/Signature/Date/Time) FedEx Jan.13 2015 1530
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)

Chain-of-Custody Record



Report to:
 AMEC
 9210 Sky Park Court
 Suite 200
 San Diego, CA 92123
 858-300-4350
 Project Manager: Chris Stransky
 Project Number: 1400901
 Requested TAT: Standard

Ship to:
 Misty Mercier
 Physis Environmental Laboratories, Inc.
 1904 East Wright Circle
 Anaheim, CA 92806
 714-602-5320

Sample Information

VistaNumber	SampleName	Sampled	Matrix	#Containers			
1400901-16	OA-FF-WC-10-06-20141011	11-Oct-14 00:00	Tissue				
1400901-17	OA-FF-LF-01-06-20141011	11-Oct-14 00:00	Tissue				
1400901-18	OA-FF-LF-02-06-20141011	11-Oct-14 00:00	Tissue				
1400901-19	IB-FF-CH-02-05-20141012	12-Oct-14 00:00	Tissue				
1400901-20	IB-FF-WC-01-05-20141012	12-Oct-14 00:00	Tissue				

Special Requests: See Original Chain of Custody

Relinquished (Printed Name/Signature/Date/Time) Bettina Benedict Jan. 13, 2015 <i>Bettina Benedict 1412 1/13/15</i>	Received (Printed Name/Signature/Date/Time) FedEx Jan. 13, 2015 1530
Relinquished (Printed Name/Signature/Date/Time)	Received (Printed Name/Signature/Date/Time)