CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

2375 Northside Drive, Suite 100
San Diego, CA 92108
(619) 516-1990 • Fax (619) 516-1994
http://www.waterboards.ca.gov

ORDER NO. R9-2014-0037
AS AMENDED BY ORDER NO. R9-2017-0010
NPDES NO. CA0109363

WASTE DISCHARGE REQUIREMENTS
FOR THE
UNITED STATES DEPARTMENT OF THE NAVY
NAVAL BASE POINT LOMA COMPLEX
SAN DIEGO COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	United States Department of the Navy
Name of Facility	Naval Base Point Loma (NBPL) Complex
Facility Address	140 Sylvester Road, Building 140 Room 234
	San Diego, CA 92106
	San Diego County
Facility Contact, Title, and Phone at adoption	Donald 'Angus' MacKelvey, Environmental Program Director, (619) 533-0526
Mailing Address	Same as Facility Address
Type of Facility	Naval Base
Facility Design Flow	Not Applicable
The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) have classified this discharge as a major discharge.	

Table 2. Discharge Location

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Industrial Process Water Effluent Discharges				
CS-001	Topside Chlorinator / Dechlorinator Units (North)	32º 41' 23" N	117º 14' 18" W	San Diego Bay
CS-002	Topside Chlorinator / Dechlorinator Units (Middle)	32º 41' 21" N	117º 14' 11" W	San Diego Bay
CS-003	Topside Chlorinator /	32º 41' 16" N	117º 14' 6" W	San Diego Bay

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
	Dechlorinator Units (South)			
PW-001	Pier Washing	32º 41’ 37” N	117º 14’ 19” W	San Diego Bay
PW-002	Pier Piling and Wing Wall Washing	32º 42’ 13” N	117º 14’ 8” W	San Diego Bay
MP-001(formerly DP-002)	Marine Mammal Pool[3]	32º 42’ 8” N	117º 14’ 14” W	San Diego Bay
MP-002 (formerly DP-001)	Marine Mammal Pool[3]	32º 41’ 57” N	117º 14’ 21” W	San Diego Bay
MP-003	Marine Mammal Pool Temporary Location[3]	32º 43’ 35” N	117º 12’ 58” W	San Diego Bay
UBW-001	Unused Bay Water	32º 42’ 19” N	117º 14’ 11” W	San Diego Bay
ABL-001	Abalone Tank	32º 41’ 33” N	117º 14’ 22” W	San Diego Bay
BW-001	Pier Boom Cleaning[1]	32º 41’ 19” N	117º 14’ 19” W	San Diego Bay
ME-001	Marine Mammal Enclosure Cleaning[3]	32º 42’ 15” N	117º 14’ 8” W	San Diego Bay
ME-002	Marine Mammal Enclosure Cleaning[3]	32º 41’ 9” N	117º 14’ 11” W	San Diego Bay
ME-003	Marine Mammal Enclosure Cleaning[3]	32º 41’ 53” N	117º 14’ 18” W	San Diego Bay
ME-004	Marine Mammal Enclosure Temporary Location[3]	32º 43’ 35” N	117º 12’ 58” W	San Diego Bay
BR-001	Small boat rinsing	32º 42’ 13” N	117º 14’ 11” W	San Diego Bay
BR-002	Small boat rinsing	32º 43’ 21” N	117º 13’ 10” W	San Diego Bay
UV-001	Utility Vault Dewatering Switch Station A	32º 42’ 23” N	117º 14’ 47” W	San Diego Bay
UV-002	Utility Vault Dewatering Switch Station B	32º 42’ 9” N	117º 14’ 24” W	San Diego Bay
UV-003	Utility Vault Dewatering Switch Station C	32º 41’ 17” N	117º 14’ 20” W	San Diego Bay
UV-004	Utility Vault Dewatering Switch Station H	32º 42’ 37” N	117º 14’ 58” W	San Diego Bay
UV-005	Utility Vault Dewatering Switch Station L	32º 41’ 36” N	117º 15’ 0” W	San Diego Bay

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
UV-006	Utility Vault Dewatering Switch Station P	32º 42’ 25” N	117º 14’ 39” W	San Diego Bay
UV-007	Utility Vault Dewatering Switch Station V	32º 43’ 29” N	117º 13’ 8” W	San Diego Bay
UV-008	Utility Vault Dewatering Pier 5003 Vault 1	32º 42’ 24” N	117º 14’ 16” W	San Diego Bay
UV-009	Utility Vault Dewatering Pier 5003 Vault 2	32º 41’ 25” N	117º 14’ 14” W	San Diego Bay
UV-010	Utility Vault Dewatering Pier 5000 Vault 1	32º 41’ 19” N	117º 14’ 15” W	San Diego Bay
UV-011	Utility Vault Dewatering Pier 5000 Vault 2	32º 41’ 19” N	117º 14’ 14” W	San Diego Bay
UV-012	Utility Vault Dewatering Pier 5000 Vault 3	32º 41’ 21” N	117º 14’ 11” W	San Diego Bay
UV-013	Utility Vault Dewatering Pier 5000 Vault 4	32º 41’ 22” N	117º 14’ 9” W	San Diego Bay
UV-014	Utility Vault Dewatering Pier 5000 Vault 5	32º 41’ 22” N	117º 14’ 7” W	San Diego Bay
UV-015	Utility Vault Dewatering Pier 5002 Vault 1	32º 41’ 14” N	117º 14’ 11” W	San Diego Bay
UV-016	Utility Vault Dewatering Pier 5002 Vault 2	32º 41’ 15” N	117º 14’ 10” W	San Diego Bay
UV-017	Utility Vault Dewatering Pier 5002 Vault 3	32º 41’ 17” N	117º 14’ 5” W	San Diego Bay
UV-018	Utility Vault Dewatering Pier 544 Vault	32º 41’ 6” N	117º 14’ 24” W	San Diego Bay
Small Municipal Separate Storm Sewer System (MS4) Discharges				
See Attachment M of this order	Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay
Industrial No Exposure Area Storm Water Discharges				

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
See Attachment M of this order	Industrial No Exposure Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay
Industrial Low Risk Area Storm Water Discharges				
See Attachment M of this order	Industrial Low Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay
Industrial High Risk Area Storm Water Dischargers				
See Attachment M of this order	Industrial High Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay

[1] Pier boom cleaning discharges to remove marine growth usually occur twice per year using high pressure potable water, and the booms are typically removed to a barge during the cleaning process. In the event booms become contaminated with oil or fuel, they are placed on a barge, transported to NBPL, and cleaned on a self-contained shore side wash pad, and the wastewater is collected and treated at the NBPL Bilge Oily Waste Treatment System (BOWTS).

[2] The discharge points identified in the table represent electrical utility vaults with automatic sump pumps that could potentially discharge water into San Diego Bay.

[3] Starting in the fall of 2013, Space and Naval Warfare Systems Pacific temporarily relocated the marine mammal enclosures and pools from current locations on NBPL to the Naval Mine and Anti-Submarine Warfare Command Complex for approximately four years.

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**June 26, 2014**
This Order originally became effective on:	**August 1, 2014**
This Order as amended by Order No. R9-2017-0010 became effective on:	**December 13, 2017**
This Order shall expire on:	**July 31, 2019**
The Discharger shall file a Report of Waste Discharge as an application for renewal of waste discharge requirements in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to this Order expiration date**
The USEPA) and the Regional Water Quality Control Board have classified this discharge as follows:	**Major**

I, **David W. Gibson,** Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of this Order adopted by the California Regional Water Quality Control Board, San Diego Region, on June 26, 2014 as amended by Order No. R9-2017-0010 on December 13, 2017.

David W. Gibson, Executive Officer

Contents

Tables

List of Attachments

I. FACILITY INFORMATION

Information describing the Naval Base Point Loma Complex (NBPL or Facility) is summarized above in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

A. Background. The United States Department of the Navy (Navy or Discharger) previously discharged pursuant to Order No. R9-2002-0002, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109363.

The Discharger submitted a Report of Waste Discharge (ROWD) dated May 31, 2007, and an updated ROWD dated May 17, 2012, in application for the reissuance of an NPDES permit to discharge topside chlorinator units wastewater, pier washing wastewater, pier boom cleaning wastewater, marine mammal pool wastewater, marine mammal enclosure cleaning wastewater, unused returned San Diego Bay water, abalone tank wastewater, small boat rinsing wastewater, utility vault and manhole dewatering wastewater, miscellaneous wastewater, and industrial and non-industrial storm water at numerous discharge locations from the Facility. The application was deemed complete on February 10, 2014. Additional information was submitted after the application was deemed complete. Site visits were conducted on September 23, 2013, and April 3, 2014, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Naval Base Point Loma Complex is managed by the Commander, Navy Region Southwest (CNRSW) command structure and is comprised of the following nine installations:

- Naval Base Point Loma (NBPL-Main Base, previously Naval Submarine Base, San Diego [SUBASE]);
- Fleet Logistics Center San Diego (FLC San Diego, previously Fleet and Industrial Supply Center [FISC]);
- Naval Mine and Anti-Submarine Warfare Complex (NMAWC, previously Fleet Anti-Submarine Warfare Training Center, Pacific [FASW]);
- Fleet Combat Training Center, Pacific (FCTCPAC) and Commander Third Fleet;
- Fleet Intelligence Training Center, Pacific (FITCPAC);
- Magnetic Silencing Facility (MSF);
- Naval Facilities Engineering Command Southwest, Taylor Street Facility (NAVFAC SW TSF);
- Space and Naval Warfare Systems Center Pacific, Point Loma Campus (SSC Pacific PLC); and
- Space and Naval Warfare Systems Center Pacific, Old Town Campus (SSC Pacific OTC).

These installations are hereinafter jointly referred to as “Facility”.

Figure B-1 of Attachment B of this Order provides a vicinity map showing the locations of the installations that comprise the Facility.

C. Discharge Descriptions. This Order establishes requirements for the following categories of discharges from the Facility:

1. **Industrial Process Wastewater**

The types of industrial process wastewaters discharged from the Facility to San Diego Bay and/or the Pacific Ocean, waters of the United States (U.S.), are described in the table below:

Table 4. Industrial Process Wastewater Discharge Types

Type of Discharge	Discharge Point Nos.
Topside Chlorinator/Dechlorinator Unit Wastewater	CS-001 through CS-003
Pier Washing Wastewater	PW-001 and PW-002
Marine Mammal Pool Wastewater	MP-001 and MP-003
Returned, Unused San Diego Bay Water	UBW-001
Abalone Tank Wastewater	ABL-001
Pier Boom Cleaning Water	BW-001
Marine Mammal Enclosure Cleaning Wastewater	ME-001 through ME-004
Small Boat Rinsing Wastewater	BR-001 and BR-002
Utility Vault and Manhole Dewatering	UV-001 through UV-018
USS ARCO Flood Water	USS ARCO

Attachment C of this Order provides flow schematics of industrial process wastewater discharges from the Facility. Section II.B of Attachment F (Fact Sheet) of this Order provides a description of each industrial process wastewater discharge

2. **Industrial Storm Water Runoff**

Industrial storm water discharges occur from areas of the Facility identified as Industrial Areas in the maps submitted in April 2014, and included in Attachment B of this Order. Industrial areas are broken down into the following risk level designations: Industrial No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas. Industrial storm water discharges from areas at the Facility designated as Industrial High Risk Areas as described under section IV.B of this Order, and including areas such as piers where vessel maintenance and repair activities are expected to occur, are subject to effluent limitations for acute toxicity. All industrial storm water discharges are subject to continued coverage under a Storm Water Pollution Prevention Plan (SWPPP). Industrial storm water from Industrial Low Risk Areas and Industrial High Risk Areas are subject to Numeric Action Levels (NALs) as described in section IV.E.3 or this Order. Section II.B.1 of Attachment F (Fact Sheet) of this Order provides a description of industrial storm water discharges. Attachment M of this Order provides a list of storm water discharges, the risk designations associated with each discharge, and the associated receiving waters

3. **Municipal Storm Water Runoff**

   Storm water (wet weather) and non-storm water (dry weather) discharges occur through Small (Phase II) Municipal Separate Storm Sewer Systems (MS4s) at numerous locations throughout the Facility. This Order regulates the discharge of storm water (wet weather) and non-storm water (dry weather) from the Facility to waters of the U.S., including San Diego Bay, the Pacific Ocean, and other unnamed waters of the Point Loma Hydrologic Area (908.10) of the Pueblo San Diego Hydrologic Unit (908.00), pursuant to federal Clean Water Act (CWA) section 402(p) as discharges from a non-traditional Phase II MS4. Section II.B of Attachment F (Fact Sheet) of this Order provides a description of Small MS4 discharges. Attachment M of this Order provides a list of the Small MS4 discharge locations and the associated receiving waters.

D. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC) commencing with section 13260. This Order is also issued pursuant to section 402 of the CWA and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the CWC commencing with section 13370. This Order shall serve as an NPDES permit for point source discharges from this facility to surface waters.

E. Background and Rationale for Requirements. The San Diego Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through M are also incorporated into this Order.

F. Provisions and Requirements Implementing State Law. Some of the provisions/requirements in subsections VI.A.2, VI.B.2, VI.C.1.d, VI.C.3, and VI.C.4 of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

G. Executive Officer Delegation of Authority. The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.

H. Notification of Interested Parties. Prior to the adoption of this Order, the San Diego Water Board notified the Discharger and other interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit their written comments and recommendations. Details of this notification are provided in the Fact Sheet of this Order.

I. Consideration of Public Comment. The San Diego Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R9-2002-0002 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The dumping, deposition or discharge of the following wastes directly into waters of the U.S., including but not limited to the Pacific Ocean and San Diego Bay, or adjacent to such waters in any manner which may permit its being transported into the waters is prohibited:

1. paint chips;
2. blasting materials;
3. paint over spray;
4. paint;
5. water contaminated with abrasive blast materials, paint, oils, fuels, lubricants, solvents, or petroleum;
6. hydro-blast water;
7. tank cleaning water such as to remove sludge and/or dirt;
8. clarified water from an oil and water separator, except for storm water discharges treated by an oil and water separator and having coverage under this Order;
9. steam cleaning water;
10. pipe and tank hydrostatic test water, unless regulated by an NPDES permit;
11. saltbox water;
12. hydraulic oil;
13. fuel;
14. trash;
15. refuse and rubbish including but not limited to cans, bottles, paper, plastics, vegetable matter or dead animals;
16. fiberglass dust;
17. swept materials;
18. ship repair and maintenance activity debris;
19. waste zinc plates;
20. demineralizer and reverse osmosis brine; and
21. oily bilge water.

B. Small boat rinsing, marine mammal pool, and marine mammal enclosure cleaning discharges having a maximum temperature greater than 20ºF above the natural receiving water when they enter the receiving water are prohibited.

C. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into San Diego Bay or the Pacific Ocean is prohibited.

D. All discharges regulated under this Order shall comply with discharge prohibitions contained in the San Diego Water Board's Water Quality Control Plan for the San Diego Basin (Basin Plan) and other applicable statewide water quality control plans. The San Diego Water Board's Basin

Plan Waste Discharge Prohibitions are hereby incorporated in this Order by reference as if fully set forth herein and are listed in Attachment J of this Order.

E. Discharges of wastes to waters of the U.S., including but not limited to San Diego Bay and the Pacific Ocean, are prohibited except as specifically authorized by and described in, this Order or another NPDES permit.

F. Except as provided in Non-Storm Water Specifications, section IV.F of this Order or as otherwise regulated by this Order, discharges of liquids or materials others than storm water (i.e. non-storm water discharges) either directly or indirectly to waters of the U.S., including but not limited to San Diego Bay or the Pacific Ocean are prohibited. Non-storm water discharges that are not authorized under section IV.F of this Order or by a separate NPDES permit are prohibited.

G. The discharge of the first ¼ inch of storm water runoff from all areas designated as Industrial High Risk areas under section IV.B of this Order is prohibited, except if the pollutants in the discharge are reduced to levels that comply with the requirements of section IV.C. Effluent limitations contained in section IV.C remain applicable to discharges after the first ¼ inch of storm water runoff has been discharged or contained on-site.

H. The discharge of materials of petroleum origin in sufficient quantities to be visible in the receiving water is prohibited.

I. Discharges to waters of the U.S., including but not limited to San Diego Bay and the Pacific Ocean, containing a hazardous substance equal to, or in excess of, a reportable quantity listed in title 40 of the Code of Federal Regulations (40 CFR) part 117, *Security Classification Regulations* Pursuant To Executive Order 11652 or 40 CFR part 302, *Designation, Reportable Quantities*, and Notification are prohibited.

J. Total chlorine residual may not be discharged from any single topside chlorinator/dechlorinator unit for more than two hours per calendar day.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Industrial Process Wastewater

1. The following industrial process wastewaters are regulated using a BMP approach under section VI.C.3 of this Order:

Table 5. Industrial Process Wastewaters Regulated with BMPs

Type of Discharge	Discharge Point Nos.
Topside Chlorinator/Dechlorinator Unit Wastewater	CS-001 through CS-003
Pier Washing Wastewater	PW-001 and PW-002
Marine Mammal Pool Wastewater	MP-001 and MP-003
Returned, Unused San Diego Bay Water	UBW-001
Abalone Tank Wastewater	ABL-001
Pier Boom Cleaning Water	BW-001
Marine Mammal Enclosure Cleaning Wastewater	ME-001 through ME-004
Small Boat Rinsing Wastewater	BR-001 and BR-002

Utility Vault and Manhole Dewatering	UV-001 through UV-018
USS ARCO Flood Water	USS ARCO

2. Final Effluent Limitations for Topside Chlorinator/Dechlorinator Units – Discharge Point Nos. CS-001 through CS-003

The Discharger shall maintain compliance with the following effluent limitations in Table 6 at Discharge Point Nos. CS-001 through CS-003 with compliance measured at Monitoring Locations CS-001 through CS-003 as described in the Monitoring and Reporting Program (MRP), Attachment E of this Order.

Table 6. Effluent Limitations for Topside Chlorinator/Dechlorinator Units

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Total Chlorine Residual	µg/L	--	--	8.1[1]	--
	lbs/day	--	--	0.012[2]	--

[1] The concentration based effluent limitation for total chlorine residual is calculated based on two hours of chlorination.

[2] The mass-based effluent limitation for total chlorine residual is calculated with a flow rate of 1500 GPM and is for each submarine that is chlorinating.

B. Storm Water Risk Level Designations

1. Storm Water Risk Level Designation Definitions

a. **Small Municipal Separate Storm Sewer System (Small MS4) Areas.** Areas where no industrial activities occur. Areas designated as "Small MS4 Areas" are subject to the technology-based standard of maximum extent practicable (MEP) and Storm Water Management Program (SWMP) requirements contained in section VI.D of this Order.

b. Industrial No Exposure Areas. Areas where all industrial materials and activities are protected by a storm resistant shelter[1] to prevent exposure to rain, snow, snowmelt, and/or runoff. "Industrial materials and activities" include, but are not limited to, material handling[2] equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, and waste products.

c. Industrial Low Risk Areas. All areas where wastes or pollutants from industrial activities are subject to precipitation, run-on, and/or runoff and which are not classified as Industrial No Exposure Areas or Industrial High Risk Areas.

[1] "Storm-resistant shelters" include completely roofed and walled buildings or structures. They also include structures with only a top cover supported by permanent supports but with no side coverings provided material within the structure is not subject to wind dispersion (sawdust, powders, etc), track-out, and there is no storm water discharged from within the structure that has come into contact with any materials.

[2] "Material handling activities" include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, or waste product.

d. Industrial High Risk Areas. All areas where wastes or pollutants of significant quantities from ship construction, modification, repair, and maintenance activities (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substances, toxic pollutants, non-conventional pollutants, materials of petroleum origin, or other substances of water quality significance) are subject to precipitation, run-on, and/or runoff.

2. Annual Storm Water Risk Designation Level Report

Annually, the Discharger shall conduct a complete and thorough survey of the Facility to identify and categorize all areas and the associated storm water drainage system(s) and outfall(s) (i.e. discharge point(s)) in accordance with the risk level designations. Storm water drainage systems and outfalls that receive storm water runoff from areas that have multiple risk levels shall be designated as having the highest risk level occurring in that area. The Discharger shall prepare and submit an Annual Storm Water Risk Level Designation Report by September 1 of each year containing the results of the surveys conducted in the previous July 1 through June 30 period including the following information:

a. Master List. An updated list of all facility discharge locations containing discharge point identification numbers, summary activity descriptions of the drainage area(s) tributary to each discharge point, the storm water risk level designation, the longitude and latitude of the outfall location, and the name of the receiving water. The current Master Risk Designation List is included as Attachment M of this Order and the updated master list shall be in a format suitable for the replacement of Attachment M.

b. Map. A Facility map clearly labeled with (i) storm water discharge points; (ii) storm drain systems, features, drainage basin boundaries, and risk level designations; and (iii) land uses. The current Master Risk Designation Facility Map is included in Attachment B of this Order and updated maps shall be in a format suitable for the replacement of the figures in Attachment B.

c. Proposed Revisions. A description of any proposed changes to the (i) storm water discharge points; (ii) storm drain systems, features, drainage basin boundaries, and risk levels; and (iii) land use designations from the previous year.

3. Annual Storm Water Risk Level Designation Implementation

The Discharger shall implement the results of the Annual Storm Water Risk Level Designation Report by October 1, unless directed otherwise in writing by the San Diego Water Board. The updated Master Risk Designation List and Facility Map will supersede Attachment M of this Order except for enforcement purposes, and shall become an enforceable condition of this Order on October 1, unless directed otherwise in writing by the San Diego Water Board. The San Diego Water Board retains the right to require revisions to the Discharger designated risk levels based on relevant evidence, whether direct or circumstantial, including but not limited to, evidence in the following categories:

a. Site characteristics and location in relation to potential sources of a discharge;

b. Industry-wide operational practices that have led to discharges;

c. Evidence of poor management of materials or wastes, such as improper storage practices or inability to reconcile inventories;

d. Lack of documentation of responsible management of materials or wastes, such as lack of manifests or lack of documentation of proper disposal;

e. Physical evidence, such as analytical data, soil or pavement staining, or unusual odor or appearance;

f. Reports or complaints;

g. Other agencies' records of possible or known discharges; and

h. Refusal or failure to respond to San Diego Water Board inquires.

4. Storm Water Risk Level Inspections

The Discharger shall conduct periodic inspections throughout the year to ensure that storm water risk level designations remain applicable and on-site operations have not changed sufficiently to warrant a revised risk level. These inspections may be conducted simultaneously with inspections conducted pursuant to other sections of this Order. If at any time the Discharger identifies a necessary revision to an area's risk level, the Discharger shall implement Best Management Practices (BMPs) and other requirements of the area's new risk level by the next storm event, unless additional time is approved by the San Diego Water Board. All risk level revisions shall be included in the Annual Storm Water Risk Level Designation Report.

C. Effluent Limitations for Discharges from Industrial High Risk Areas

1. For discharges of pollutants in storm water discharges, from areas designated under section IV.B.1. of this Order as Industrial High Risk Areas, the Discharger shall maintain compliance with the following Maximum Daily Effluent Limitations (MDEL) for acute toxicity with compliance measured at Monitoring Locations as described in the Monitoring and Reporting Program (MRP) Attachment E and Attachment M as updated annually of this Order.

2. The Acute Toxicity MDEL is based on the outcome of the Test of Significant Toxicity (TST) approach and the resulting percent effect at the Instream Waste Concentration (IWC). The MDEL is exceeded when a toxicity test results in a "fail," and the percent effect is greater than or equal to 40% for acute toxicity tests in accordance with Compliance Determination, Section VII. of this Order.

D. Small MS4 Discharge Specifications

1. **Pollutant Reduction to MEP.** The Discharger shall reduce pollutants in storm water discharges from areas, designated under section IV.B. of this Order as "Small (Military Base) MS4 Areas", to the technology–based standard of MEP to attain compliance with water quality standards set forth in section V, Receiving Water Limitations of this Order.

2. **Storm Water Management Plan (SWMP) Implementation.** The Discharger shall prepare and submit to the San Diego Water Board, an adequate SWMP no later than 18 months following the effective date of this Order. The Discharger shall implement the SWMP no later than 24 months following the effective date of this Order. The Discharger shall make revisions to the SWMP as necessary or required by the San Diego Water Board. The SWMP shall be designed to reduce the discharge of pollutants from "Small (Military Base) MS4 Areas" to the technology–based standard of MEP to protect receiving water quality.

The SWMP shall serve as the framework for identification, assignment, and implementation of measures and BMPs to control Small (Military Base) MS4 discharges. Existing programs such as street sweeping that have storm water quality benefits should be identified in the SWMP and be a part of the Discharger's storm water program. The SWMP shall at a minimum contain the elements described in Attachment L of this Order.

E. Industrial Storm Water Discharge Specifications – No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas

1. **Pollutant Reduction to Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT).** The Discharger shall reduce pollutants in storm water discharges from areas, designated under section IV.B of this Order as Industrial No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas to do the following:

   a. Attain the technology–based standards of BAT for toxic and non-conventional pollutants, and BCT for conventional pollutants; and

   b. Attain compliance with applicable effluent limitations set forth in section IV, Effluent Limitations and Discharge Specifications of this Order and water quality standards set forth in section V, Receiving Water Limitations of this Order.

2. **Storm Water Pollution Prevention Plan (SWPPP) Requirements.**

   a. The Discharger shall continue to maintain and implement an effective SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities conducted in Industrial No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas to the technology–based standards of BAT for toxic and non-conventional pollutants, and BCT for conventional pollutants.

   b. The SWPPP shall include identification, assignment, and guidance for implementation of measures and BMPs to control discharges from industrial activities in the Industrial No Exposure, Industrial Low Risk and Industrial High Risk Areas of NBPL. The BMPs and measures shall be selected to achieve BAT/BCT and compliance with all receiving water limitations.

   c. At a minimum, the SWPPP shall contain the elements and be implemented in accordance with Attachment G of this Order.

3. **Numeric Action Levels (NALs) for Industrial High Risk Areas and Industrial Low Risk Areas.**

   The NALs described in Table G-1 of Attachment G of this Order are used as numeric thresholds for corrective action. An exceedance of a NAL is not a violation of this Order. The Discharger shall implement corrective actions as described below.

   a. NAL Exceedance Determination Method:

      i. Annual NAL Exceedance. The Discharger shall determine the average concentration for each parameter using the results of all the industrial storm water sampling and analytical results for the entire Facility for the reporting year (i.e., all "effluent" data). This average concentration for each parameter shall be compared

to the corresponding annual NAL values in Table G-1. For Dischargers using composite sampling or flow-weighted measurements in accordance with standard practices, the average concentrations shall be calculated in accordance with the USEPA *Industrial Stormwater Monitoring and Sampling Guide*.[3] An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds an annual NAL value for that parameter listed in Table G-1 (or is outside the NAL pH range). The Discharger has the option of calculating the flow weighted average concentration for all industrial storm water effluent data for the entire facility as shown below to compare the corresponding annual NAL values in Table G-1:

$$\text{FWAC} = \frac{\sum_{n=1}^{n=5} Q_n C_n}{\sum_{n=1}^{n=5} Q_n}$$

Where:

FWAC = Flow weighted average concentration
Q_n = Flow rate of discharge at time of sample collection
C_n = Concentration of chemical in the collected sample
n = Number of discharge points

The flow rate for each discharge point is multiplied by the concentration (C) in the sample from that discharge point. This sum is divided by the total flow rate for all of the discharge points.

For calculating the average, all effluent sampling analytical results that are reported by the laboratory as “non-detect" or less than the Method Detection Limit (MDL), a value of zero shall be used. Any results reported by the laboratory as “Detected Not Quantifiable” or less than the Minimum Level (ML) but above the MDL, a value of the MDL plus ½ the difference between the MDL and the ML shall be used.

ii. Instantaneous Maximum NAL Exceedance. The Discharger shall compare all industrial storm water analytical results from each distinct sample (grab or composite) to the corresponding instantaneous maximum NAL values in Table G-1. An instantaneous maximum NAL exceedance occurs when two or more analytical results for TSS, oil and grease, or pH from samples taken within a reporting year exceed the instantaneous maximum NAL value (or is outside the NAL pH range).

iii. Exceedances of the Annual NAL or Instantaneous Maximum NAL are not a violation of this Order.

b. NAL Exceedance Response Actions (ERAs)

i. Baseline Status – No Exceedance

[3] US EPA. “Industrial Stormwater Monitoring and Sampling Guide.” March 2009. EPA 832-B-09-003 Web 7 April 2014. <http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf>.

(a) The Discharger will automatically be placed in Baseline status at the beginning of the permit term.

ii. Level 1 Status

A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. Level 1 status will commence on July 1 following the reporting year during which the exceedance(s) occurred.

(a) Level 1 ERA Evaluation. By October 1 following commencement of Level 1 status for any parameter with sampling results indicating an NAL exceedance, the Discharger shall:

(1) Complete an evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s); and,

(2) Identify in the evaluation the corresponding BMPs in the SWPPP and any additional BMPs and SWPPP revisions necessary to prevent future NAL exceedances and to comply with the requirements of this Order. Although the evaluation may focus on the drainage areas where the NAL exceedance(s) occurred, all drainage areas shall be evaluated.

(b) Level 1 ERA Report. Based on the above evaluation, the Discharger shall, as soon as practicable, but no later than January 1 following commencement of Level 1 status:

(1) Revise the SWPPP as necessary and implement any additional BMPs identified in the evaluation;

(2) Certify and submit a Level 1 ERA Report that includes the following:

a) A summary of the Level 1 ERA Evaluation required in section IV.E.3.b.ii.(a) above; and

b) A detailed description of the SWPPP and any additional BMPs for each parameter that exceeded an NAL.

(c) Return to Baseline. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter.

(d) NAL Exceedances Prior to Implementation of Level 1 Status BMPs. Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1, whichever comes first, sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances.

iii. Level 2 Status

A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the Discharger is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL exceedance(s) occurred.

(a) Level 2 ERA Action Plan

(1) Dischargers with Level 2 status shall certify and submit a Level 2 ERA Action Plan that addresses each new Level 2 NAL exceedance by January 1 following the reporting year during which the NAL exceedance(s) occurred. For each new Level 2 NAL exceedance, the Level 2 Action Plan will identify which of the demonstrations in section X.B of Attachment G the Discharger has selected to perform. A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.

(2) The Level 2 ERA Action Plan shall at a minimum address the drainage areas with corresponding Level 2 NAL exceedances.

(3) All elements of the Level 2 ERA Action Plan shall be implemented as soon as practicable and completed no later than 1 year after submitting the Level 2 ERA Action Plan.

(4) The Level 2 ERA Action Plan shall include a schedule and a detailed description of the tasks required to complete the Discharger's selected demonstration(s) as described below in section X.B of Attachment G.

(b) Level 2 ERA Technical Report

(1) On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report that includes one or more of the following demonstrations described in section X.B of Attachment G to this order:

a) Industrial Activity BMPs Demonstration:

b) Non-Industrial Pollutant Source Demonstration; or

c) Natural Background Pollutant Source Demonstration.

(2) The San Diego Water Board may review the submitted Level 2 ERA Technical Reports. Upon review of a Level 2 ERA Technical Report, the San Diego Water Board may reject the Level 2 ERA Technical Report and direct the Discharger to take further action(s) to comply with this Order.

(3) Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area, facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation,

etc.). The Level 2 ERA Technical Report shall be certified and submitted by the Discharger with each Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

(4) Dischargers are not precluded from submitting a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status if information is available to adequately prepare the report and perform the demonstrations described above. A Discharger who chooses to submit a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status will automatically be placed in Level 2 in accordance to the Level 2 ERA schedule.

(5) Eligibility for Returning to Baseline Status

a) Dischargers with Level 2 status who submit an Industrial Activity BMPs Demonstration in accordance with section X.B.1 of Attachment G and have implemented BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) shall return to baseline status for that parameter, if results from four (4) subsequent consecutive QSEs sampled indicate no additional NAL exceedance(s) for that parameter(s). If future NAL exceedances occur for the same parameter(s), the Discharger's Baseline status will return to Level 2 status on July 1 in the subsequent reporting year during which the NAL exceedance(s) occurred. These Dischargers shall update the Level 2 ERA Technical Report as required above in section IV.E.3.b.3)b).

b) Dischargers are ineligible to return to baseline status if they submit any of the following:

(i) A industrial activity BMP demonstration but are not expected to eliminate future NAL exceedance(s) in accordance with section X.B.1.d of Attachment G;

(ii) An non-industrial pollutant source demonstration; or,

(iii) A natural background pollutant source demonstration.

(6) Level 2 ERA Implementation Extension

a) Dischargers that need additional time to submit the Level 2 ERA Technical Report shall be automatically granted a single time extension for up to six (6) months upon submitting the following items as applicable:

(i) Reasons for the time extension;

(ii) A revised Level 2 ERA Action Plan including a schedule and a detailed description of the necessary tasks still to be performed to complete the Level 2 ERA Technical Report; and

(iii) A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.

b) The San Diego Water Board will review Level 2 ERA Implementation Extensions for completeness and adequacy. Requests for extensions that total more than six (6) months are not granted unless approved in writing by the San Diego Water Board. The San Diego Water Board may (1) reject or revise the time allowed to complete Level 2 ERA Implementation Extensions, (2) identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or (3) require the Discharger to implement additional temporary BMPs.

4. **Design Storm Standards for Storm Water Retention and Treatment Control BMPs**

All new treatment control BMPs employed by Discharger to comply with this Order shall be designed to comply with minimum design storm standards in this section. A Factor of Safety shall be incorporated into the design of all treatment control BMPs to ensure that storm water is sufficiently treated throughout the life of the treatment control BMPs. The design storm standards for treatment control BMPs are as follows:

a. **Volume-based BMPs:** The Discharger shall, at a minimum, calculate[4] the volume to be treated using one of the following methods:

i. The volume of runoff produced from an 85th percentile storm event as determined from local, historical rainfall records. Isopluvial maps for the 85th percentile storm event are available on the internet[5];

ii. The volume of runoff produced by the 85th percentile storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's (WEF's) Manual of Practice[6]; or,

iii. The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook[7] using local historical rainfall records.

b. **Flow-based BMPs:** The Discharger shall calculate the flow needed to be treated using one of the following methods:

i. The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;

[4] All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).
[5] The County of San Diego isopluvial map located at http://www.sdcounty.ca.gov/dpw/watersheds/susmp/susmppdf/susmp_85precip.pdf may be used.
[6] Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, pg. 175 Equation 5.2 (1998).
[7] California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. Web. 28 February 2013. <http://www.cabmphandbooks.com/Development.asp>.

ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,

iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

c. In lieu of complying with the design storm standards for treatment control BMPs in this section, the Discharger may certify and submit a BAT/BCT Compliance Demonstration Technical Report.

d. The San Diego Water Board may revise the treatment design storm standard provided in this Order in writing based upon sampling data indicating that a revised design storm standard would be protective of water quality, or based upon the San Diego Water Board's determination that the treatment technology associated with the revised design storm standard meets BAT/BCT.

F. Non-Storm Water Discharge Specifications

1. **Non-Storm Water Discharges.** Discharges through the Small MS4 of material other than storm water to waters of the U.S. shall be effectively prohibited, except as allowed under this Provision or as otherwise authorized by a separate NPDES permit. The following non-storm water discharges are authorized under this Order unless the Discharger or the San Diego Water Board identifies the discharges as a significant source of pollutants to waters of the U.S. as provided in section IV.F.3 below:

   a. Diverted stream flows;

   b. Rising ground waters;

   c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;

   d. Uncontaminated pumped ground water, foundation drains, crawl space pumps and, footing drain discharges not subject to a ground water extraction permit such as NPDES Permit No. CAG919001, (*General Waste Discharge Requirements for Discharges from Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay, Tributaries Thereto under Tidal Influence, and Storm Drains or Other Conveyance Systems Tributary Thereto*) or subsequent superseding NPDES renewal permit;

   e. Springs;

   f. Drinking fountain water and emergency eye wash/shower station test water;

   g. Atmospheric condensate including refrigeration, air conditioning and compressor condensate;

   h. Flows from riparian habitats and wetlands;

   i. Discharges from potable water sources not subject to an NPDES permit such as NPDES Permit No. CAG679001 (*General Waste Discharge Requirements for Discharges of*

Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains or Other Conveyance Systems) or NPDES Permit No. CAG140001 (*Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States*) or subsequent superseding NPDES renewal permits;

j. Individual residential car washing;

k. Dechlorinated swimming pool discharges;

i. Residual chlorine, algaecide, filter backwash, or other pollutants from swimming pools must be eliminated prior to discharging to the MS4; and

ii. The discharge of saline swimming pool water must be directed to the sanitary sewer, landscaped areas, or other pervious surfaces that can accommodate the volume of water, unless the saline swimming pool water can be discharged via a pipe or concrete channel directly to a naturally saline water body (e.g. San Diego Bay).

l. Seawater infiltration where the seawater is discharged back into the seawater source; and

m. Non-storm water discharges explicitly authorized elsewhere in this Order.

2. Conditions for Authorized Non-storm Water Discharges. The non-storm water discharges identified in section IV.F.1 above are authorized by this Order only if all of the following conditions are satisfied:

a. The non-storm water discharges are not in violation of any San Diego Water Board requirement;

b. The non-storm water discharges are not in violation of any municipal or federal agency ordinance or requirement;

c. BMPs are included in the SWMP for MS4 areas and in the SWPPP for industrial areas that are designed to do the following:

i. Prevent or reduce the contact of non-storm water discharges with significant materials or equipment; and

ii. Minimize, to the extent practicable, the flow or volume of non-storm water discharges;

d. The non-storm water discharges do not contain quantities of pollutants that may cause or contribute to an exceedance of a water quality standard(s);

e. The non-storm water discharges and identified sources in industrial areas are visually inspected quarterly in accordance with the SWPPP to ensure adequate BMP implementation and effectiveness; and

f. The non-storm water discharges from Industrial Low Risk and Industrial High Risk Areas are reported in the Annual Report required under section VII.C of the Monitoring and Reporting Program (MRP) in Attachment E of this Order.

3. **Identification of Non-Storm Water Significant Sources of Pollutants**. Where the Discharger or the San Diego Water Board determines that any individual or category of non-storm water discharge(s) listed in section IV.F.1. above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the individual or category of non-storm water discharge(s) must be addressed by the Discharger as an illicit discharge(s) and prohibited through ordinance, order, or similar means unless the discharge is from a non-anthropogenic source. For a non-anthropogenic source determined to be a significant source of pollutants, the Discharger must either prohibit the discharge or develop and implement appropriate control measures to prevent the discharge of pollutants to the MS4.

4. **Firefighting Discharges**. Emergency firefighting flows (i.e., flows necessary for the protection of life or property) are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S. The Discharger should develop and encourage implementation of BMPs to reduce or eliminate pollutants in emergency firefighting discharges to the MS4s and receiving waters within its jurisdiction. During emergency situations, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs should not interfere with immediate emergency response operations or impact public health and safety.

5. **Non-Fire Fighting Discharges**. Non-emergency firefighting discharges (i.e., discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems) must be addressed by a program, to be developed and implemented by the Discharger, to reduce or eliminate pollutants in such discharges from entering the MS4 or the receiving water. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) to the MS4 must be addressed as illicit discharges unless BMPs are implemented to prevent pollutants associated with such discharges to the MS4.

6. **Utility Vault & Manhole Dewatering (Utility Vault) Discharges**. The Discharger shall reduce or prevent pollutants associated with utility vault and manhole dewatering discharges through implementation of BAT for toxic and non-conventional pollutants, and BCT for conventional pollutants.

7. **Incidental Runoff from Landscaped Areas.** Incidental runoff is defined as unintended amounts (volume) of landscape irrigation that escapes the area of intended use. The Discharger shall control incidental runoff thorough the following means:

    a. Detection of leaks (e.g. broken sprinkler heads) and correction of the leaks within 72 hours of learning of the leaks;

    b. Proper design and aiming of sprinkler heads; and

    c. Elimination of landscape irrigation during precipitation events.

    The discharge of incidental runoff from landscaped areas that is not controlled by the above requirements is prohibited.

G. USS ARCO Floating Dry Dock Operation Discharge Specifications

1. The Discharger shall prevent or minimize the discharge of pollutants from any surface of its floating dry dock during submergence by implementing a BMP Program as described in Attachment I of this Order.

2. As the Discharger performs maintenance and repair work, the Discharger shall remove spent abrasives, paint residues, particulate matter, and other debris, and waste from those portions of its dry dock surfaces that are reasonably accessible to the degree achievable by scraping, broom cleaning, and power washing. Prior to submergence, the remaining area of the dry dock deck that was previously inaccessible shall be cleaned by scraping, broom cleaning, and power and pressure washing as soon as practical. The discharger may then submerge the dry dock. This provision shall not apply in cases wherein a vessel must be introduced into the dry dock on an emergency basis, such as to prevent sinking or leakage of oil or another hazardous material. The discharger shall notify the San Diego Water Board of such emergency circumstances as follows:

   a. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances.

   b. A written report submission shall also be provided within five (5) working days of the time the Discharger becomes aware of the circumstances. The San Diego Water Board may waive written report under this provision on a case by case basis if an oral report has been received within 24 hours.

3. The Discharger shall perform regular dry dock cleaning while work is being conducted to minimize the potential for pollutants to accumulate on, or to be released from, its dry dock surfaces.

V. RECEIVING WATER LIMITATIONS

A. The receiving water limitations set forth in section V.B. and V.C. of this Order for Pacific Ocean and San Diego Bay waters are based on applicable water quality standards contained in water quality control plans and policies and federal regulations listed below. These plans, policies, and regulations set forth limits or levels of water quality characteristics to ensure the reasonable protection of beneficial uses and the prevention of nuisance. The discharges of waste regulated under this Order shall not cause or contribute to violations of these water quality standards.

1. The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;

2. State Water Board water quality control plans and policies including the following:

   a. Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan);

   b. Water Quality Control Plan for Ocean Waters of California (Ocean Plan);

   c. Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Bays and Estuaries Policy);

d. Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP);

e. Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Bays and Estuaries Plan – Sediment Quality Plan [SQO]); and

f. The Statement of Policy with Respect to Maintaining High Quality of Waters in California (State Water Board Resolution No. 68-16).

3. Priority pollutant criteria promulgated by the USEPA through the following:

a. National Toxics Rule (NTR)[8] (promulgated on December 22, 1992 and amended on May 4, 1995); and

b. California Toxics Rule (CTR). [9,10]

B. Discharges from the Facility to San Diego Bay shall not by itself or jointly with any other discharge(s) cause or contribute to violations of the following receiving water limitations:

1. **Physical Characteristics**

a. Waters shall be fee of coloration that causes nuisance or adversely affects beneficial uses. [Basin Plan]

b. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which otherwise adversely affect beneficial uses. [Basin Plan]

c. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [Basin Plan]

d. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. [Basin Plan]

e. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses. [Basin Plan]

f. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses. [Basin Plan]

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. In addition, within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, and measured by a standard Secchi disk. Wherever the water is less than

[8] 40 CFR 131.36
[9] 65 Federal Register 31682-31719 (May 18, 2000), adding section 131.38 to 40 CFR
[10] If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies

10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone. [Basin Plan]

h. The discharge of waste shall not cause the temperature of the receiving water to be altered in a manner that adversely impacts beneficial uses. [Thermal Plan]

2. **Chemical Characteristics**

a. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally. The pH shall not be depressed below 7.0 nor raised above 9.0. [Basin Plan]

b. The dissolved oxygen concentration shall not at anytime be less than 5.0 mg/L. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10 percent of the time. [Basin Plan]

c. San Diego Bay waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses. [Basin Plan]

d. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/L (as N) in the San Diego Bay. [Basin Plan]

e. No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife, or aquatic organisms. [Basin Plan]

3. **Biological Characteristics**

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [Ocean Plan-BPJ]

b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered. [Ocean Plan-BPJ]

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. [Ocean Plan-BPJ]

4. **Bacterial Characteristics**

a. The most probable number of total coliform organisms in the upper 60 feet of the water column shall be less than 1,000 organisms per 100 ml (10 organisms per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 organisms per 100 ml (10 per ml); and provided further that no single sample shall exceed 10,000 organisms per 100 ml as described in the Basin Plan. [Basin Plan]

b. The median total coliform concentration throughout the water column for any 30-day period shall not exceed 70 organisms per 100 ml nor shall more than 10 percent of the samples collected during any 30-day period exceed 230 organisms per 100 ml for a five-

tube decimal dilution test or 330 organisms per 100 ml when a three-tube decimal dilution test is used where shellfish harvesting is designated. [Basin Plan]

c. Where bay waters are used for whole fish handling, the density of E. coli shall not exceed 7 organisms per ml in more than 20 percent of any 20 daily consecutive samples of bay water. [Basin Plan]

5. **Radioactivity**

a. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life. [Basin Plan]

b. The radioactivity in the receiving waters shall not exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 1, section 30253 of the California Code of Regulations (CCR).

6. **Toxicity**

a. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board. [Basin Plan]

b. Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities. [Bays and Estuaries Plan - SQO]

c. Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health. [Bays and Estuaries Plan - SQO]

C. Discharges from the Facility to the Pacific Ocean shall not by itself or jointly with any other discharge(s) cause or contribute to violations of the following receiving water limitations:

1. **Bacterial Characteristics**

a. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1), but including all kelp* beds, the following bacterial objectives shall be maintained throughout the water column:

i. 30-day Geometric Mean – The following standards are based on the geometric mean of the five most recent samples from each site:

(a) Total coliform density shall not exceed 1,000 per 100 mL;

(b) Fecal coliform density shall not exceed 200 per 100 mL; and

(c) Enterococcus density shall not exceed 35 per 100 mL. [Ocean Plan]

ii. Single Sample Maximum:

(a) Total coliform density shall not exceed 10,000 per 100 mL;

(b) Fecal coliform density shall not exceed 400 per 100 mL;

(c) Enterococcus density shall not exceed 104 per 100 mL; and

(d) Total coliform density shall not exceed 1,000 per 100 mL when the fecal coliform/total coliform ratio exceeds 0.1. [Ocean Plan]

b. At all areas where shellfish* may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

i. The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL. [Ocean Plan]

2. **Physical Characteristics**

a. Floating particulates and grease and oil shall not be visible. [Ocean Plan]

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface. [Ocean Plan]

c. Natural light shall not be significantly reduced as the result of the discharge of waste. [Ocean Plan]

d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded. [Ocean Plan]

e. The discharge of waste shall not cause the temperature of the receiving water to be altered in a manner that adversely impacts beneficial uses. [Thermal Plan]

3. **Chemical Characteristics**

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials. [Ocean Plan]

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally. [Ocean Plan]

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions. [Ocean Plan]

d. The concentration of substances set forth in the Ocean Plan chapter II, Table 1, in marine sediments shall not be increased to levels which would degrade indigenous biota. [Ocean Plan]

e. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life. [Ocean Plan]

f. Nutrient materials shall not cause objectionable aquatic growths or degrade* indigenous biota. [Ocean Plan]

4. **Numerical Water Quality Objectives**

a. Ocean Plan Table 1 water quality objectives apply to all discharges within the jurisdiction of this Plan. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations. [Ocean Plan]

5. **Biological Characteristics**

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [Ocean Plan]

b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered. [Ocean Plan]

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. [Ocean Plan]

6. **Radioactivity**

a. The discharge of radioactive waste shall not degrade marine life. [Ocean Plan]

b. The radioactivity in the receiving waters shall not exceed limits specified in title 17, division 1, chapter 5, subchapter 3, group 3, article 3, section 30253 of the CCR.

D. Corrective Actions for Receiving Water Limitations Violations

Upon determination by the Discharger or written notification by the San Diego Water Board that storm water discharges are causing or contributing to an exceedance of Receiving Water Limitations in section V of this Order, the Discharger shall implement the following corrective actions at a minimum:

1. Notify the San Diego Water Board that discharges are causing or contributing to an exceedance of Receiving Water Limitations in section V of this Order.

2. Conduct a facility evaluation to determine whether there are pollutant source(s) within the Facility and whether BMPs described in the SWPPP, the SWMP, BMP Plans, the Pollution Prevention Plan (PPP), and other requirements of this Order have been properly implemented.

3. Conduct an assessment of the Facility's SWPPP, SWMP, BMP Plans, PPP, and other requirements of this Order to determine whether additional BMPs or implementation measures are necessary to prevent or reduce pollutants in storm water discharges to meet Receiving Water Limitations set forth in section V of this Order.

4. Prepare a certification statement, based upon the Facility evaluation and assessment required above, that one of the following applies:

    a. Additional BMPs and/or implementation measures have been identified and included in the appropriate plan to meet Receiving Water Limitations, as specified in section V of this Order; or

    b. No additional BMPs or implementation measures are required to reduce or prevent pollutants in storm water discharges to meet Receiving Water Limitations, as specified in section V of this Order; or

    c. There are no sources of the pollutants at the Facility causing or contributing to the Receiving Water Limitations exceedance(s).

5. If a certification statement provides that no additional BMPs or implementation measures are required to reduce or prevent pollutants in storm water discharges to comply with Receiving Water Limitations specified in section V of this Order, the Discharger must demonstrate why the exceedance occurred and why it will not occur again under similar circumstance.

6. Implement additional BMPs and corrective measures as soon as is practicable in accordance with an approved schedule.

7. Prepare and submit a report, within 60 days from the date of the determination of the exceedance of Receiving Water Limitations, to the San Diego Water Board that does the following:

    a. Describes the facility evaluation;

    b. Describes the assessment of the SWPPP, SWMP, BMP Plans, PPP, and other requirements of this Order;

    c. Identifies the BMPs and corrective actions that are currently being implemented to assure compliance with Receiving Water Limitations;

    d. Identifies additional BMPs and corrective actions that will be implemented to assure compliance with Receiving Water Limitations with an implementation schedule for any additional BMPs or corrective actions not yet implemented; and

    e. Includes the certification required above. The implementation schedule shall not exceed 90 days from the date of the determination of the exceedance of Receiving Water Limitations as specified in section V of this Order.

8. Submit any modifications to the report required by the San Diego Water Board within 30 days of notification.

9. Within 30 days following submittal of the report or modifications to the San Diego Water Board, the Discharger shall revise the SWPPP, SWMP, BMP Plans, PPP, and other plan required by this Order and monitoring program to incorporate a) the additional BMPs and corrective actions that have been and will be implemented, b) the implementation schedule, and c) a description of any additional monitoring required.

10. Nothing in this section shall prevent the San Diego Water Board from enforcing any provisions of this Order while the Discharger prepares and implements the report described above.

11. So long as the Discharger has complied with the procedures set forth above and is implementing the actions, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the San Diego Water Board.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **San Diego Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. The Discharger shall comply with all applicable federal, state, and local laws and regulations for handling, transport, treatment, or disposal of waste or the discharge of waste to waters of the state in a manner which causes or threatens to cause a condition of pollution, contamination or nuisance as those terms are defined in CWC section 13050.

   b. This Order expires on July 31, 2019, after which, the terms and conditions of this permit are automatically continued pending issuance of a new Order, provided that all requirements of USEPA' s NPDES regulations at 40 CFR 122.6 and the state's regulations at CCR title 23, section 2235.4 regarding the continuation of expired Orders and waste discharge requirements are met.

   c. A copy of this Order shall be maintained on-site at the Facility, and shall be available to San Diego Water Board, State Water Board, and USEPA personnel and/or their authorized representative at all times.

B. Monitoring and Reporting Program (MRP) Requirements

1. The Discharger shall comply with the MRP and future revisions thereto, in Attachment E of this Order.

2. Reports required to be submitted to the San Diego Water Board shall be sent to the following address and phone numbers unless the San Diego Water Board office is relocated:

   Executive Officer
   California Regional Water Quality Control Board
   San Diego Region
   2375 Northside Drive, Suite 100
   San Diego, CA 92108

Notifications required to be provided to this San Diego Water Board shall be made to:

Telephone – (619) 516-1990
Facsimile – (619) 516-1994

C. Special Provisions

1. Reopener Provisions

a. This Order may be re-opened and modified in accordance with NPDES regulations at 40 CFR parts 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any USEPA approved, new, state water quality objective.

b. This Order may be modified, revoked and reissued or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:

i. Violations of any terms or conditions of this Order;

ii. Endangerment to human health or the environment resulting from the permitted activity;

iii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or

iv. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. This Order may be re-opened and modified for cause at any time prior to its expiration under any of the following circumstances:

i. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.

ii. New or revised Water Quality Objectives come into effect, or any total maximum daily load (TMDL) is adopted or revised that is applicable to the Discharger.

iii. Modification is warranted to those provisions of this Order addressing compliance with water quality standards in the receiving water or those provisions of this Order laying out an iterative process for implementation of management practices to achieve compliance with water quality standards in the receiving water.

iv. Modification is warranted to incorporate additional effluent limitations, prohibitions, and requirements, based on the results of additional monitoring required by the MRP in Attachment E of this Order.

v. Modification of the receiving waters monitoring and reporting requirements and/or special studies requirements of this Order is necessary for cause, including but not limited to a) revisions necessary to implement recommendations from Southern California Coastal Water Research Project (SCCWRP); b) revisions necessary to develop, refine, implement, and/or coordinate a regional monitoring program; and/or c) revisions necessary to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*.

vi. Modification is warranted to address acute or chronic toxicity in Facility wastewater discharges, storm water discharges, or receiving waters through new or revised effluent limitations or other permit toxicity requirements or to implement new, revised, or newly interpreted water quality standards applicable to acute or chronic toxicity.

vii. The Discharger has requested, and submitted technical information demonstrating to the satisfaction of the San Diego Water Board, that technology-based or water quality based effluent limitations may be adjusted on a pollutant-by-pollutant or discharge by discharge basis to reflect credit for pollutants in the Discharger's intake water in conformance with the applicable requirements of 40 CFR 122.45(g) and section 1.4.4 of the State Water Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP).

viii. The Discharger has submitted technical information in accordance with the Ocean Plan to the satisfaction of the San Diego Water Board documenting the basis for a mixing zone of initial dilution for storm water discharges to the Pacific Ocean.

d. The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

2. Special Studies, Technical Reports and Additional Monitoring Requirements[11]

a. Future Development of Chronic Toxicity Effluent Limitations for Industrial High Risk Storm Water Areas

The San Diego Water Board may establish chronic toxicity effluent limitations for Industrial High Risk Areas storm water discharges in the future. In developing such effluent limitations, an in-stream waste concentration (IWC) of 100 percent will be assumed whenever mixing zones or dilution credits are not authorized by the San Diego Water Board.

The Discharger may, at their discretion, propose a work plan for a detailed study to support a Basin Pan Amendment on the possible application of chronic toxicity effluent limitations with mixing zones and dilution credits applicable to industrial storm water discharges to San Diego Bay. The study may also encompass the

[11] See section V.F of the MRP (Attachment E) for an overview of TRE Requirements

possible application of mixing zones and dilution credits applicable to municipal storm water discharges.

The work plan shall include the following elements:

i. A detailed proposal describing the goals, technical approach, methods, data evaluation framework, and a schedule for completion of all study activities and submission of a draft Basin Plan Amendment for consideration of adoption by the San Diego Water Board;

ii. Formation of a stakeholder advisory panel with the San Diego Water Board, USEPA, federal and state resource agencies, representatives of environmental non-governmental organizations, San Diego County Department of Health Services, and representatives of storm water dischargers to San Diego Bay. The panel shall be notified of proposed work and results; and the panel shall be provided opportunity for comment;

iii. An analysis of storm water impacts to San Diego Bay that considers circulation and flushing, pollutant movement and accumulation, and fate to determine mixing zones and dilution factors appropriate for storm water discharges to San Diego Bay. The analysis shall include consideration of relevant State of California and USEPA polices and guidance pertaining to the establishment of mixing zones and dilution credits in receiving waters; and

iv. Provisions for establishment of an external scientific peer review panel comprised of experts in the fields of plume dilution modeling, toxicology, and marine ecology to guide the technical approach, review the study results and make recommendations for a proposed Basin Plan amendment and toxicity monitoring strategies for storm water discharges.

b. Topside Chlorinator/ Dechlorinator Units Water Quality Effects Study

This Order establishes a BMP approach to regulate the discharge from the topside chlorinator/ dechlorinator units. The Discharger shall prepare and submit a work plan to assess the short and long term effects of the chlorinator/ dechlorinator units discharges on San Diego Bay receiving waters. The work plan shall be submitted no later than 12 months from the effective date of this Order and shall include the following elements:

i. ***Quality Assurance Project Plan***. A Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols.

ii. ***Conceptual Model***. A Conceptual Model identifying the physical and chemical factors that control the fate and transport of pollutants and receptors that could be exposed to pollutants in the discharges. The Conceptual Model will serve as the basis for assessing the appropriateness of the project design. The Conceptual Model shall consider the following:

(a) Points of discharge into the segment of the water body or region of interest;

(b) Tidal flow and/or direction of predominant currents;

(c) Historic or legacy conditions in the vicinity;

(d) Nearby land and marine uses or actions;

(e) Beneficial Uses;

(f) Potential receptors of concern;

(g) Other sources or discharges in the immediate vicinity

The conceptual model shall be refined and updated as data becomes available. The initial conceptual model shall include a discussion of the level of uncertainty of conclusions, outline data gaps in the initial conceptual model and describe the additional work needed to complete the conceptual model.

iii. ***Existing Information***. The project design shall take into consideration existing data and information of appropriate quality.

iv. ***Spatial Representation***. The project shall be designed to ensure that sample stations are spatially representative of the water body segment of interest. The locations, type, and number of samples shall be identified and shown on a site map.

v. ***Chemical Analyses.*** The workplan shall identify the chemical analytes and other parameters that must be collected to assess the impacts of the discharge on the receiving waters.

vi. ***Final Report Completion Schedule.*** A schedule for completion of all sample collection and analysis activities and submission of a Final Report.

vii. ***Final Report Preparation*****.** The Final Report shall include an evaluation, interpretation and tabulation of the data collected including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station.

The Discharger shall modify the workplan as requested by the San Diego Water Board. The Discharger shall implement the workplan 60 days after submittal unless otherwise directed in writing by the San Diego Water Board and shall submit the Final Report in accordance with the finalized version of the Final Report Completion Schedule contained in the workplan.

3. Best Management Practices (BMP) and Pollution Prevention Plan (PPP)

a. <u>Best Management Practices and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan)</u>

The Discharger shall continue to implement a Utility Vault Plan for utility vault and manhole dewatering discharges to prevent the discharge of pollutants into the receiving waters at levels that would contribute to the degradation of the receiving waters or otherwise adversely affect the beneficial uses of the receiving water. At a

minimum, the Utility Vault Plan shall be maintained and implemented in accordance with Attachment H to prevent, or minimize the potential for, the release of pollutants to waters of the state and waters of the U.S.

b. **BMP Plan for Industrial Process Wastewater Discharges**

The Discharger shall develop and implement a BMP Plan for discharges from topside chlorinator / dechlorinator units, pier boom cleaning, returned unused San Diego Bay water from building 111, abalone tank discharges, marine mammal pool discharges, pier washing, small boat rinsing, dry dock pre-flood cleaning, and marine mammal enclosure cleaning that prevents the discharge of pollutants into the receiving waters at levels that would contribute to the degradation of the receiving waters or otherwise adversely affect the beneficial uses of the receiving water. At a minimum, the BMP Plan shall be developed and implemented in accordance with Attachment I of this Order to prevent, or minimize the potential for, the release of pollutants to waters of the state and waters of the U.S.

The BMP Plan for the topside chlorinator / dechlorinator units shall include applicable BMPs from the Uniform National Discharge Standards (UNDS) program including, but not limited to, the following:

i. When possible, the vessel should use shore based power when in port.

ii. Seawater piping biofouling chemicals subject to registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (40 CFR 152.15) must be used in accordance with the FIFRA label. Pesticides or chemicals banned for use in the United States shall not be discharged.

iii. Only the minimum amount of biofouling chemicals should be used to keep fouling under control.

iv. Fouling organisms must be removed from seawater piping on a regular basis. For all vessels, except submarines, fouling organisms removed during cleanings shall not be discharged.

v. Dechlorination must be used whenever chlorination occurs.

The BMP Plans for abalone tank discharges, marine mammal enclosure cleaning, and marine mammal pool discharges shall include applicable BMPs from USEPA's *Effluent Guidelines - Aquatic Animal Production Industry - Guidance for Aquatic Animal Production Facilities to Assist in Reducing the Discharge of Pollutants (CAAP).* The BMP Plan must, at a minimum, include but is not limited to the following practices:

i. Feed management and feeding strategies must minimize the discharge of unconsumed food to waters of San Diego Bay;

ii. Routine cleaning of holding tanks and pens must minimize the discharge of accumulated waste to waters of San Diego Bay;

iii. Feed bags, packaging materials, waste rope, netting and other materials used for marine pen construction must be properly disposed;

iv. Aquatic animal mortalities must be removed and disposed of properly to minimize any discharge of waste to San Diego Bay, including but not limited to: blood, viscera, feces, carcasses or transport water containing blood;

v. Records of any drugs, pesticides, thermal shocks, or other chemicals administered at the Facility must be maintained;

vi. All drugs and chemicals must be used in accordance with applicable label directions, except extra label drug use, as prescribed by a veterinarian;

vii. Storage of drugs, chemicals, and feed must be in a manner designed to prevent spills that may result in the discharge of drugs, chemicals, or feed to waters of San Diego Bay; and

viii. Procedures for properly containing, cleaning and disposing of any spilled material must be implemented.

In addition, the BMP Plans for small boat rinsing, marine mammal pools, and marine mammal enclosure cleaning shall ensure that the maximum temperature of waste discharges entering the receiving water shall not exceed the natural temperature of the receiving waters by more than 20°F.

c. Pollution Prevention Plan (PPP) for Industrial Storm Water

The Discharger shall prepare and implement a Pollution Prevention Plans for storm water discharges associated with the Industrial High Risk Areas for acute toxicity and copper and zinc (Discharge Points specified in Attachment M of this Order, as updated annually pursuant to section IV.B. of this Order).

The PPP shall be developed in accordance with CWC section 13263.3(d)(2). The minimum requirements for the PPP are outlined in the Fact Sheet of this Order, Attachment F, section VII.C.3.c. A work plan and time schedule for preparation of the PPP shall be completed and submitted to the San Diego Water Board within 90 days of the effective date of this Order. The PPP shall be completed and submitted to the San Diego Water Board within 9 months of the effective date of this Order.

4. Flood and Runoff Protection Requirements

a. All waste treatment, containment, and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County Flood Control Agency.

b. All waste treatment, containment, and disposal facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency 24-hour storm.

5. Other Special Provisions – Not Applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. General

Compliance with effluent limitations shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purpose of reporting and administrative enforcement by the San Diego Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the constituent in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL) or lowest quantifiable level.

B. Multiple Sample Data

When determining compliance with an average annual effluent limitation (AAEL), average monthly effluent limitation (AMEL) or maximum daily effluent limitation (MDEL) and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determination of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, following by quantified values (if any). The order of individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Mass Emission Rate

The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

Mass Emission Rate (lb/day) = 8.34 x Q x C

In which Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lb/gallon of water). Q is the flow rate for the two hours of chlorination and C is the concentration during a chlorination event. If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

D. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by section VII.B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for discretionary penalties. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the

Discharger will be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by section VII.B above for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of 2 grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of 2 grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in 2 instances of non-compliance with the instantaneous maximum effluent limitation).

H. Median Monthly Effluent Limit (MMEL)

If the median result of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST is a “fail” (i.e. two out of three is “fail”), this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for discretionary penalties. If median result is “fail”, the Discharger will be considered out of compliance for days when the discharge occurs. For any one calendar month during which fewer than 3 samples are taken, no compliance determination can be made for that calendar month.

I. Acute Toxicity for Discharges to San Diego Bay

1. The Maximum Daily Effluent Limitation (MDEL) for acute toxicity is exceeded and a violation will be flagged when a toxicity test results in a “fail” in accordance with the TST approach and the percent effect is greater than or equal to 40%.

2. The determination of “Pass” or “Fail” from a single-effluent concentration acute toxicity test at the IWC of 100 percent effluent shall be determined using the TST approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010).

3. The Discharger shall report the results of reasonable potential analyses (RPA), species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as either a "pass" or a "fail" at the IWC, in accordance with the TST approach and provide the calculated percent effect at the IWC.

   Pass

   A test result that rejects the null hypothesis (Ho) below is reported as "Pass" in accordance with the TST approach:

   Ho: Mean response (100 percent effluent) ≤ 0.80 × Control mean response

   Fail

   A test result that does not reject the null hypothesis (Ho) above is reported as "Fail" in accordance with the TST approach.

4. The presence or absence of acute toxicity shall be determined as specified in section V of the MRP.

J. Chronic Toxicity

1. The MDEL for chronic toxicity is exceeded and a violation will be flagged when a toxicity test results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to 50%.

2. The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST, (i.e. 2 out of 3) is a "fail."

3. For this discharge, the determination of "Pass" or "Fail" from a single-effluent concentration chronic toxicity test at the IWC of 100 percent effluent is determined using the TST approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010).

4. The Discharger shall report the results of RPA, species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as either a "pass" or a "fail" at the IWC, in accordance with the TST approach and provide the calculated percent effect at the IWC.

   Pass

   A test result that rejects the null hypothesis (Ho) below is reported as "Pass" in accordance with the TST approach:

   Ho: Mean response (100 percent effluent) ≤ 0.75 × Control mean response

   Fail

   A test result that does not reject the null hypothesis (Ho) above is reported as "Fail" in accordance with the TST approach.

5. The presence or absence of chronic toxicity shall be determined as specified in section V of the MRP.

ATTACHMENT A – ABREVIATIONS AND GLOSSARY

Part 1 – Abbreviations

Abbreviation	Definition
AAEL	Average Annual Effluent Limitation
AMEL	Average Monthly Effluent Limitation
ASBS	Areas of Special Biological Significance
AST	Above Ground Storage Tanks
AWEL	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD_5	Biochemical Oxygen Demand (5-Day at 20^{o}C)
BPJ	Best Professional Judgment
BPT	Best Practicable Treatment Control Technology
CAAPP	Concentrated Aquatic Animal Production Facility
CCR	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
CNRSW	Commander, Navy Region Southwest
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
DMR	Discharger Monitoring Report
DNQ	Detected, but Not Quantified
DoD	Department of Defense
ECA	Effluent Concentration Allowance
ERA	Exceedance Response Action
FCTCPAC	Fleet Combat Training Center, Pacific
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FITCPAC	Fleet Intelligence Training Center, Pacific
FLC	Fleet Logistics Center
FOR	Fuel Oil Reclamation
gpd	gallons per day
gpm	gallons per minute
IWC	Instream Waste Concentration
lbs/day	Pounds per Day
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEP	Maximum Extent Practicable
mg/L	Milligrams per Liter
MGD	Million Gallons per Day
ML	Minimal Level

Abbreviation	Definition
ml/L	Milliliters per Liter
MMEL	Maximum Monthly Effluent Limitation
MPCD	Marine Pollution Control Device
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
MSF	Magnetic Silencing Facility
NAL	Numeric Action Level
NBPL	Naval Base Point Loma
ND	Not Detected
NMAWC	Naval Mine and Anti-Submarine Warfare Complex
NOEL	No Observed Effect Level
NPDES	National Pollutant Discharge Elimination System
NR	Not Reported
NTR	National Toxics Rule
Ocean Plan	California Ocean Plan, Water Quality Control Plan Ocean Waters Of California
PCB	Polychlorinated Biphenyls
PMP	Pollutant Minimization Program
PPP	Pollution Prevention Plan
QAPP	Quality Assurance Project Plan
QSE	Qualifying Storm Event
REC-1	Contact Water Recreation Beneficial Use
RL	Reporting Level
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SCCWRP	Southern California Coastal Waters Research Project
Sediment Quality Plan	Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality
SIP	State Implementation Plan
SQO	Sediment Quality Objective
SSC Pacific OTC	Space and Naval Warfare Systems Center Pacific, Old Town Campus
SSC Pacific PLC	Space and Naval Warfare Systems Center Pacific, Point Loma Campus
State Water Board	State Water Resources Control Board
SUBBASE	Naval Submarine Base
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TBEL	Technology-Based Effluent Limitations
Thermal Plan	Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation

Abbreviation	Definition
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
U.S.	United States
UNDS	Uniform National Discharge Standards
USEPA	United Stated Environmental Protection Agency
WDR	Waste Discharge Requirements
WEF	Water Environment Federation
WET	Whole Effluent Toxicity
WLA	Wasteload Allocation
WQBEL	Water Quality-Based Effluent Limitation
µg	Microgram
µg/L	Micrograms per Liter

Part 2 – Glossary of Common Terms

Acute Toxicity Tests
A measurement of the adverse effect (usually mortality) of a waste discharge or ambient water sample on a group of test organisms during a short-term exposure.

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Armed Forces Vessel
A vessel owned or operated by the United States Department of Defense or the United States Coast Guard, other than time or voyage chartered vessels, vessels of the U.S. Army Corps of Engineers, vessels that are memorials or museums, vessels under construction, or vessels in drydock.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative Pollutants

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this Order.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permit conditions on a case by-case basis using all reasonably available and relevant data.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Clean Water Act (CWA)
The Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC 1251 et seq.

Chronic Toxicity Tests
A measurement of the sub-lethal effects of a discharge or ambient water sample (e.g. reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Contamination
“Contamination” means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. “Contamination” includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected. [CWC § 13050(k)]

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation (WQBEL), based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Discharge incidental to the normal operation of a vessel
A discharge, including, but not limited to: graywater, bilgewater, cooling water, weather deck runoff, ballast water, oil water separator effluent, and any other pollutant discharge from the operation of a marine propulsion system, shipboard maneuvering system, crew habitability system, or installed major equipment, such as an aircraft carrier elevator or a catapult, or from a protective, preservative, or absorptive application to the hull of a vessel; and a discharge in connection with the testing, maintenance, and repair of any of the aforementioned systems whenever the vessel is waterborne, including pierside. A discharge incidental to normal operation does not include:
(1) Sewage;
(2) A discharge of rubbish, trash, or garbage;
(3) A discharge of air emissions resulting from the operation of a vessel propulsion system, motor driven equipment, or incinerator;
(4) A discharge that requires a National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act; or
(5) A discharge containing source, special nuclear, or byproduct materials regulated by the Atomic Energy Act.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake' s Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Facility
As used in the Storm Water Pollution Prevention Plan contained in Attachment G, a Facility is an area or areas discharging storm water associated with industrial activity within the property boundary or operational unit.

Industrial High Risk Areas
All areas where wastes or pollutants of significant quantities from ship construction, modification, repair, and maintenance activities (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substances, toxic pollutants, non-conventional pollutants, materials of petroleum origin, or other substances of water quality significance) are subject to precipitation, run-on, and/or runoff.

Industrial Low Risk Areas
All areas where wastes or pollutants from industrial activities are subject to precipitation, runon, and/or runoff which are not classified as Industrial No Exposure Areas or Industrial High Risk Areas.

Industrial No Exposure Areas
Areas where all industrial materials and activities are protected by a storm resistant shelter[1] to prevent exposure to rain, snow, snowmelt, and/or runoff. “Industrial materials and activities” include, but are not limited to, material handling[2] equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

[1] “Storm-resistant shelters” include completely roofed and walled buildings or structures. They also include structures with only a top cover supported by permanent supports but with no side coverings provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.), track-out, and there is no storm water discharged from within the structure that has come into contact with any materials.

[2] “Material handling activities” include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, or waste product.

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Instream Waste Concentration (IWC)
The concentration of a toxicant or effluent in the receiving water after mixing (the inverse of the dilution factor). A discharge of 100 percent effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board.

Marine Pollution Control Device, (MPCD)
Any equipment or management practice installed or used on an Armed Forces vessel that is designed to receive, retain, treat, control, or discharge a discharge incidental to the normal operation of a vessel, and that is determined by the Administrator of USEPA and Secretary of the Department of Defense to be the most effective equipment or management practice to reduce the environmental impacts of the discharge consistent with the considerations in Clean Water Act section 312(n)(2)(B).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Extent Practicable (MEP)
MEP is the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. MEP is the result of emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with structural and treatment methods where appropriate serving as additional lines of defense.

Median Monthly Effluent Limitation (MMEL)
An effluent limit based on the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST. The MMEL is exceeded when the median result (i.e. two out of three) is a “fail.”

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Non-Storm Water Discharge
Any discharge to storm sewer systems that is not composed entirely of storm water.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Nuisance
"Nuisance" means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of waste. [CWC § 13050(m)]

Numeric Action Level (NAL)
Numeric Action Levels (NALs), found in Table G-1of Attachment G of this Order are used as numeric thresholds for corrective action. An exceedance of a NAL is not a violation of this Order.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board' s California Ocean Plan.

Percent Effect
The value that denotes the difference in response between the IWC and the control, divided by the mean response, and multiplied by 100 using the following equation:

$$\% \text{ Effect at IWC} = \frac{\text{Mean Control Response - Mean IWC Response}}{\text{Mean Control Response}} * 100$$

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant
"Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well, used either to facilitate production or for disposal purposes, is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources. NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials.

Examples of materials not covered include radium and accelerator-produced isotopes. See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976). (40 CFR 122.2)

Pollution
"Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses. "Pollution" may include "contamination." [CWC § 13050(l)]

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in CWC section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or San Diego Water Board.

Pollution Prevention Plan (PPP)
A PPP is a plan for implementing pollution prevention containing, at a minimum, the elements identified in CWC section 13263.3(d)(2).

Priority Pollutants
Priority pollutants are all compounds with criteria in the California Toxics Rule (CTR).

Qualifying Storm Event
A Qualifying Storm Event (QSE) is a precipitation event that produces a discharge for at least one drainage area; and is preceded by 48 hours with no discharge from any drainage area.

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the San Diego Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

San Diego Water Board
As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in CWC section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in CWC Section 13200.

Significant Materials
Raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101 (14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and chemicals the facility is required to report pursuant to section 313 of title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers;

pesticides; and waste products such as ashes, slag, and sludge that have the potential to be discharged.

Significant Quantities
Volumes, concentrations, or masses of pollutants that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standard for the receiving water or any receiving water limitation.

Significant Spills
Include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities under section 311 of the CWA (see 40 CFR 110 and 117.21) or section 102 of CERCLA (see 40 CFR 302.4).

Small Municipal Separate Storm Sewer System (Small MS4) Areas
Areas where no industrial activities occur. Areas designated as "Small MS4 Areas" shall be applicable to the Storm Water Management Program (SWMP) requirements contained within section IV.D.2 of this Order.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

- x is the observed value;
- μ is the arithmetic mean of the observed values; and
- n is the number of samples.

Storm Water
Includes storm water runoff, snowmelt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

Storm Water Discharge Associated with Industrial Activity
The discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters; sites used for residual treatment, storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the

description of the facilities referenced in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

Storm Water Management Plan (SWMP)
The Storm Water Management Plan (SWMP) is a written plan to reduce the discharge of pollutants from "Small Municipal (Military Base) MS4 Areas" to the technology–based standard of MEP to protect receiving water quality.

Storm Water Pollution Prevention Plan (SWPPP)
A SWPPP is a written document that identifies the industrial activities conducted at the site, including any structural control practices, which the industrial facility operator will implement to prevent pollutants from making their way into storm water runoff. The SWPPP also must include descriptions of other relevant information, such as the physical features of the facility, and procedures for spill prevention, conducting inspections, and training of employees. The SWPPP is intended to be a "living" document, updated as necessary, such that when industrial activities or storm water control practices are modified or replaced, the SWPPP is similarly revised to reflect these changes.

Test of Significant Toxicity (TST)
A statistical approach used to analyze toxicity test data. The TST incorporates a restated null hypothesis, Welch's t-test, and biological effect thresholds for chronic and acute toxicity.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Vessel
Includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on navigable waters of the United States or waters of the contiguous zone, but does not include amphibious vehicles.

Water Quality Objectives
Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water.

Water Quality Standards
Water quality standards, as defined in CWA section 303(c) and 40 CFR131.6, consist of 1) the beneficial uses of a water body, 2) criteria (referred to as water quality objectives in California law) to protect those uses, and 3) an anti-degradation policy. Under state law, the water boards establish beneficial uses and water quality objectives in their water quality control or basin plans. Together with an anti-degradation policy (State Water Board Resolution 68-16), these beneficial uses and water quality objectives serve as water quality standards under the CWA. In CWA parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory

scheme. The water quality standards described in section V of this Order are enforceable receiving water limitations for the surface water bodies for which they are established.

Waters of the United States
Waters of the United States are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purpose by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA." (40 CFR 122.2)

Whole Effluent Toxicity (WET)
The aggregate toxic effect of a waste discharge measured directly by a chronic or acute toxicity test.

ATTACHMENT B – MAPS

Figure B-1. NBPL Installations

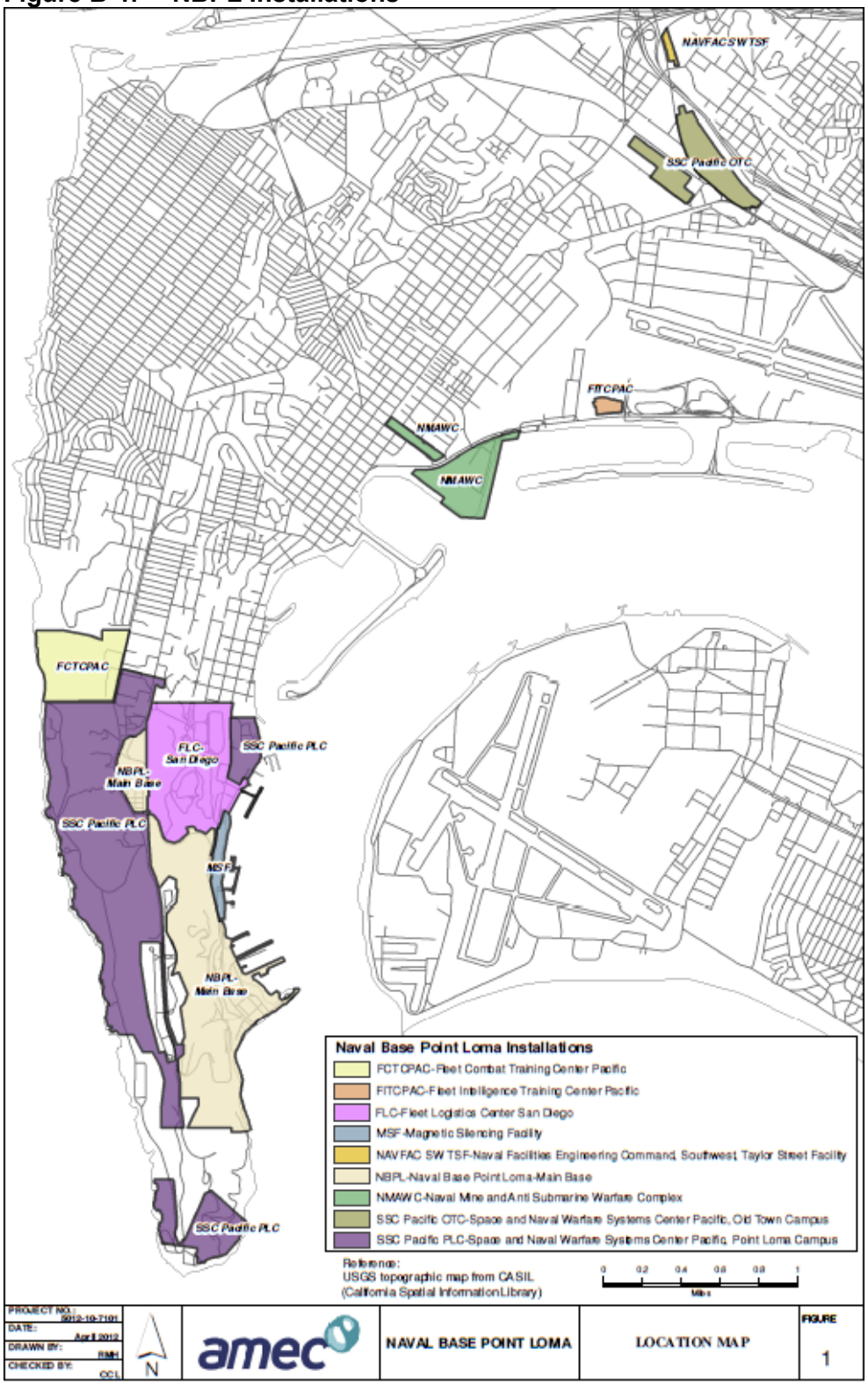


Figure B-2. NBPL Topographic Map

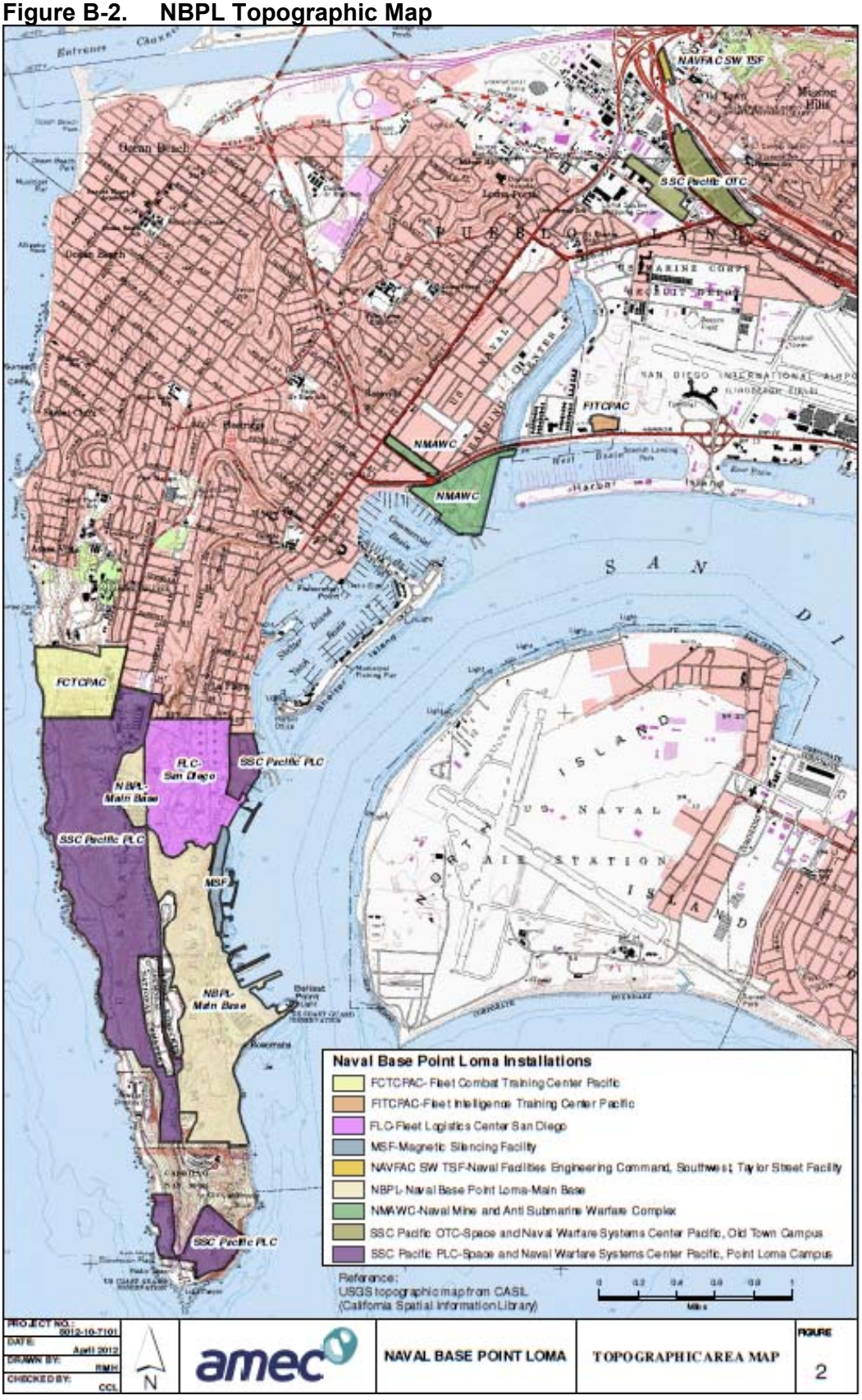


Figure B-3. NBPL Process Wastewater Discharge Locations

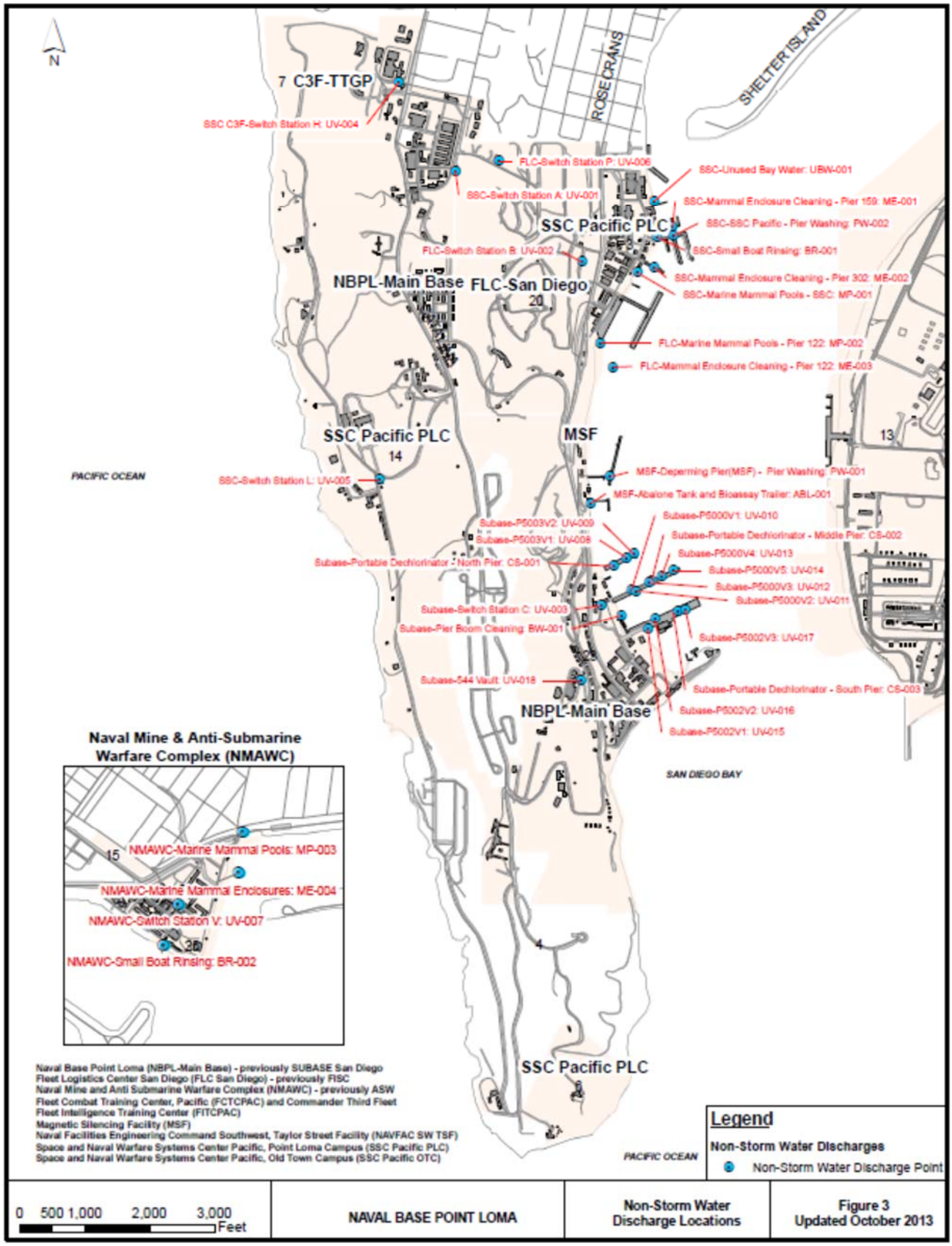


Figure B-4. NBPL Industrial Storm Water Discharge Locations on Point Loma

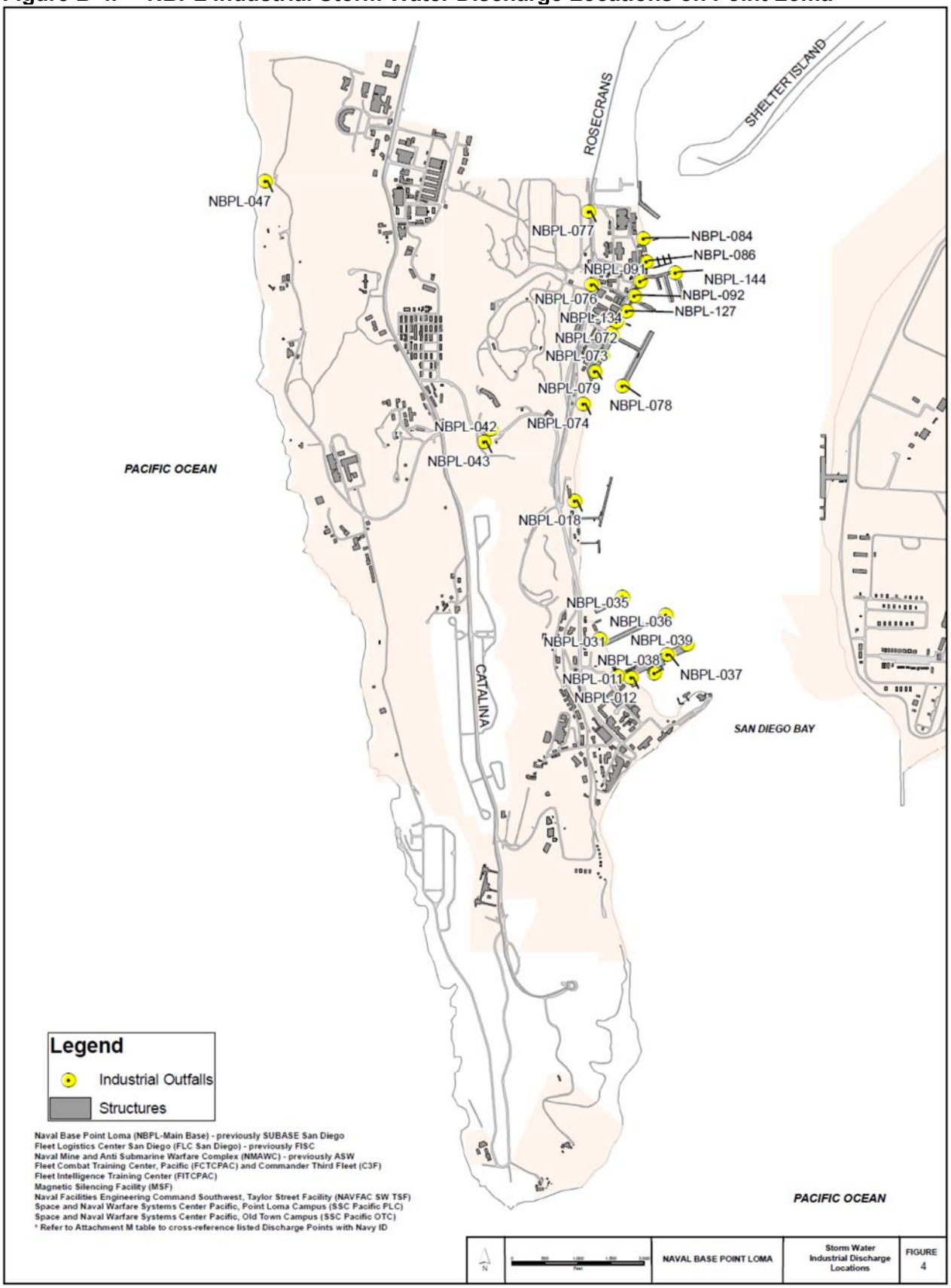
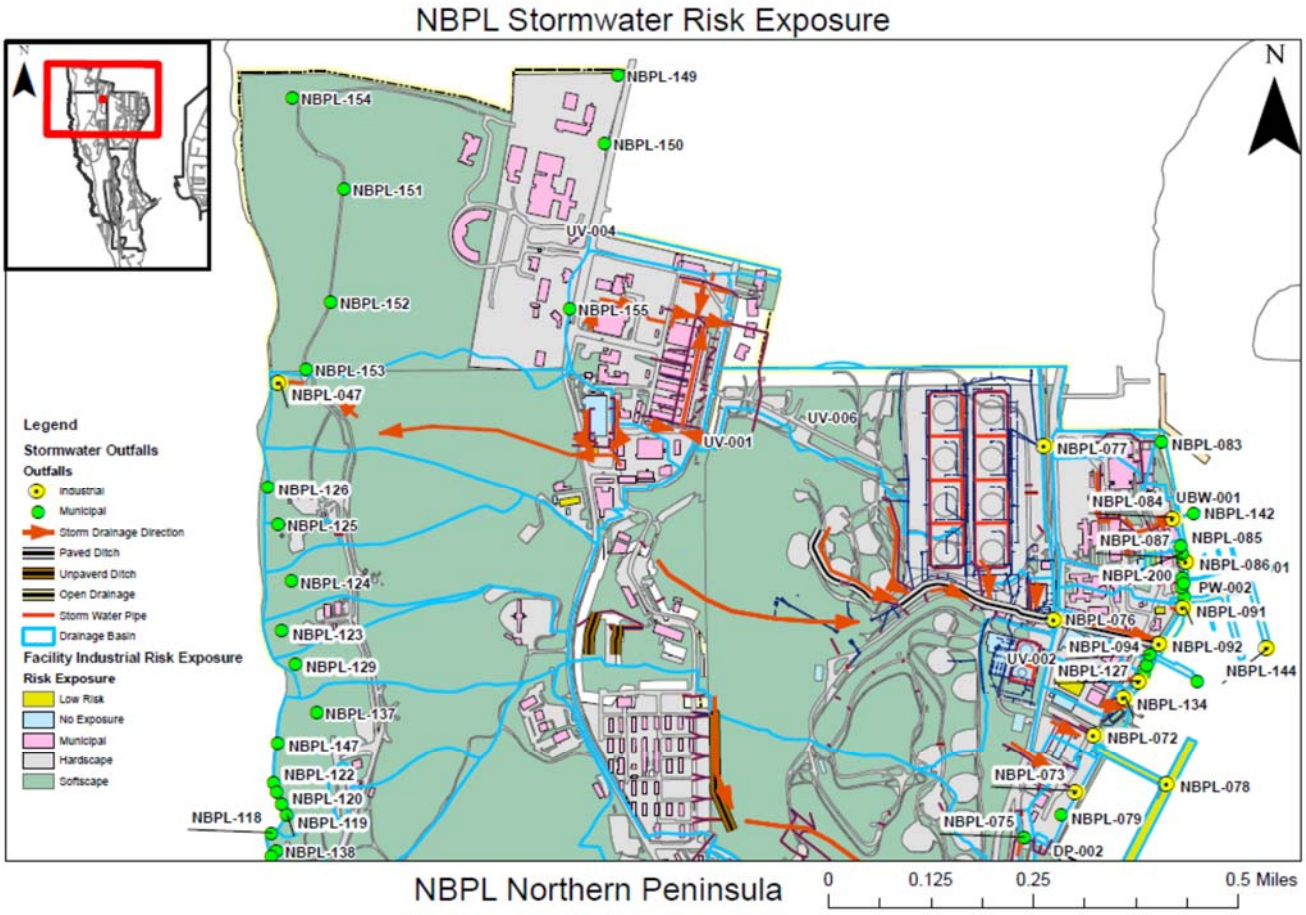
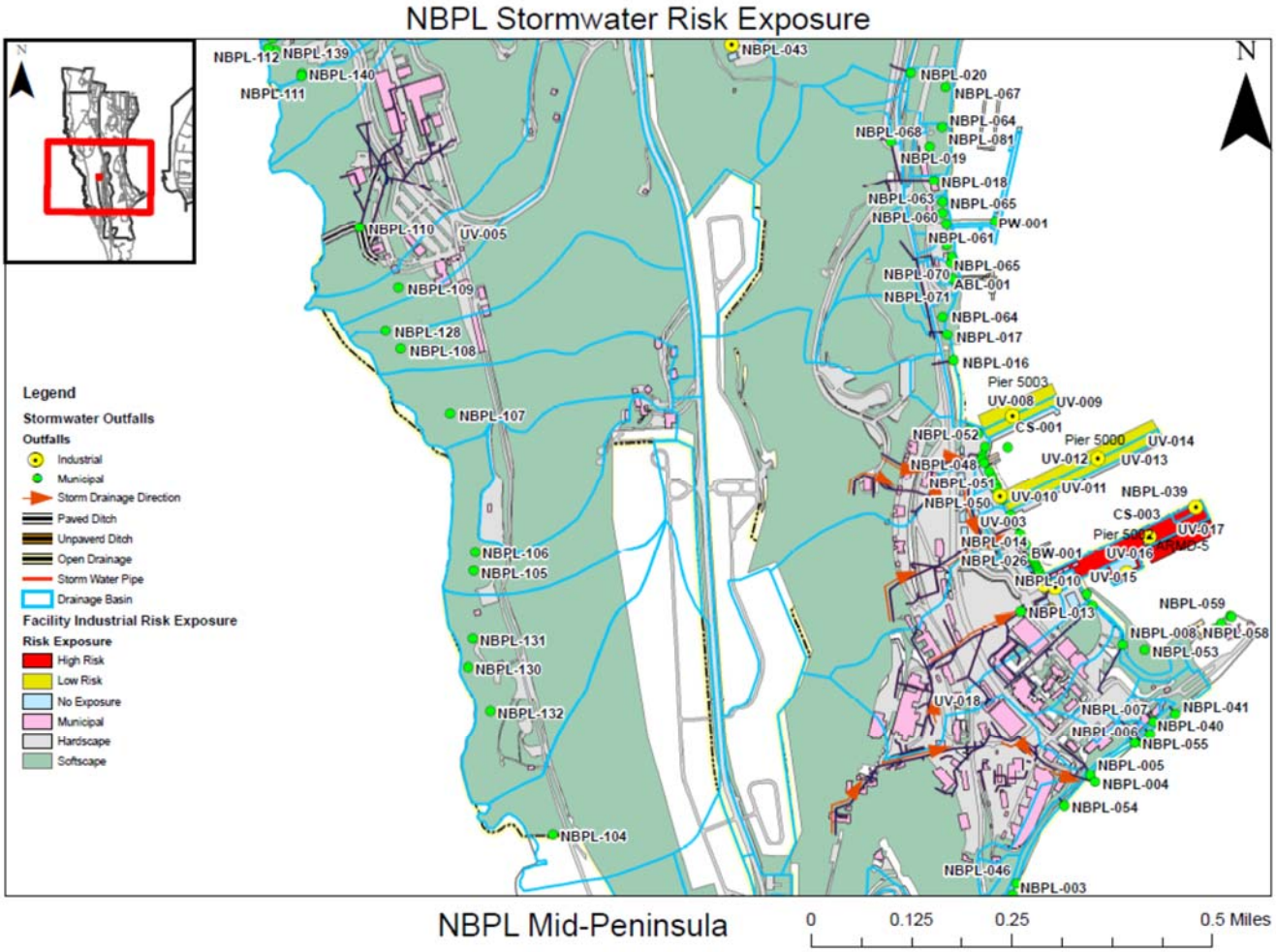


Figure B-5. NBPL Industrial Storm Water Risk Areas Part 1



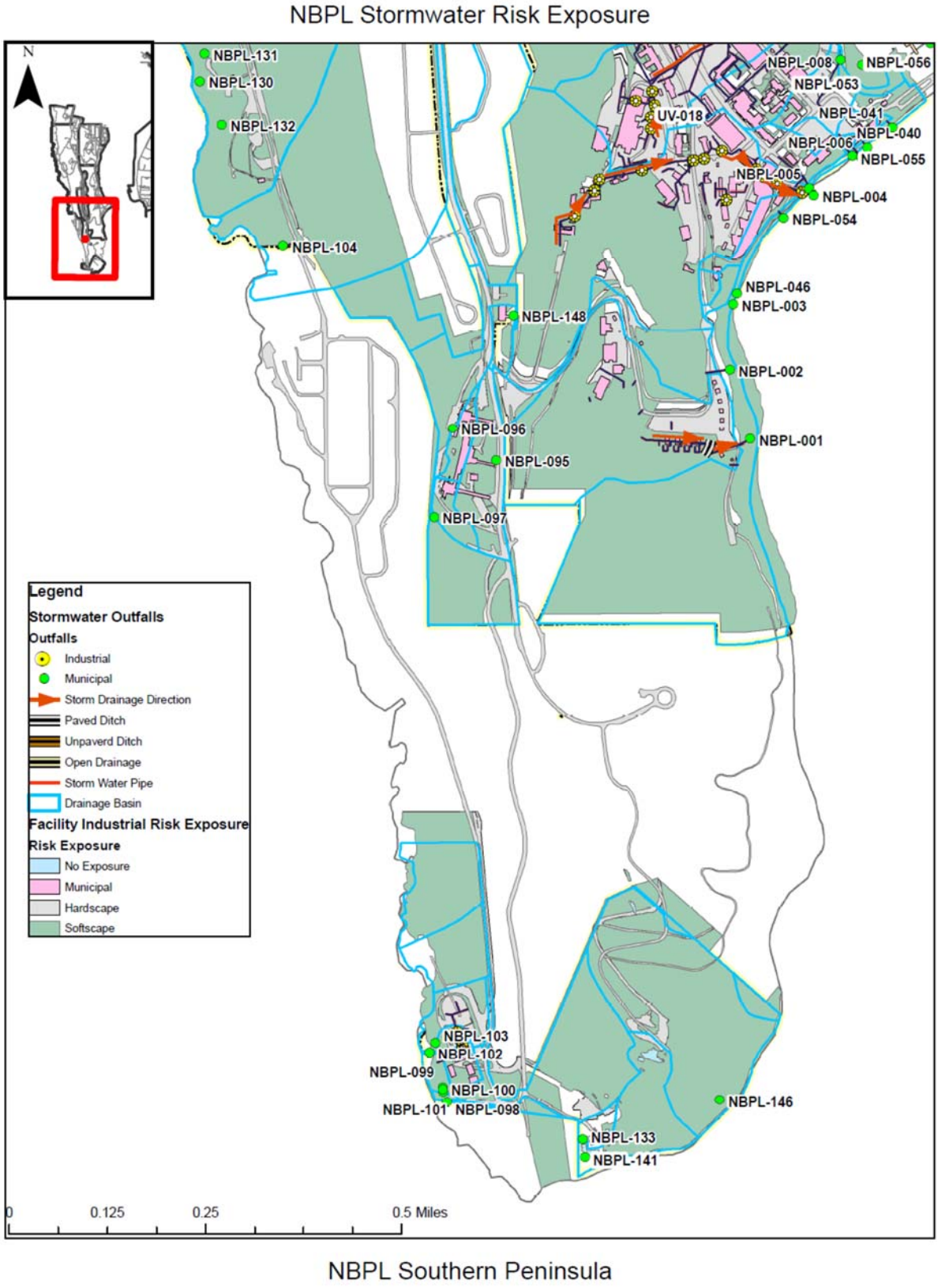
Refer to Attachment M table to cross-reference listed Discharge Points with Navy ID and Outfall Risk Level.

Figure B-6. NBPL Industrial Storm Water Risk Areas Part 2



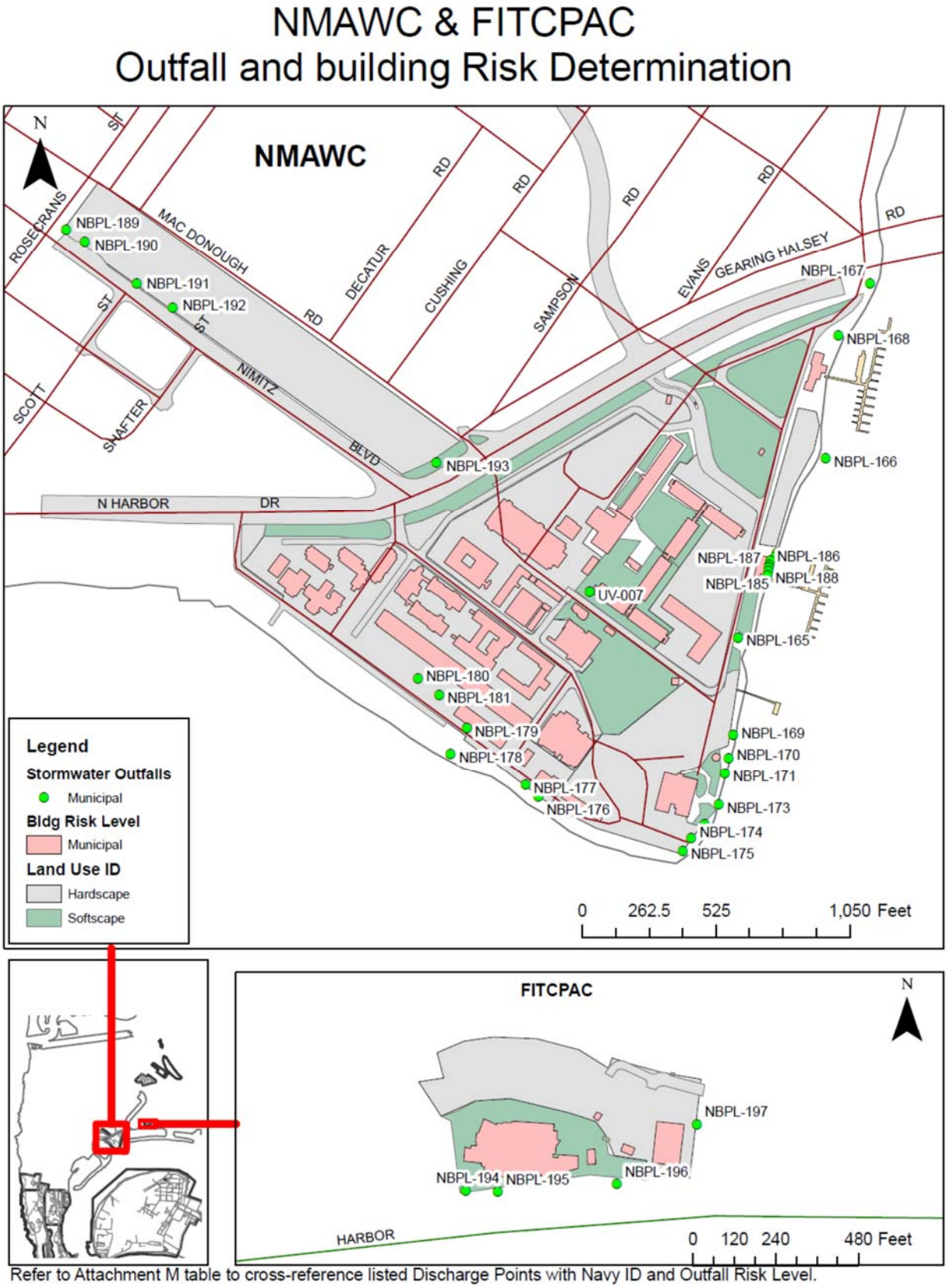
Refer to Attachment M table to cross-reference listed Discharge Points with Navy ID and Outfall Risk Level.

Figure B-7. NBPL Industrial Storm Water Risk Areas Part 3



Refer to Attachment M table to cross-reference listed Discharge Points with Navy ID and Outfall Risk Level.

Figure B-8. NBPL Industrial Storm Water Risk Areas Part 4

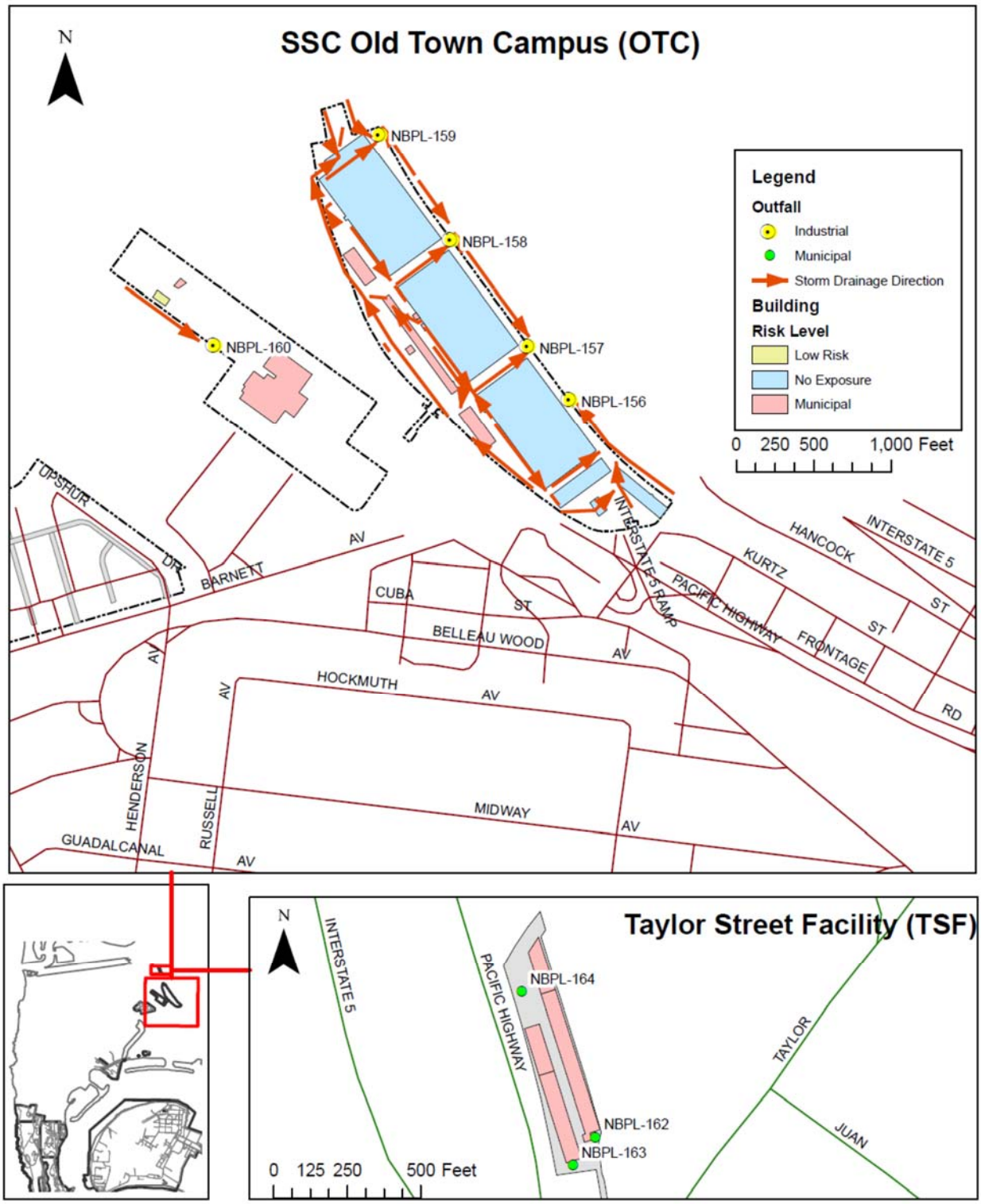


Refer to Attachment M table to cross-reference listed Discharge Points with Navy ID and Outfall Risk Level.

Figure B-9. NBPL Industrial Storm Water Risk Areas Part 5

SSC Old Town Campus (OTC) and Taylor Street Facility (TSF)

Outfall and Building Risk Determination



Refer to Attachment M table to cross-reference listed Discharge Points with Navy ID and Outfall Risk Level.

Figure B-10. NBPL Non-Industrial (Small MS4) Storm Water Discharge Locations – Part 1

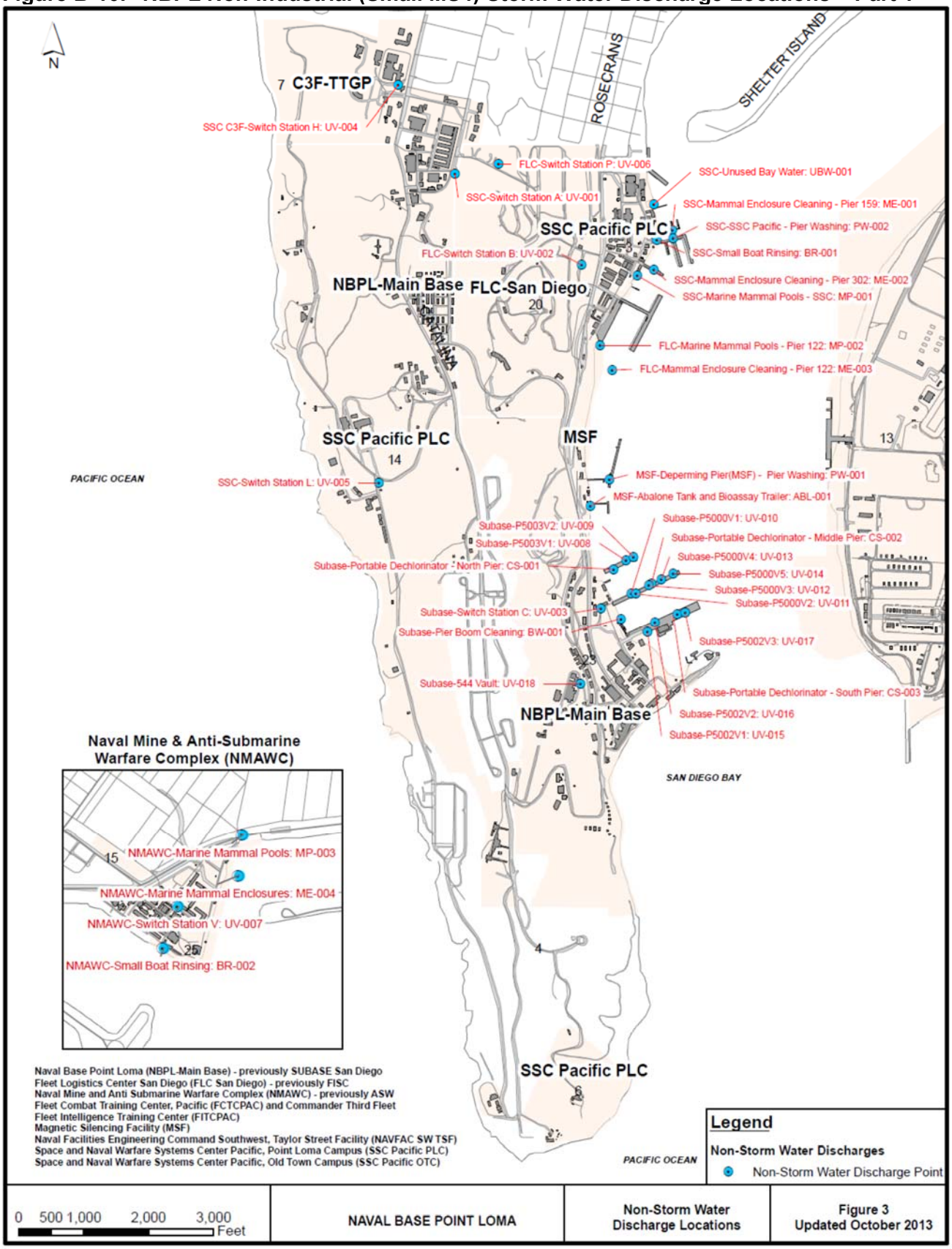
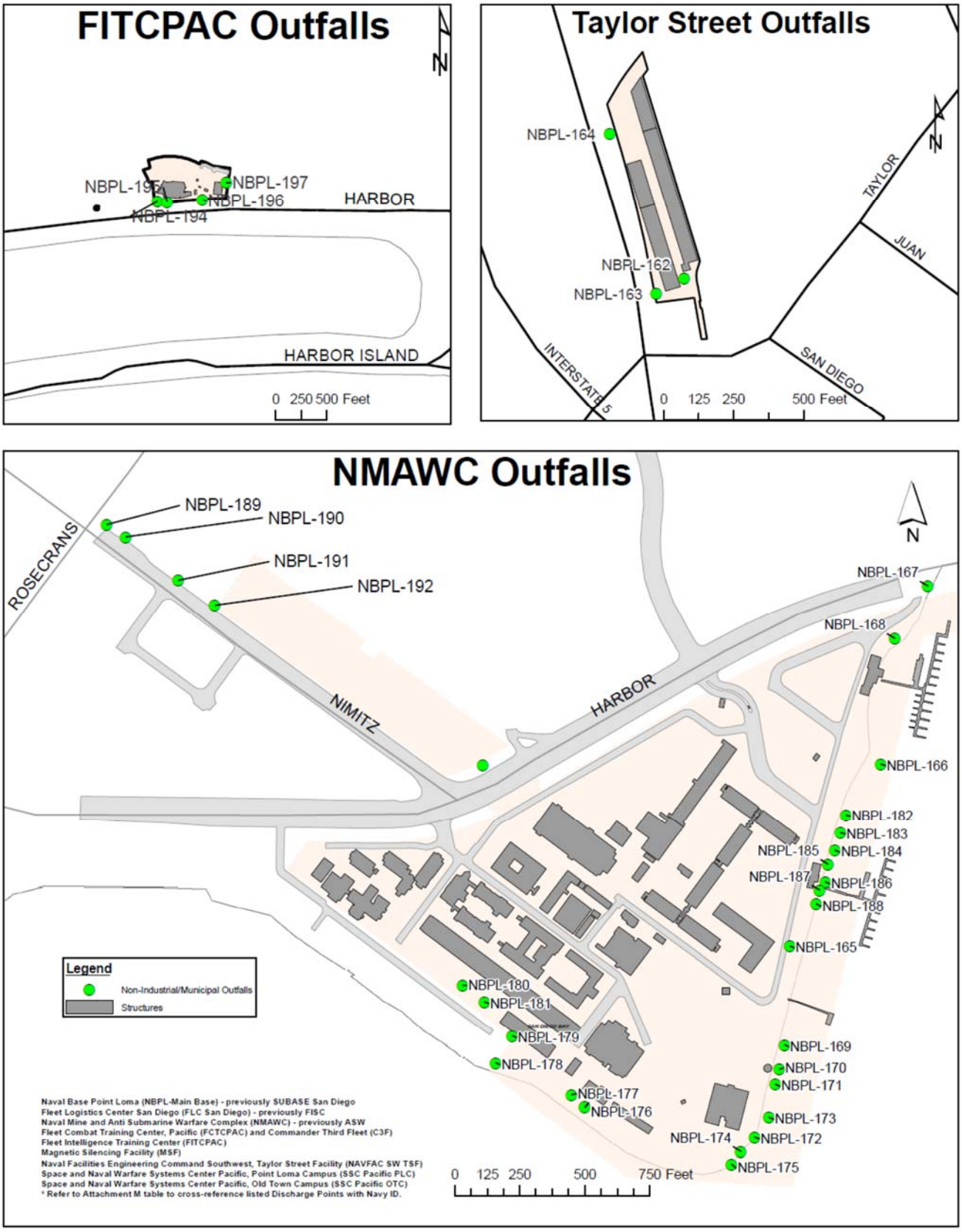


Figure B-11. NBPL Non-Industrial (Small MS4) Storm Water Discharge Locations – Part 2



ATTACHMENT C – FLOW SCHEMATIC

Figure C-1. Chlorination/Dechlorination Tanks

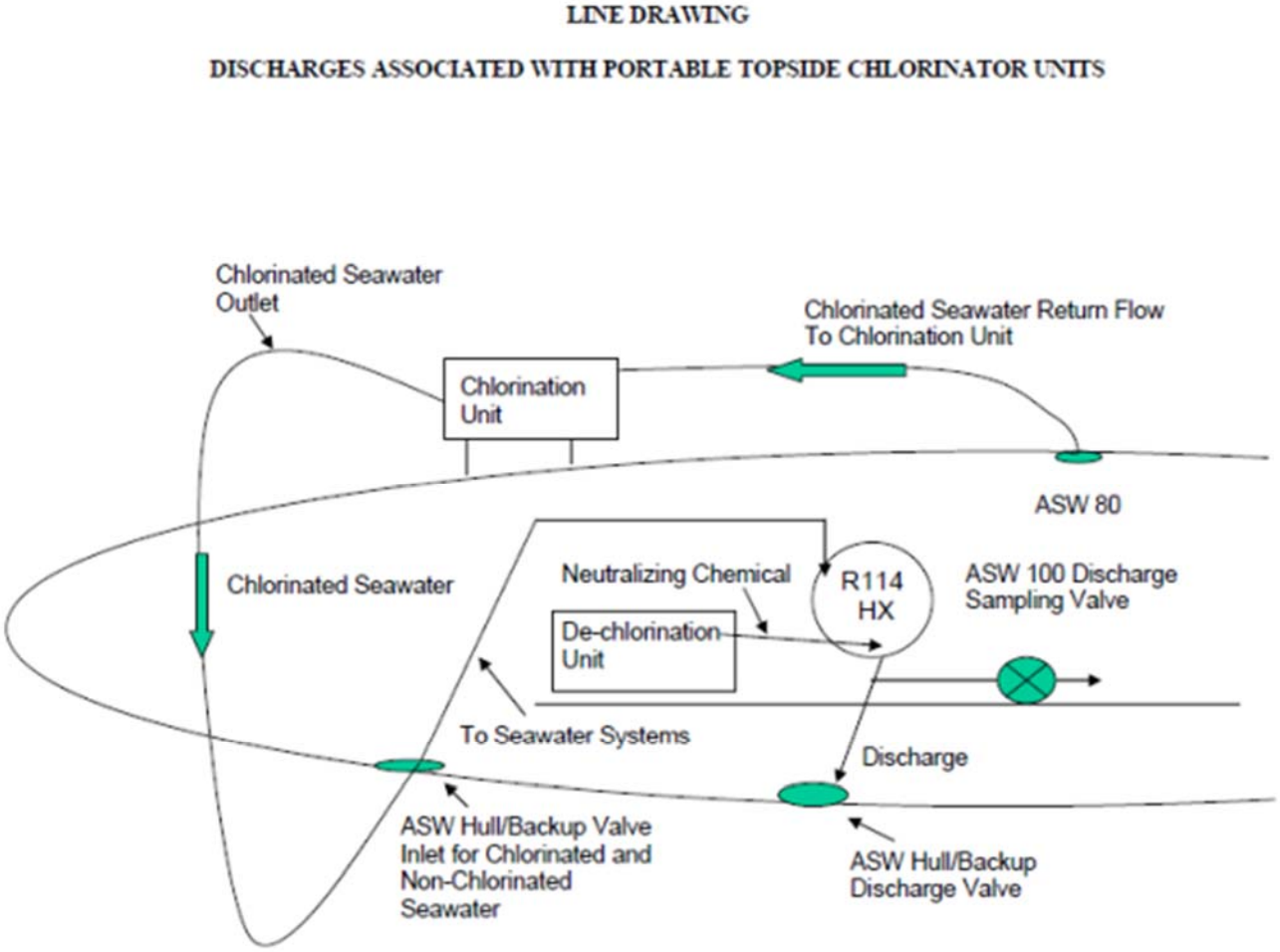


Figure C-2. Pier Washing

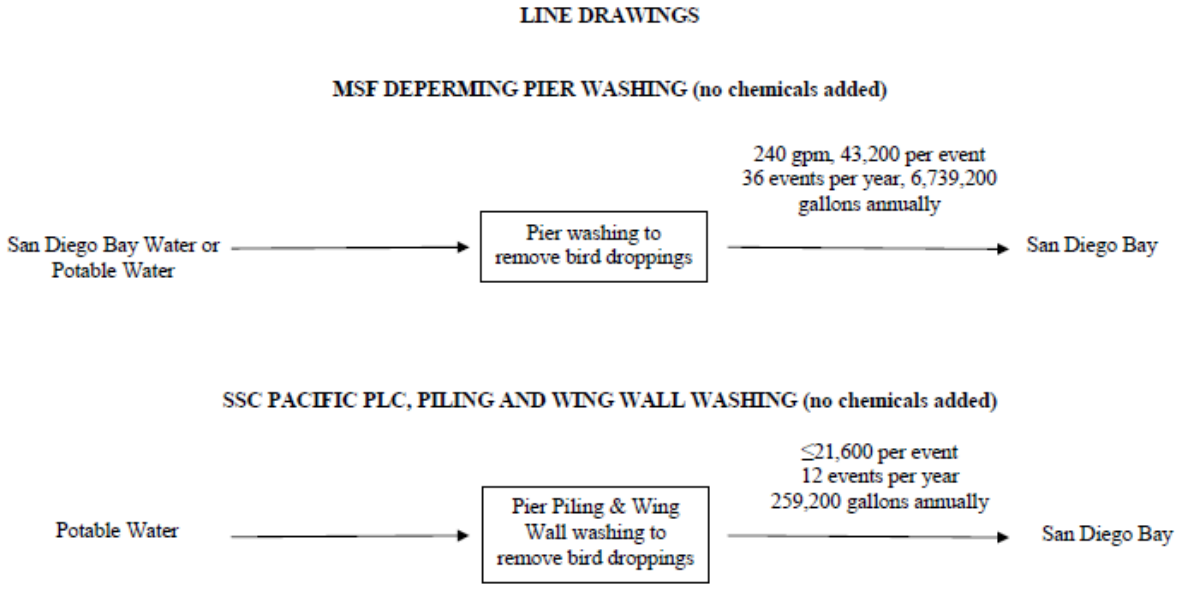


Figure C-3. Marine Mammal Pools

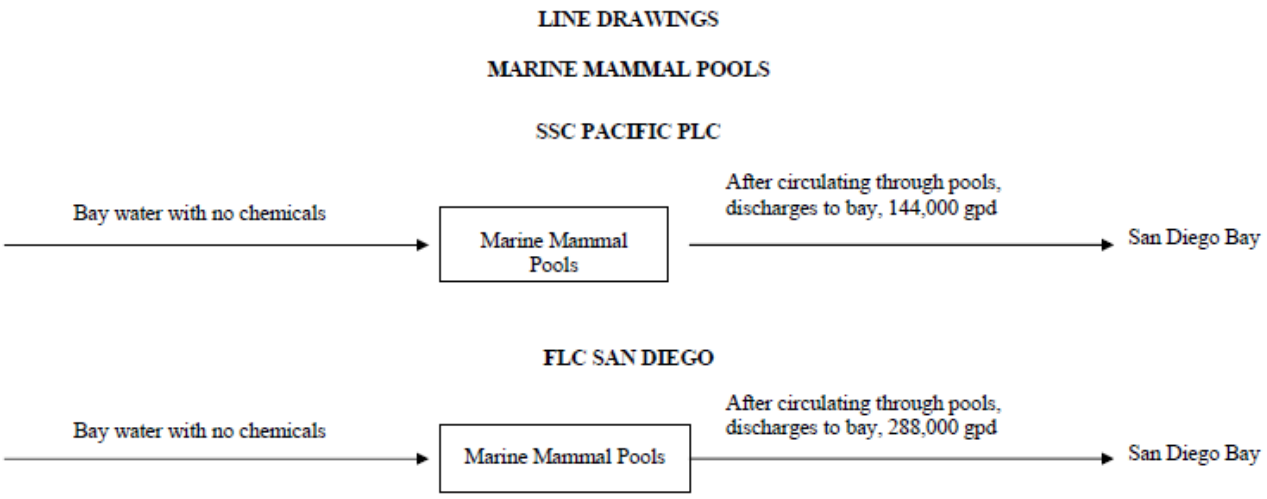


Figure C-4. Marine Mammal Enclosure Cleaning

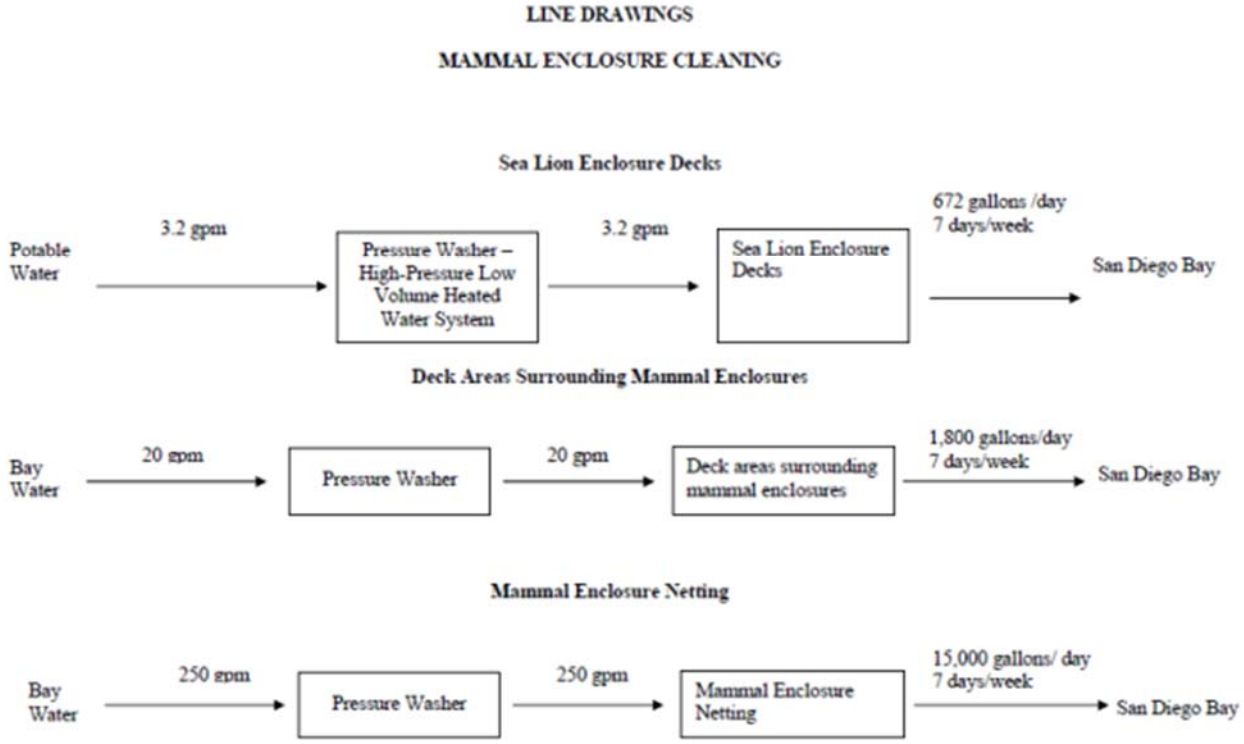


Figure C-5. Returned Unused Bay Water, Building 111

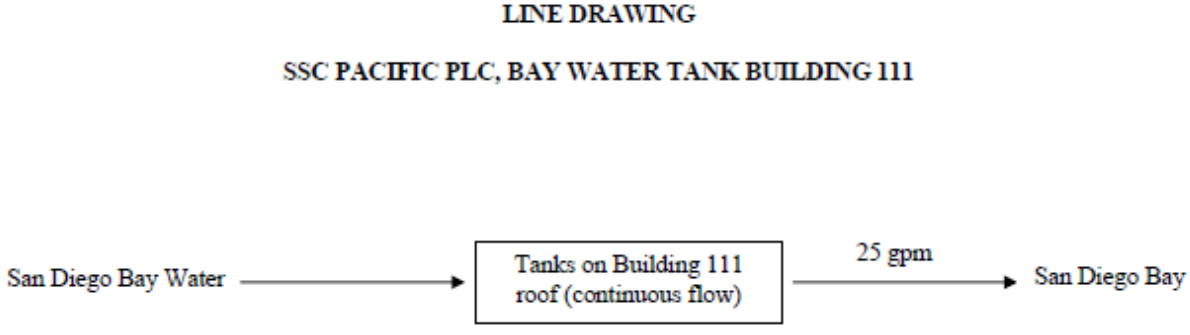


Figure C-6. Abalone Tank

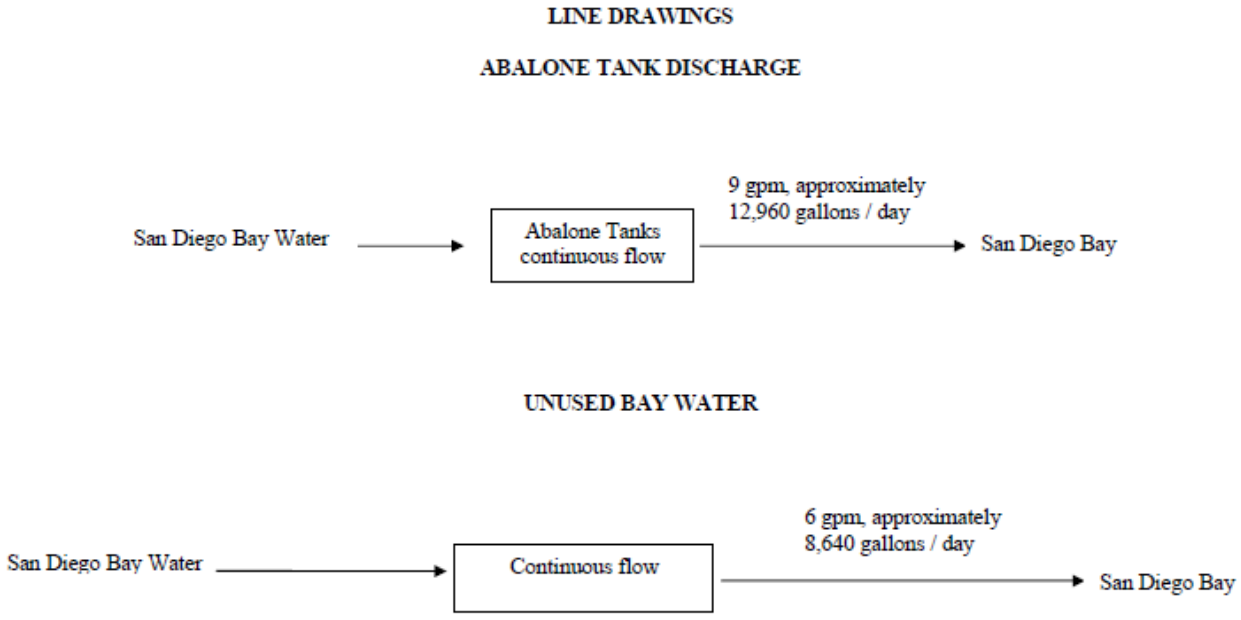


Figure C-7. Pier Boom Cleaning

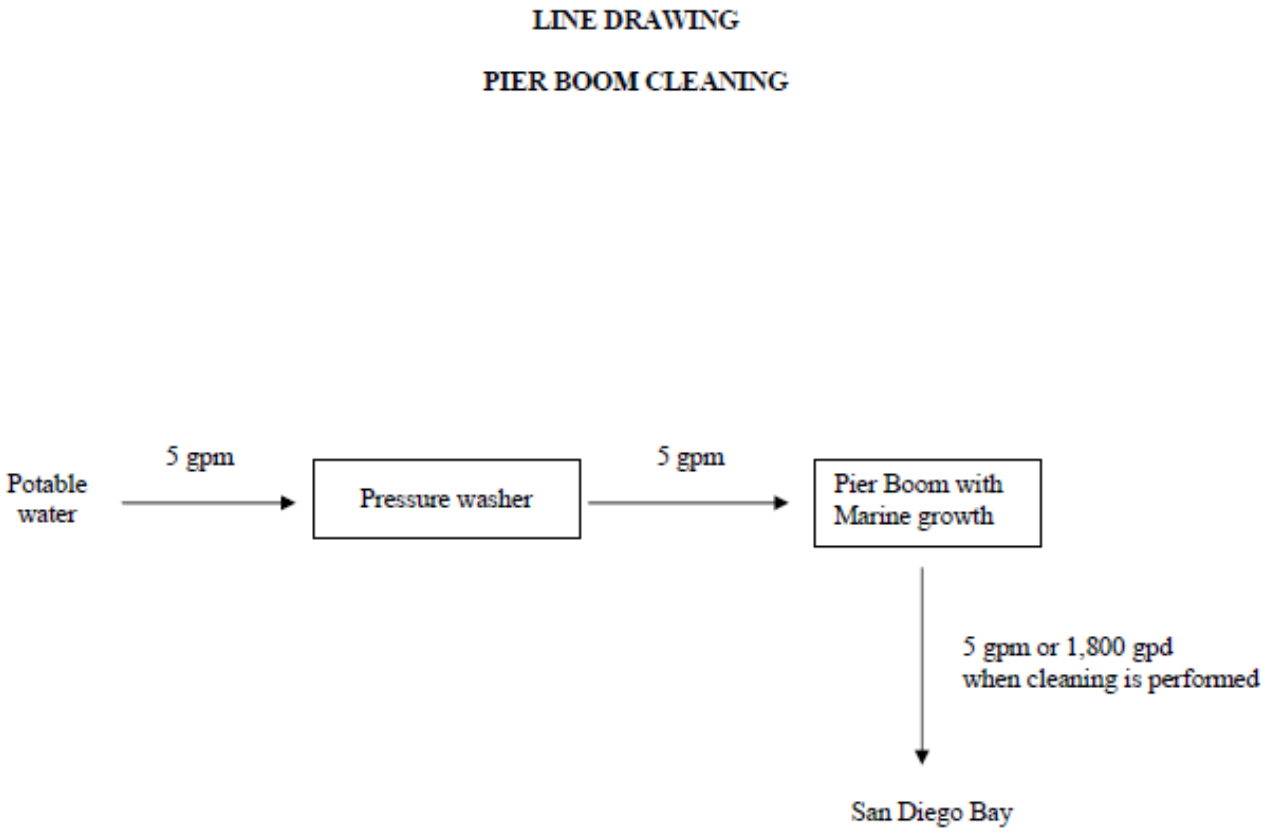


Figure C-8. Small Boat Rinsing

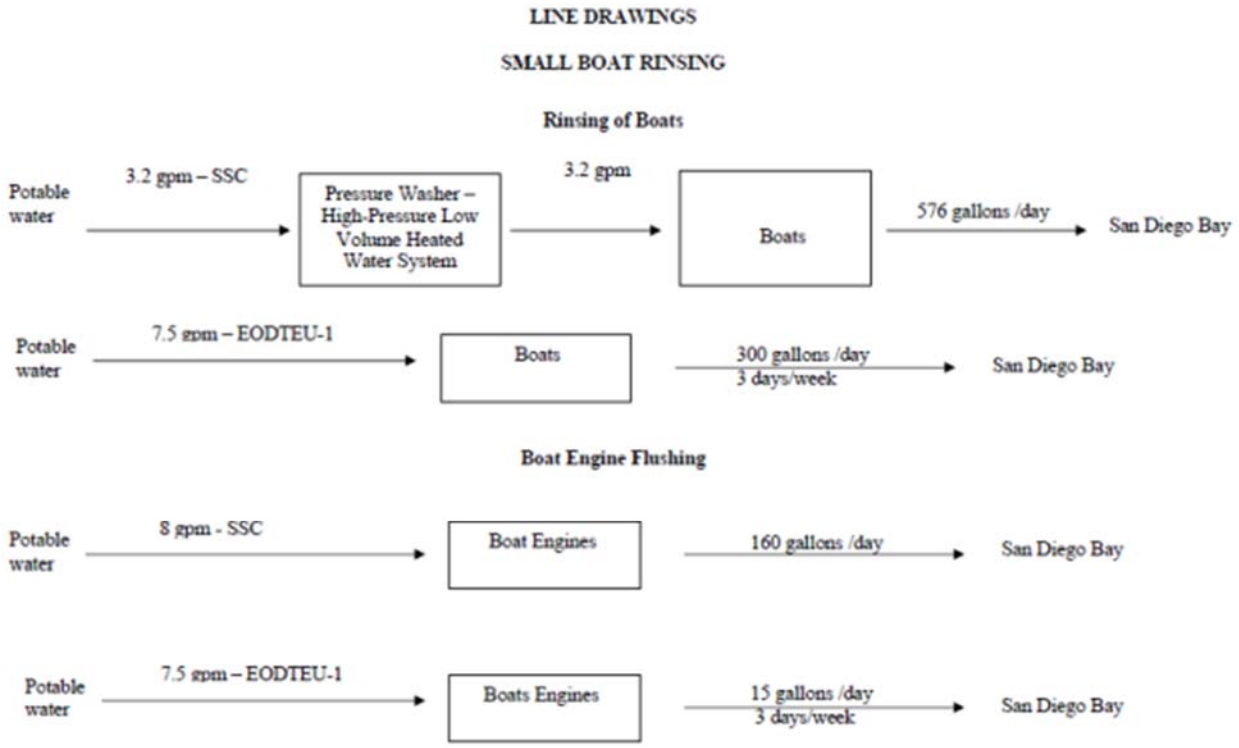
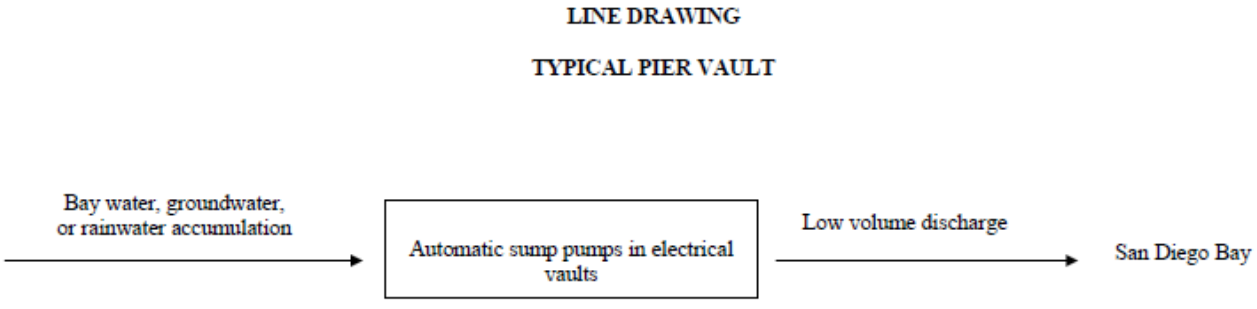


Figure C-9. Utility Vault and Manhole Dewatering



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR §122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the San Diego Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR § 122.41(i); CWC, § 13383):

1. Enter upon the Discharger' s premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR § 122.41(i)(4).)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering

judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

4. The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR § 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 122.41(l)(3); § 122.61.).)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

B. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger' s sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR § 122.41(k).)

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the San Diego Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and

   c. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the San Diego Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22 (c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for

reporting results of monitoring of sludge use or disposal practices. (40 CFR § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board. (40 CFR § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

3. The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the San Diego Water Board as soon as they know or have reason to believe (40 CFR § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR § 122.42(a)(1)):

a. 100 micrograms per liter (µg/L) (40 CFR § 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(1)(iii)); or

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 CFR § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 CFR § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(2)(iii)); or

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 CFR sections 122.44(i) and 122.48) requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the San Diego Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitoring flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the San Diego Water Board.

B. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* as amended, unless other test procedures are specified in this Order and/or in this MRP. Alternative test procedures not specified in this Order are subject to San Diego Water Board and USEPA approval.

C. A copy of the monitoring and reports signed, and certified as required by Attachment D, Standard Provisions V.B, of this Order, shall be submitted to the San Diego Water Board at the address listed in section VIII.C.5.c this MRP.

D. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring, instrumentation, copies of all reports required by this Order and this MRP, and records of all data used to complete the application for this Order. Records of monitoring information shall include information required under Attachment D, Standard Provisions, section IV. Records shall be maintained for a minimum of five years from the date of sample, measurement, report, or application. This period may be extended by request of this San Diego Water Board or by the USEPA at any time.

E. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health (CDPH) or by a laboratory approved by the San Diego Water Board or USEPA. The laboratory must be accredited under the CDPH Environmental Laboratory Accreditation (ELAP) program to ensure the quality of analytical data used for regulatory purposes to meet the requirements of this Order. Additional information on ELAP can be accessed at http://www.cdph.ca.gov/certlic/labs/Pages/ELAP-CAInformation.aspx.

F. The Discharger shall report in its cover letter all instances of noncompliance not reported under Attachment D, section V.H of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Attachment D, section V.E of this Order.

G. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their

continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

H. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger should have a success rate equal to or greater than 80 percent.

I. Monitoring results shall be reported at intervals and in a manner specified in this Order or in this MRP.

J. This MRP may be modified by the San Diego Water Board as appropriate.

K. This Order may be modified by the San Diego Water Board and the USEPA to enable the Discharger to participate in comprehensive regional monitoring activities conducted in the Regional Harbor Monitoring Program. Minor changes may be made without further public notice.

L. The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations established in this Order use minimum levels (ML) no greater than the applicable effluent limitation and are consistent with the requirements of 40 CFR part 136 or otherwise approved by USEPA and authorized by the San Diego Water Board. The MLs defined in Appendix 4 of the SIP are applicable to these discharges. If no authorized ML value is below the effluent limitation, then the method must achieve an ML no greater than the lowest ML value indicated in Attachment N of this Order (or if not listed in Attachment N of this Order, be the lowest ML provided for in 40 CFR part 136).

II. MONITORING LOCATIONS

A. Monitoring Station Locations

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order. Samples required by this Order shall be collected at a point or prior to the point of discharge, at the designated NPDES sampling station for the effluent as specified in Table E-1 below:

Table E-1. Monitoring Station Locations

Discharge Location No.	Monitoring Location Name	Monitoring Location Description
CS-001	CS-001	A location where a representative sample of the Topside Chlorinator Units from Naval Base Point Loma (NBPL)-Main Base can be obtained: 32º 41’ 23” N; 117º 14’ 18” W
CS-002	CS-002	A location where a representative sample of the Topside Chlorinator Units from NBPL-Main Base can be obtained: 32º 41’ 21” N; 117º 14’ 11” W
CS-003	CS-003	A location where a representative sample of the Topside Chlorinator Units from NBPL-Main Base can be obtained: 32º 41’ 16” N; 117º 14’ 6” W
PW-001	PW-001	A location where a representative sample of Pier Washing Wastewater can be obtained: 32º 41’ 37” N; 117º 14’ 19” W
PW-002	PW-002	A location where a representative sample of Pier Washing Wastewater can be obtained: 32º 42’ 13” N; 117º 14’ 8” W

Discharge Location No.	Monitoring Location Name	Monitoring Location Description
MP-001	INF-MP-001	A location where a representative sample of the influent to the Marine Mammal Pool at SSC Pacific PLC can be obtained: 32º 42' 8" N; 117º 14' 14" W
MP-001	MP-001 (was DP-002)	A location where a representative sample of Marine Mammal Pool Water at SSC Pacific PLC can be obtained: 32º 42' 8" N; 117º 14' 14" W
MP-002	INF-MP-002	A location where a representative sample of the influent to the Marine Mammal Pool Water at FLC San Diego can be obtained: 32º 41' 57" N; 117º 14' 21" W
MP-002	MP-002 (was DP-001)	A location where a representative sample of Marine Mammal Pool Water at FLC San Diego can be obtained: 32º 41' 57" N; 117º 14' 21" W
MP-003	INF-MP-003	A location where a representative sample of the influent to the Marine Mammal Pool Water during temporary relocation to NMAWC can be obtained.
MP-003	MP-003	A location where a representative sample of Marine Mammal Pool Water during temporary relocation to NMAWC can be obtained.
UBW-001	UBW-001	A location where a representative sample of the Returned Unused Bay Water for SSC Pacific PLC Bldg. 111 can be obtained: 32º 42' 19" N; 117º 14' 11" W
APL-001	INF-ABL-001	A location where a representative sample of the influent to the Abalone Tanks can be obtained: 32º 41' 33" N; 117º 14' 22" W
ABL-001	ABL-001	A location where a representative sample of the Abalone Tank Wastewater can be obtained: 32º 41' 33" N; 117º 14' 22" W
BW-001	BW-001	A location where a representative sample of the Pier Boom Cleaning Wastewater can be obtained: 32º 41' 19" N; 117º 14' 19" W
ME-001	ME-001	A location where a representative sample of the Marine Mammal Enclosure Cleaning Wastewater can be obtained: 32º 42' 15" N; 117º 14' 8" W
ME-002	ME-002	A location where a representative sample of the Marine Mammal Enclosure Cleaning Wastewater can be obtained: 32º 42' 9" N; 117º 14' 11" W
ME-003	ME-003	A location where a representative sample of the Marine Mammal Enclosure Cleaning Wastewater can be obtained: 32º 42' 53" N; 117º 14' 18" W
ME-004	ME-004	A location where a representative sample of the Marine Mammal Enclosure Cleaning Water can be obtained during temporary relocation to NMAWC.
BR-001	BR-001	A location where a representative sample of the Small Boat Rinsing Wastewater at SSC Pacific PLC can be obtained: 32º 42' 13" N; 117º 14' 11" W
BR-002	BR-002	A location where a representative sample of the Small Boat Rinsing Water at NMAWC can be obtained: 32º 43' 21" N; 117º 13' 10" W
UV-001 through UV-018	UV-001 through UV-018	A location where a representative sample of the Utility Vault and Manhole Dewatering Discharge can be obtained. Individual coordinates are listed in Table F-11 in Attachment F (Fact Sheet).
--	Industrial Storm Water See Attachment M	The Discharger shall identify storm water monitoring locations at a point prior to or at the point of discharge for all "Industrial High Risk Areas" and "Industrial Low Risk Areas), as identified in Attachment M of this Order. The Discharger shall establish monitoring locations as described in section II.B of the MRP.
--	Municipal Storm Water See Attachment M	The Discharger shall identify storm water monitoring locations at a point prior to or at the point of discharge for Small MS4 Areas, as identified in Attachment M of this Order. The Discharger shall establish monitoring locations as described in section II.B of the MRP.

B. Industrial Storm Water Monitoring Location Report

1. The Discharger shall prepare and submit, no later than November 30, 2014, an Industrial Storm Water Monitoring Location Plan to identify representative monitoring locations for industrial storm water discharges from Industrial High Risk Areas, and Industrial Low Risk Areas. The Plan shall contain the following information:

   a. The criteria and methods used to identify the representative monitoring locations.

   b. A map of monitoring locations for each Industrial High Risk Area and Industrial Low Risk Area storm water discharge point. Where a single drainage area, or similar drainage areas to the same receiving water, discharge to multiple discharge points, the Discharger may propose a single monitoring location for that drainage area (or similar drainage areas), provided the Discharger submits supporting rationale demonstrating that a single monitoring location is representative for that drainage area (or similar drainage areas) (i.e., similar industrial activities and best management practices (BMPs)).

   c. A tabulation of the proposed representative monitoring locations for industrial storm water discharges from Industrial High Risk Areas and Industrial Low Risk Areas. The tabulation shall include the discharge points, the representative monitoring locations for each discharge point, a brief description of the representative monitoring location (including the drainage area for storm water discharges only), and the latitude and longitude for each representative monitoring location.

2. In the annual storm water monitoring report for industrial storm water discharges, the Discharger shall submit a summary of any proposed changes to the representative monitoring locations, a rationale for each change in monitoring location, and a certification that all monitoring locations are representative of their respective discharge locations.

3. The Discharger shall implement the Industrial Storm Water Monitoring Location Report unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any conditions set by the San Diego Water Board including modification of proposed monitoring locations.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. INDUSTRIAL PROCESS WASTEWATER AND EFFLUENT MONITORING REQUIREMENTS

A. Topside Chlorinator Monitoring Location CS-001 through CS-003

Beginning on January 1, 2015, the Discharger shall monitor portable topside chlorinator discharges when the chlorinators are operating at Monitoring Locations CS-001 through CS-003 as specified below to answer the following primary questions:

1. Does the effluent meet permit effluent limits thereby ensuring that water quality standards are achieved in the receiving water?

2. What is the mass of the constituents that are discharged annually?

3. Is the effluent concentration or mass changing over time?

If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML:

Table E-2. Effluent Monitoring for Portable Topside Chlorinator Units

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[1]	GPD	Grab or Estimate	Quarterly	Estimate
Conventional Pollutants				
pH	standard units	Grab	Quarterly	[2, 5]
Non-Conventional Pollutants				
Chlorine, Total Residual[3]	mg/L	Grab	Quarterly[6]	[2, 4]

1 Flow measurement refers to the flow from the cooling water system while chlorination is occurring.
2 As specified in 40 CFR 136.
3 Total Residual Chlorine shall be measured at a point after dechlorination and before discharge to San Diego Bay.
4 The Navy may use the analytical test method for chlorine sampling of Chlorine, Total Residual - Titrimetric, DPD-FAS, method number 330.4 described in EPA/600/4-79/020, Methods for Chemical Analysis for Water and Wastes. For ship onboard monitoring of Total Residual Chlorine, the CHEMetrics, Inc. K-2500 Total Chlorine Test Kit, DPD method, or equivalent may be used for this purpose.
5 Field test with pre and post calibrated portable instrument, or lab sample in accordance with 40 CFR 136.
6 If samples are collected more frequently, all data shall be submitted with the quarterly report.

B. Pier Washing Monitoring Location PW-001 and PW-002

The Discharger shall submit a log of pier washing wastewater discharges at Monitoring Locations PW-001 and PW-002 annually. The log shall include the date, location, duration, approximate discharge volume, water source, visual assessment of discharge and receiving water quality, and any other relevant comments. The log is designed to address the following primary questions:

1. How much pier washing occurs?

2. Is pier washing a major source of pollutants?

C. Marine Mammal Pool Monitoring Locations MP-001, MP-002, and MP-003

1. The Discharger shall submit a log of marine mammal pool discharges at Monitoring Location Nos. MP-001, MP-002, and MP-003 annually. The log shall include the date of discharge, location, approximate discharge quantity, number and type of mammals, and any other relevant comments. Any significant changes in the operation of the Marine Mammal Pools and potential impacts to receiving water quality shall also be noted in the log. The log is designed to address the following primary questions:

   a. How much are the marine mammal pools used?

b. Are the marine mammal pools a major source of pollutants?

D. Returned Unused Bay Water Discharge Monitoring Location UBW-001

The Discharger shall monitor Returned Unused Bay Water discharges at Monitoring Location UBW-001 as specified below to address the following primary question:

1. Is operation changing over time?

Annually, the discharger shall submit a log identifying any significant changes in the operation of the Unused Bay Water and potential impacts to receiving water quality.

Table E-3. Effluent Monitoring for Returned Unused Bay Water Discharges

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Grab or Estimate	Quarterly	Estimate

E. Abalone Tank Monitoring Location ABL-001

The Discharger shall monitor the abalone tank discharges at Monitoring Location ABL-001 as specified below to address the following primary questions:

1. Is the volume changing over time?

Annually, the discharger shall submit a log identifying any significant changes in the operation of the abalone tank discharge and potential impacts to receiving water quality.

Table E-4. Effluent Monitoring for Abalone Tank

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flowrate	GPD	Grab or Estimate	Quarterly	Estimate

F. Pier Boom Monitoring Location BW-001

The Discharger shall submit a log of pier boom cleaning discharges at Monitoring Point BW-001 annually. The log shall include the date, location, duration, approximate discharge quantity, visual observations of discharge and receiving water quality, and any other relevant comments. The log is designed to address the following primary questions:

1. How often are the pier booms cleaned?

2. Is the discharge a major source of pollutants?

G. Marine Mammal Enclosure Monitoring Locations ME-001 through ME-003

The Discharger shall monitor the marine mammal enclosure discharges at Monitoring Location ME-001 through ME-003 as specified below to address the following primary questions:

1. Is the discharge changing over time?

Annually, the discharger shall submit a log identifying any significant changes in the operation of the marine mammal enclosure discharge and potential impacts to receiving water quality.

H. Small Boat Rinsing Monitoring Locations BR-001 and BR-002

The Discharger shall monitor the small boat rinsing discharges at Monitoring Location BR-001 through BR-002 as specified below to address the following primary questions:

1. Is the discharge changing over time?

Annually, the discharger shall submit a log identifying any significant changes in the operation of the small boat rinsing discharge and potential impacts to receiving water quality.

I. Utility Vault and Manhole Monitoring Locations UV-001 through UV-018

1. Section B.1 of MRP No. R9-2002-0002, Utility Vault and Manhole Dewatering, is incorporated by this reference as if set forth herein. The Discharger shall continue monitoring in accordance with section B.1 of MRP No. R9-2002-0002 until December 31, 2014, with the annual report due March 1, 2015.

2. Beginning on January 1, 2015, the Discharger shall monitor utility vault and manhole dewatering discharges at Monitoring Locations UV-001 through UV-018 at a minimum of three representative monitoring locations, including at least one electrical vault discharge and one manhole discharge as shown in Table E-5 below to address the following primary questions:

   a. What is the mass of constituents that are discharged annually?

   b. Is the effluent concentration or mass changing over time?

   The electrical vault representative shall be chosen from Monitoring Location Nos. UV-001 through UV-018 and shall change each year. The manhole discharge and steam vault discharge monitoring location shall be chosen at random and may be different each year.

Table E-5. Effluent Monitoring Utility Vault and Manhole Dewatering for Discharges

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Grab or Estimate	Annually	Estimate
Oil and Grease	mg/L	Grab	Annually	[3]
pH	standard units	Grab	Annually	[1]
Total Suspended Solids	mg/L	Grab	Annually	[1]
Total Petroleum Hydrocarbons	mg/L	Grab	Annually	[1]

1 As specified in 40 CFR 136.
2 TPH as gasoline (TPH-g) – Report Benzene, Ethylbenzene, Toluene, and Xylene. Also analyze for TPH Diesel (TPH-d).
3 Field test with pre and post calibrated portable instrument, or lab sample in accordance with 40 CFR 136.

3. Annually, by September 1, the Discharger shall submit a log of the utility vault and manhole dewatering discharges. For vaults with automatic sump pumps, the log shall include the total volume of each discharge point for each calendar quarter. For vaults or manholes that are dewatered manually, the log shall describe the volume, flow rate, location of the discharge, date, and receiving water body. The log is designed to address the following primary questions:

   a. How often does the discharge occur?

   b. Is the discharge a major source of pollutants?

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. The WET testing is designed to address the following primary questions:

1. Does the effluent meet permit effluent limits for toxicity thereby ensuring that water quality standards are achieved in the receiving water?

2. If not:

   a. Are unmeasured pollutants causing risk to aquatic life?

   b. Are pollutants in combinations causing risk to aquatic life?

3. Does the storm water runoff meet objectives for toxicity in the receiving water?

4. Are conditions in receiving water getting better or worse with regard to toxicity?

5. What is the relative storm water runoff contribution to the receiving water toxicity?

6. What are the causes of the toxicity and the sources of the constituents responsible?

B. Acute Toxicity

1. **Monitoring Frequency for Industrial High Risk Storm Water Discharges**

   The Discharger shall conduct acute toxicity monitoring at the frequencies specified in Table E-8 and section VII.A.4. of this MRP. For storm water sampling, sampling shall occur during storm events or if storm water is collected, prior to the release of storm water to the receiving water.

2. **Marine and Estuarine Species and Test Methods**

   The Discharger shall conduct a species sensitivity screening for acute toxicity on a representative sample which shall include one vertebrate and one invertebrate during the first required monitoring period. The species sensitivity screening samples shall also be analyzed for the parameters required for the discharge. The test species that exhibits the highest percent effect at the in-stream waste concentration (IWC) during a species sensitivity screening (i.e. the most sensitive species) shall be utilized for routine monitoring

during the permit cycle. Routine toxicity test design shall, at a minimum, include a single-concentration analysis of the IWC compared to a control.

The Discharger shall follow the methods for acute toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for accelerated monitoring. The USEPA method manuals referenced therein include *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition* (EPA-821-R-02-012).

All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

3. **Compliance Determination**

The acute toxicity Maximum Daily Effluent Limitation (MDEL) is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in a "fail" in accordance with the Test of Significant Toxicity (TST) approach and the percent effect is greater than or equal to 40%.

The determination of "pass" or "fail" from a single effluent concentration acute toxicity test at the IWC of 100 percent effluent shall be determined using the TST approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010).

The Discharger shall report the results of a reasonable potential analysis (RPA), species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as either a "pass" or a "fail" at the IWC, in accordance with the TST approach and provide the calculated percent effect at the IWC. The methodology for determining "pass", "fail" and "percent effect" is provided below.

Pass

An acute toxicity test result that rejects the null hypothesis (Ho) below is reported as "pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.80 × Control mean response

Fail

An acute toxicity test result that does not reject the null hypothesis (Ho) above is reported as "fail" in accordance with the TST approach.

Percent Effect

The percent effect at the IWC is calculated for each acute toxicity test result using the following equation:

$$\% \text{ Effect at IWC} = \frac{\text{Mean Control Response - Mean IWC Response}}{\text{Mean Control Response}} * 100$$

4. **Acute Toxicity MDEL Exceedance Follow-up Action**

If an acute toxicity test result during routine monitoring exceeds the acute toxicity MDEL, the Discharger shall implement corrective action to abate the source of the toxicity within 24 hours from the time the Discharger becomes aware of an MDEL exceedance, if the source of toxicity is known (e.g. operational upset). The Discharger shall also conduct an additional acute toxicity test within the same calendar month that the exceedance occurred or, the next qualifying storm event after receiving results of an exceedance for storm water discharges.

5. **Industrial Storm Water from High Risk Areas**

If the additional test result for industrial storm water from high risk areas results in a "pass", the Discharger may return to routine monitoring for the following monitoring period. If the verification test results in a "fail" at a percent effect greater than or equal to 20%, the Discharger shall implement an approved Toxicity Reduction Evaluation (TRE) Work Plan as set forth below in section V.F of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-by-case basis if implementation of a previously approved TRE Work Plan is already underway for the sampled discharge point.

C. Chronic Toxicity

1. **Monitoring Frequency for Chronic Toxicity**

The Discharger shall conduct chronic toxicity monitoring at the frequencies specified in Table E-6 and E-8.

2. **Marine and Estuarine Species and Test Methods**

The Discharger shall conduct a species sensitivity screening for chronic toxicity on a representative sample which shall include one vertebrate, one invertebrate and one aquatic plant during the first required monitoring period. The species sensitivity screening samples shall also be analyzed for the parameters required for the discharge. The test species that exhibits the highest percent effect at the IWC during a species sensitivity screening (i.e. the most sensitive species) shall be utilized for routine monitoring during the permit cycle. Routine toxicity test design shall, at a minimum, include a single-concentration analysis of the IWC compared to a control.

The Discharger shall follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for accelerated monitoring. The USEPA method manuals referenced therein include *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition* (EPA-821-R-02-013), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition* (EPA-821-R-02-014). Additional methods for chronic toxicity monitoring are outlined in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition* (EPA-600-R-95-136) and are the preferred methods if local species are available.

For discharges to marine and estuarine waters, the Discharger shall conduct a static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01); a static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and a static non-renewal toxicity test with

the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0 or Embryo-Larval Development Test Method). For discharges to a fresh water surface water, the Discharger shall conduct a static renewal toxicity test with one vertebrate, one aquatic plant, and one invertebrate species.

If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002; Table IA, 40 CFR Part 136). Additional species may be used by the Discharger if approved by the San Diego Water Board.

All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

3. **Compliance Determination**

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to 50%.

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST, (i.e. 2 out of 3) is a "fail."

The determination of "Pass" or "Fail" from a single effluent concentration chronic toxicity test at the IWC of 100 percent effluent shall be determined using the TST approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010).

The Discharger shall report the results of reasonable potential analyses, species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as either a "pass" or a "fail" at the IWC, in accordance with the TST approach and provide the calculated percent effect at the IWC. The methodology for determining "pass", "fail" and "percent effect" is provided below.

Pass

A chronic toxicity test result that rejects the null hypothesis (Ho) below is reported as "pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.75 × Control mean response

Fail

A chronic toxicity test result that does not reject the null hypothesis (Ho) above is reported as "fail" in accordance with the TST approach.

Percent Effect

The percent effect at the IWC is calculated for each chronic toxicity test result using the following equation:

$$\% \text{ Effect at IWC} = \frac{\text{Mean Control Response - Mean IWC Response}}{\text{Mean Control Response}} * 100$$

4. **Chronic Toxicity MDEL Exceedance Follow-up Action**

A chronic toxicity test result during routine monitoring indicating a "fail" with a percent effect at or above 50% is an exceedance of the chronic toxicity MDEL. The Discharger shall implement corrective action to abate the source of the toxicity within 24 hours from the time the Discharger becomes aware of an MDEL exceedance, if the source of toxicity is known (e.g. operational upset). The Discharger shall also conduct an additional toxicity test within the same calendar month that the exceedance occurred or, in the event laboratory monitoring results are not received during the same month when the sampling was performed, the next discharge event after receiving results of an exceedance.

5. **Industrial Process Wastewater**

If the additional test result for industrial process wastewater results in a "pass", the Discharger may return to routine monitoring for the following monitoring period. If the verification test results in a "fail" at a percent effect greater than or equal to 25%, the Discharger shall implement an accelerated monitoring schedule for chronic toxicity as set forth below in section V.E of this MRP.

6. **High Risk Industrial Storm Water**

The chronic toxicity test results shall be used in the Discharger's study on chronic toxicity described in section VI.C.2.a of this Order. If both the chronic toxicity test results at the end of pipe for high risk industrial storm water and the concurrent receiving water chronic toxicity test result in a "fail", the discharger shall conduct a TRE as required in section V.F of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-by-case basis if implementation of a previously approved TRE Work Plan is already underway for the sampled discharge point.

D. Quality Assurance

1. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

   a. This discharge is subject to a determination of "pass" or "fail" from a single-effluent concentration toxicity test at the IWC (for statistical flowchart and procedures, see *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, Appendix A, Figure A-1). The chronic IWC for applicable discharges is 100 percent effluent.

   b. Effluent dilution water and control water should be prepared and used as specified in the test methods manual *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002); or,

for *Atherinops affinis*, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used.

c. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

d. All multi-concentration reference toxicant test results must be reviewed and reported according to USEPA guidance on the evaluation of concentration-response relationships found in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136) (EPA 821-B-00-004, 2000).

e. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the Discharger shall resample and retest within 14 days (or as soon as possible for storm water).

E. Accelerated Chronic Toxicity Testing Monitoring Schedule

The Discharger shall implement an accelerated chronic toxicity monitoring schedule, as required by section V.C.5 of this MRP for industrial process wastewater discharges, consisting of four, five-concentration chronic toxicity tests, conducted at approximately two-week intervals, over an eight-week period. All toxicity tests conducted during an accelerated monitoring schedule shall, at a minimum, include the IWC and four additional concentrations. The additional effluent concentrations should provide useful information regarding the intensity and persistence of the toxic effect(s). If all of the additional tests result in a "pass", the Discharger may return to routine monitoring for the following monitoring period. If any one of the additional tests result in a "fail" and exhibit a percent effect equal to or greater than 25%, the Discharger shall implement an approved TRE Work Plan as set forth below in section V.F of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-by-case basis if implementation of a previously approved TRE Work Plan is already underway for the sampled discharge point

F. Toxicity Reduction Evaluation (TRE)

1. **TRE Work Plan Submittal.** The Discharger shall prepare and submit a TRE Work Plan to the San Diego Water Board no later than 30 days from the time the Discharger becomes aware of the following:

   a. A TRE work plan is required by section V.E of this MRP for an industrial process wastewater discharge which had a chronic toxicity test result during accelerated monitoring that resulted in a "fail" and exhibited a percent effect greater than or equal to 25%; or

   b. A TRE work plan is required by section V.B.5 of this MRP for a high risk industrial storm water discharge which had an additional acute toxicity test conducted following an MDEL exceedance that results in a "fail" and exhibits a percent effect greater than or equal to 20%; or

c. A TRE work plan is required by section V.C.6 of this MRP for a high risk industrial storm water discharge which had a chronic toxicity test and a concurrent receiving water sample test both result in a "fail" and exhibit a percent effect greater than or equal to 25%.

2. **TRE Work Plan**. The TRE Work Plan shall be in conformance with the USEPA manual "*Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, 1989)."* The TRE Work Plan shall also include the following information:

   a. A description of the actions to be undertaken by the Discharger to investigate, identify, and correct the causes of toxicity;

   b. If the MDEL noncompliance has not been corrected, the amount of time it is expected to continue;

   c. A description of the steps taken or planned to reduce, eliminate and prevent recurrence of the MDEL noncompliance; and

   d. A schedule for completion of all activities and submission of a final report.

3. **TRE Work Plan Implementation.** The Discharger shall implement the TRE Work Plan unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any additional conditions set by the San Diego Water Board.

4. **TRE Progress Reports**. The Discharger shall prepare and provide written semiannual progress reports which: (1) describe the actions that have been taken toward achieving compliance with the acute or chronic toxicity MDEL for the previous six months; (2) describe all activities including, data collection and other field activities which are scheduled for the next year and provide other information relating to the progress of work; (3) identify any modifications to the compliance plans that the Discharger proposed to the San Diego Water Board or that have been approved by San Diego Water Board during the previous six months; and (4) include information regarding all delays encountered or anticipated that may affect the future schedule for completion of the actions required to attain compliance with the MDEL, and a description of all efforts made to mitigate those delays or anticipated delays. These progress reports shall be submitted to the San Diego Water Board semiannually by February 1 and August 1 each year following the adoption of this Order in accordance with the reporting schedule in Table E-11. Submission of these progress reports shall continue until compliance with the MDEL is achieved.

5. **Toxicity Identification Evaluation (TIE).** Based upon the magnitude and persistence of the acute and chronic toxicity, the Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). If a TIE is undertaken, the Discharger shall prepare and submit a work plan to the San Diego Water

Board containing the following elements and comply with any conditions set by the Board:

a. Criteria for initiating a TIE on a sample;

b. Roles and responsibilities of the team conducting the TIE;

c. Study design, sample treatments, and chemical analysis;

d. Data evaluation and communication;

e. Follow-up actions; and

f. A schedule for completion of all activities and submission of a final report.

G. Violations

An exceedance of the MDEL or MMEL during routine monitoring is a violation. Any exceedances occurring during a required accelerated monitoring period and, if appropriate, a TRE period shall not constitute additional violations provided that (1) the Discharger proceeds with the accelerated monitoring and TRE (if required) in a timely manner; and (2) the accelerated monitoring and TRE are completed within one year of the initial exceedance. The San Diego Water Board has the discretion to impose additional violations and initiate an enforcement action for toxicity tests that result in a "fail" after one year from the initial violation. Additionally, a discharger's failure to initiate an accelerated monitoring schedule or conduct a TRE, as required by this Order, will result in all exceedances being considered violations of the MDEL or MMEL and may result in the initiation of an enforcement action.

H. Reporting of Toxicity Monitoring Results

1. The Discharger shall submit a full laboratory report for all toxicity testing as an attachment to the monitoring report. The laboratory report shall contain the toxicity test results; the dates of sample collection and initiation of each toxicity test; and all results for effluent parameters monitored concurrently with the toxicity test(s).

2. The Discharger shall provide the actual test endpoint responses for the control (i.e., the control mean) and the IWC (i.e., the IWC mean) for each toxicity test to facilitate the review of test results and determination of reasonable potential for toxicity by the permitting authority.

3. The Discharger shall notify the San Diego Water Board in writing within 14 days of receipt of any test result with an exceedance of the toxicity limit. This notification shall describe actions the Discharger has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

VI. RECEIVING WATER AND SEDIMENT MONITORING REQUIREMENTS

A. Monitoring Questions: The receiving water and sediment monitoring shall be designed and conducted to address the following primary questions :

1. Does the discharge cause or contribute to violations of the Receiving Water Limitations in section V. of this Order.

2. Does the receiving water meet the water quality standards?

3. Are the receiving water conditions getting better or worse over time?

4. What is the relative contribution of the discharge to pollution in the receiving water?

5. Is natural light significantly reduced as the result of the discharge of waste?

6. Does the discharge of waste cause a discoloration of the receiving waters?

7. Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than allowed by the water quality objective?

8. Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally?

9. Does the discharge of waste cause the salinity to become elevated in the receiving water?

10. Do nutrients cause objectionable aquatic growth or degrade indigenous biota?

11. Is the dissolved sulfide concentration of waters in marine sediments significantly increased above that present under natural conditions?

12. Is the concentration of substances at levels which would degrade the benthic community?

13. Is the concentration of organic pollutants, set forth in Attachment 1 of the State Water Board's Sediment Quality Control Plan, at levels in marine sediments that would degrade the benthic community?

14. Are benthic communities degraded as a result of the discharge?

15. Is the sediment condition changing over time?

16. Are the marine mammal enclosures and pools causing bacteria water quality objectives to be exceeded?

B. Monitoring Responsibility. Receiving water and sediment monitoring shall be performed individually by the Discharger to assess compliance with receiving water limits or through the Discharger's participation in a regional or water body monitoring coalition or both as determined by the San Diego Water Board. The receiving water monitoring requirements in MRP No. R9-2002-0002 shall continue to be implemented until the receiving and sediment monitoring program in this Order below is implemented.

C. Monitoring Coalition Reopener. To achieve maximum efficiency and economy of resources, the Discharger may establish or join a San Diego Bay water body monitoring coalition. If a San Diego Bay monitoring coalition is formed, revised monitoring requirements will be established to ensure that appropriate monitoring is conducted in a timely manner.

D. Water and Sediment Monitoring Plan. The Discharger shall prepare and submit a Water and Sediment Monitoring Plan to assess compliance with Receiving Water Limitations of this Order. The Water and Sediment Monitoring Plan shall be designed to answer the questions listed in section VI.A. above and submitted within 12 months of the effective date of this Order. The Water and Sediment Monitoring Plan shall contain the following elements:

1. **Quality Assurance Project Plan (QAPP).** A QAPP describing the project objectives and organization, functional activities, and quality assurance/quality control (QA/QC) protocols for the water and sediment monitoring.

2. **Sampling and Analysis Plan.** A Sampling and Analysis Plan based on methods or metrics described in 40 CFR 136, *Guidelines Establishing Test* Procedures *for the Analysis of Pollutants Under the Clean Water Act* and the SWRCB Sediment Quality Plan. The plan shall include a list of chemical analytes for the water column and sediment as well as frequency and monitoring locations.

i. Water Column Sampling

a) Frequency: The Sampling and Analysis Plan must propose the frequency and timing for water column sampling. The minimum frequency of sampling is shown in table E-6 below. The proposed sampling must be based upon results on the fate and transport of pollutants from the conceptual model (see c, below).

b) Pollutants: The Sampling and Analysis Plan must propose what pollutants will be monitored. At a minimum, monitoring must include the pollutants and frequency in Table E-6 below:

Table E-6. Minimum Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Priority Pollutants				
Copper, Total Recoverable	µg/L	Grab	Annually	[1,2]
Mercury, Total Recoverable	µg/L	Grab	Annually	[1]
Nickel, Total Recoverable	µg/L	Grab	Annually	[1]
Zinc, Total Recoverable	µg/L	Grab	Annually	[1]
Other Pollutants Identified by the Discharger	µg/L	Grab	Annually	[1]
Non-Conventional Pollutants				
Temperature	°F	Grab	Semiannually	[1]
Chronic Toxicity	Pass/Fail	Grab	Semiannually	[3]
Fecal Coliform[4]	MPN/100 mL	Grab	Semiannually	[1]
Total Coliform[4]	MPN/100 mL	Grab	Semiannually	[1]
Enterococcus[4]	MPN/100 mL	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

1 As specified in 40 CFR 136.
2 Effluent samples shall be analyzed for copper according to method 1638 or 1640. The commonly used methods 6010B (Inorganics by ICP-Atomic Emission Spectroscopy) and 200.7 (Trace Elements-ICP) have been found to give inaccurate copper readings in saline-matrix samples due to interference with the sodium-argon complex, which has a molecular weight similar to copper. Method 1638 (ICP/MS) or 1640 (On-Line Chelation) will eliminate the sodium-argon complex before the sample is tested for copper. No inaccurate readings for other metals in a saline-matrix sample is analyzed by methods 6010B or 200.7 are known.
3 The Discharger shall monitor chronic toxicity twice per year concurrently with the end of pipe high risk industrial storm water discharge monitoring required in Table E-8 of this MRP during one storm event per semiannual period. The receiving water chronic toxicity sample shall be collected in the receiving water adjacent to the storm drain outfall sampled in Table E-8 during the storm event. The data for this chronic toxicity sampling shall be reported annually in the Annual Storm Water Report.
4 The bacterial monitoring shall be focused on the marine mammal enclosure areas and marine mammal pool discharges and can be independent of the other receiving water monitoring. The bacterial monitoring program shall be designed to answer the question: "Are the marine mammal enclosures and pools causing bacteria water quality objectives to be exceeded?"

ii. Sediment Sampling

a) **Frequency**. Sediment chemistry, toxicity and benthic organism monitoring shall be done at least twice during the term of this Order

b) **Sediment Chemistry, Toxicity, and Benthic Community Condition**. Sediment chemistry, toxicity and benthic community monitoring shall be done in accordance with, at a minimum, the requirements set forth in the State Water Board's *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Control Plan). The proposal must also include the following:

1) **Sediment Chemistry**. Bulk sediment chemical analysis shall include at a minimum the pollutants identified in Attachment A of the State Water Board's Sediment Quality Control Plan and listed in Attachment K of this Order.

2) **Sediment Toxicity**. Short term survival tests and sublethal tests shall be performed as specified in section V.F of the SWRCB Sediment Quality Plan. The results shall be recorded as "Percent of control response".

3) **Benthic Community - Subtidal Habitat.** For discharges to unvegetated subtidal habitat, the benthic community shall be evaluated using the line of evidence approach in section V.G of the State Water Board Sediment Quality Control Plan. For discharges to vegetated subtidal (*Zostera marina*), the proposed benthic community monitoring must be conducted in accordance with section V.J of the State Water Board's Sediment Quality Control Plan and utilize a reference site approach to assess the benthic invertebrate community and impacts to *Zostera marina* as a line of evidence. Assessment of *Zostera marina* must be done in accordance with the Southern California Eelgrass Mitigation Policy.

iii. **Conceptual Model**. A Conceptual Model identifying the physical and chemical factors that control the fate and transport of pollutants and receptors that could be exposed to pollutants in the water and sediment shall be developed and included in the Water and Sediment Monitoring Plan. The Conceptual Model will serve as the basis for assessing the appropriateness of the Water and Sediment Monitoring Plan design. The Conceptual Model shall consider:

a. Points of discharge into the segment of the water body or region of interest;

b. Tidal flow and/or direction of predominant currents;
c. Historic or legacy conditions in the vicinity;
d. Nearby land and marine uses or actions;
e. Beneficial Uses;
f. Potential receptors of concern;
g. Change in grain size salinity water depth and organic matter; and
h. Other sources or discharges in the immediate vicinity.

iv. **Spatial Representation**. The Water and Sediment Monitoring Plan shall be designed to ensure that the sample stations are spatially representative of the water and sediment within the water body segment or region of interest.

v. **Existing Data and Information**. The Water and Sediment Monitoring Plan design shall take into consideration existing data and information of appropriate quality including ongoing monitoring programs conducted by other entities.

vi. **Strata**. Identification of appropriate strata shall consider characteristics of the water body including sediment transport, hydrodynamics, depth, salinity, land uses, inputs (both natural and anthropogenic) and other factors that could affect the physical, chemical, or biological condition of the sediment.

vii. **Index Period**. All sediment stations shall be sampled between the months of June through September to correspond with the benthic community index period.

viii. **Report Completion Schedule**. The Water and Sediment Monitoring Plan shall include a schedule for completion of all sample collection and analysis activities and submission of the Water and Sediment Monitoring Report described below.

E. Water and Sediment Monitoring Plan Implementation. The Discharger shall implement the Water and Sediment Monitoring Plan in accordance with the schedule contained in the Water and Sediment Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. Before beginning sample collection activities, the Discharger or water body monitoring coalition shall comply with any conditions set by the San Diego Water Board with respect to sample collection methods such as providing split samples.

F. Water and Sediment Monitoring Report. The Discharger or water body monitoring coalition shall submit a Water and Sediment Monitoring Report twice during the term of the permit after each sediment sampling occurrence. The Water and Sediment Monitoring report shall be submitted by September 1 as part of the Annual Report in accordance with Table E-9. The Water and Sediment Monitoring Report shall contain the following information:

a. Analysis. An evaluation, interpretation and tabulation of the water and sediment monitoring data including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station.

b. Sample Location Map. The locations, type, and number of samples shall be identified and shown on a site map.

VII. OTHER MONITORING REQUIREMENTS

A. Storm Water Discharges from Industrial High Risk Areas, Industrial Low Risk Areas, and Industrial No Exposure Areas

1. **Monitoring Questions.** The industrial storm water monitoring program is designed to address the following primary questions:

   a. Does the runoff meet permit effluent limitations for toxicity thereby ensuring water quality standards are achieved in the receiving water?

   b. Does the runoff meet the Numeric Action Levels (NALs)?

   c. Is the Storm Water Pollution Prevention Plan (SWPPP) being properly implemented?

   d. Is the Facility achieving standards of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT)?

2. **Non-Storm Water Discharge Visual Observations and Assessment**

   a. Monthly, the Discharger shall visually assess each drainage area for the presence or indications of prior, current, or potential unauthorized non-storm water discharges and their sources.

   b. The Discharger shall visually observe the Facility's authorized non-storm water discharges and their sources;

   c. The monthly visual observations shall be conducted during daylight hours, on days without precipitation, and during scheduled facility operating hours[1].

   d. Visual observations shall document the presence of or the indication of any non-storm water discharge, pollutant characteristics (floating and suspended material, oil and grease, discoloration, turbidity, odor, etc.), and source.

   e. The Discharger shall maintain records of the personnel performing the visual observations, the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Attachment G of this Order.

   f. The Discharger shall provide an explanation in the Annual Report for uncompleted monthly visual observations.

3. **Industrial Storm Water Discharge and Other Visual Observations**

   a. Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained,

[1] *Scheduled facility operating hours* are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

the Discharger shall observe the discharge of storm water associated with industrial activity.

b. The Discharger shall ensure that visual observations of discharge(s) from contained storm water are conducted at the time of discharge. If the discharge is not likely to occur during scheduled facility operating hours (based upon rainfall forecasts and containment freeboard), the visual observations of the contained storm water shall be conducted prior to the discharge. Visual observations shall confirm that the discharge is complying with the section III. Discharge Prohibitions of this Order.

c. If the Discharger is employing volume-based or flow-based treatment BMPs, any bypass that occurs while the visual observations and/or sampling of storm water discharges are conducted shall be sampled.

d. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any observed pollutants.

e. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location. The Discharger shall provide an explanation in the Annual Report for uncompleted sampling event visual observations.

f. Dischargers shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.

g. The Discharger shall revise BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP.

4. **Industrial Storm Water Sampling and Analysis**

a. A QSE is a precipitation event that:

i. Produces a discharge for at least one drainage area; and

ii. Is preceded by 48 hours with no discharge from any drainage area.

b. The Discharger shall collect storm water samples from two qualifying storm event (QSE) during each semiannual period (i.e. January – June, July – December). Representative storm water discharge locations for “Industrial High Risk” and “Industrial Low Risk” areas, as designated under section IV.B of this Order, shall be sampled as specified in Tables E-7 and E-8.

c. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is discharged. Samples shall be collected from two QSE during each semiannual period (i.e. January –June, July – December).

d. Samples shall be collected from each drainage location within four hours of the following:

i. The start of the discharge, or

ii. The start of facility operations if the QSE occurs within the previous 12 hour period (storms that begin the previous night) and representative discharge of the facility is determined to still be occurring. Sample collection is required during scheduled facility operating hours and when sampling conditions are safe.

e. Composite samples shall be flow-weighted storm water samples for the duration of the storm. If composite samples are collected, all parameters identified in Tables E-7 and E-8 with a sample type of grab or composite must be analyzed using composite samples.

f. In the event that the first QSE in a semi-annual period does not produce a discharge that can be sampled at one or more sampling locations, the Discharger shall record which sampling locations were observed that did not discharge, and collect samples from those locations during the next QSE(s) that produces a discharge in that semi-annual period. If the Discharger fails to collect a sample at one or more sampling locations that did produce a discharge, the Discharger is required to fulfill the sampling requirement from an additional QSE that produces a discharge. For each discharge location, the maximum number of storm water samples required per reporting year is four.

g. Sections C.2, C.3, C.5, and C.8 of MRP No. R9-2002-002, Industrial Storm Water Monitoring, are incorporated by this reference as if set forth herein. The Discharger shall continue monitoring in accordance with sections C.2, C.3, C.5, and C.8 of MRP No. R9-2002-0002 until December 31, 2014, with the annual report due September 1, 2015, as required by Table E-9 of this MRP.

h. Beginning on January 1, 2015, the industrial storm water discharges from the "Industrial Low Risk" and "Industrial High Risk" areas, shall be sampled and analyzed as shown in Table E-7 and Table E-8 respectively.

Table E-7. Monitoring Requirements for Industrial Storm Water Discharges from "Industrial Low Risk" Areas

Parameter	Unit	Sample Type	Minimum Frequency[5]	Required Analytical Test Method
Discharge Volume	gallons	Estimate[1]	Two storms per semi-annual period	Estimate
Conventional Pollutants				
Oil and Grease	mg/L	Grab	Two storms per semi-annual period	[2]
pH	pH Units	Grab	Two storms per semi-annual period	[4]
Total Suspended Solids	mg/L	Grab	Two storms per semi-annual period	[2]
Priority Pollutants				
Copper, Total Recoverable[6]	mg/L	Grab or Composite	Two storms per semi-annual period	[2]
Zinc, Total Recoverable[6]	mg/L	Grab or Composite	Two storms per semi-annual period	[2]

Parameter	Unit	Sample Type	Minimum Frequency[5]	Required Analytical Test Method
Non-Conventional Pollutants				
Other Pollutants[3]	µg/L	Grab or Composite	Two storms per semi-annual period	[2]

1 The volume of storm water discharge can be estimated by multiplying: amount of rainfall in feet × square feet of surface area × impervious factor. There are 7.5 gallons per cubic foot.
2 As specified in 40 CFR 136.3.
3 Pollutants that are likely to be present in storm water discharges in significant quantities shall be sampled. The pollutants shall be selected based upon the pollutant source assessment required in section VII of the SWPPP requirements contained in Attachment G, visual observations, and inspection records. If these pollutants are not detected in significant quantities after two consecutive sampling events, the Discharger may eliminate the pollutant from future analysis until the pollutant is likely to be present again. The Discharger shall select appropriate analytical test methods that indicate the presence of pollutants in storm water discharges in significant quantities.
4 Field test with pre- and post-calibrated portable instrument, or lab sample in accordance with 40 CFR 136.
5 Sampling shall occur during qualifying storm events each semiannual calendar period (January – June, July – December) prior to release to receiving water. If there are no qualifying storm events during the semiannual period, then sampling shall occur as soon as possible.
6 After four consecutive sample events where parameters are not detected or below the Annual NAL values, analysis for those parameters may be discontinued. The San Diego Water Board may approve discontinuation of analysis for parameters with sources attributable solely to the presence of 1) the parameters in the natural background that has not been disturbed by industrial activities or 2) non-industrial sources.

Table E-8. Monitoring Requirements for Storm Water Discharges from "Industrial High Risk" Areas.

Parameter	Unit	Sample Type	Minimum Frequency[7]	Required Analytical Test Method
Discharge Volume	gallons	Estimate[1]	Two storms per semiannual period.	Estimate
Conventional Pollutants				
Chemical Oxygen Demand	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Oil and Grease	mg/L	Grab	Two storms per semiannual period.	[2]
pH	pH Units	Grab	Two storms per semiannual period.	[5]
Total Suspended Solids	mg/L	Grab	Two storms per semiannual period.	[2]
Priority Pollutants				
Arsenic, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Cadmium, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Copper, Total Recoverable	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Mercury, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Nickel, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Selenium, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]

Parameter	Unit	Sample Type	Minimum Frequency[7]	Required Analytical Test Method
Silver, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Zinc, Total Recoverable	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Lead, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Non-Conventional Pollutants				
Aluminum, Total Recoverable[8]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Iron, Total Recoverable[8]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Nitrate+Nitrite Nitrogen[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Phosphorus, Total[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Ammonia[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Acute Toxicity[3]	Pass or Fail	Grab or Composite	Two storms per semiannual period.	[3]
Chronic Toxicity[3,6]	Pass or Fail	Grab or Composite	Two storms per semiannual period.	[3]
Other Pollutants[4]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]

1 The volume of storm water discharge can be estimated by multiplying: amount of rainfall in feet × square feet of surface area × impervious factor. There are 7.5 gallons per cubic foot.
2 As specified in 40 CFR 136.3.
3 The presence of acute or chronic toxicity in the storm water shall be determined as specified in section V of this MRP.
4 Pollutants that are likely to be present in storm water discharges in significant quantities shall be sampled. The pollutants shall be selected based upon the pollutant source assessment required in section VII of the SWPPP requirements contained in Attachment G, visual observations, and inspection records. If these pollutants are not detected in significant quantities after two consecutive sampling events, the Discharger may eliminate the pollutant from future analysis until the pollutant is likely to be present again. The Discharger shall select appropriate analytical test methods that indicate the presence of pollutants in storm water discharges in significant quantities.
5 Field test with pre- and post-calibrated portable instrument, or lab sample in accordance with 40 CFR 136.
6 Chronic toxicity will be sampled at one representative high risk industrial storm water discharge location.
7 Sampling shall occur during qualifying storm events, or if collected, prior to release to receiving water. If there are no qualifying storm events during the year, then sampling shall occur as soon as possible. If there are no qualifying storm events during the fifth year and conditions for administrative extension are met, then sampling shall occur as soon as possible.
8 After four consecutive sample events where parameters are not detected or below the Annual NAL values, analysis for those parameters may be discontinued. The San Diego Water Board may approve discontinuation of analysis for parameters with sources attributable solely to the presence of 1) the parameters in the natural background that has not been disturbed by industrial activities or 2) non-industrial sources.

i. Sampling Frequency Reduction Certification

1) The Discharger is eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:
   a) Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs; and

b) The Discharger is in full compliance with the requirements of this Order and has updated, certified and submitted all documents, data, and reports required by this Order during the time period in which samples were collected.

2) The San Diego Water Board may notify a Discharger that it may not reduce the number of QSEs sampled each reporting year if the Discharger is subject to an enforcement action.

3) An eligible Discharger shall certify that it meets the conditions in section VII.A.4.g.1) above.

4) Upon Sampling Frequency Reduction certification, the Discharger shall collect and analyze samples from one (1) QSE within the first half of each reporting year (July 1 to December 31), and one (1) QSE within the second half of each reporting year (January 1 to June 30). All other monitoring, sampling, and reporting requirements remain in effect.

5) A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the San Diego Water Board that: (1) the Sampling Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the San Diego Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted by the Discharger.

6) A Discharger loses its Sampling Frequency Reduction certification if an NAL exceedance occurs.

5. **Visual Observation and Sample Collection Exceptions**

The Discharger shall be prepared to collect samples and conduct visual observations at the beginning of the semi-annual period until the minimum requirements of this section are completed with the following exceptions:

a. The Discharger is not required to collect samples or conduct visual observations under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms; or
ii. Outside of scheduled Facility operating hours. The Discharger is not precluded from collecting samples or conducting visual observations outside of scheduled facility operation hours.

b. If the Discharger does not collect the required samples or conduct the visual observations during a wet season due to these exceptions, then the Discharger shall include an explanation in the Annual Report why the sampling or visual observations were not conducted.

c. The Discharger shall ensure that all industrial storm water discharge sampling locations are representative of drainage areas associated with industrial activities, where practicable. The storm water discharge observed and collected from these sampling locations shall be representative of the storm water discharge generated in each drainage area. For sheet flow, the Discharger shall determine the appropriate sampling

location(s) which represent industrial storm water discharges generated from the corresponding drainage area.

d. The Discharger shall identify practicable alternate sample collection locations representative of the Facility's storm water discharge if:

   i. Specific drainage areas at the Facility are affected by storm water run-on from off-site areas or on-site non-industrial areas; or

   ii. Specific sampling locations are difficult to sample such as submerged discharge outlets, dangerous discharge location accessibility.

B. Non-Industrial Storm Water Monitoring for Small Municipal (Military Base) Separate Storm Sewer System (MS4) Areas

1. **Monitoring Questions.** The Small MS4 monitoring program shall be designed to address the following primary questions:

   a. Is the Storm Water Management Plan (SWMP) being properly implemented?

   b. Is the Facility achieving the standard of reducing pollutants in MS4 discharges to the Maximum Extent Practicable (MEP)?

2. **MS4 Monitoring Plan.** Within 24 months of the effective date of this Order, the Discharger shall prepare and submit to the San Diego Water Board a written plan for monitoring discharges and pollutants in non–industrial storm water discharges from Small (Military Base) MS4 Areas designed to answer the monitoring questions above. The monitoring plan shall include the following information:

   a. A list of pollutants to be monitored in non-industrial storm water from MS4 areas.

   b. Specific monitoring procedures for pollutants identified by the Discharger, with the goal of evaluating SWMP implementation throughout the Facility.

   c. A minimum subset of three representative monitoring locations for storm water and dry-weather discharges within the Small MS4 Areas of the Facility. These monitoring locations shall be sampled for pollutants identified by the Discharger.

   d. A schedule for monitoring. Pollutant monitoring shall be performed a minimum of twice per year at the representative monitoring locations for storm water, and twice per year for dry-weather discharges, beginning 24 months after the effective date of this Order.

   e. A program for at least quarterly visual observations to identify and correct unauthorized non-storm water discharges.

3. The Discharger shall implement the Small (Military Base) MS4 Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any conditions set by the San Diego Water Board including modification of proposed monitoring locations and constituents.

4. Monitoring results shall be submitted annually with the Storm Water Annual Report.

C. Storm Water Annual Report for Industrial High Risk Areas, Industrial Low Risk Areas, and Small MS4 Areas

The Discharger shall submit an Industrial Storm Water Annual Report by September 1 of each year to the San Diego Water Board. The report shall include the following:

1. Identification of any changes to "Industrial High Risk", "Industrial Low Risk", "Industrial No-Exposure", and "Small MS4 Areas" at the Facility, as defined in section VI.B.1 of this Order;

2. A summary of visual observations and sampling and analysis results;

3. An evaluation of the visual observation and sampling and analysis results;

4. The Annual Comprehensive Site Compliance Evaluation Report as required by section IX of the SWPPP requirements contained in Attachment G;

5. Laboratory reports; and

6. A list of authorized and non-authorized non-storm water discharges.

D. Spill and Illicit Discharge Log (within all industrial storm water risk areas)

This requirement for a Spill and Illicit Discharge log is designed to answer the following primary monitoring questions:

1. Are there more frequent and/or bigger spills at this Facility than at other similar facilities?

2. Are spills and illicit discharges properly addressed and are measures being taken or planned to reduce, eliminate, and prevent recurrence of them in the future?

The Discharger shall log and report all spills of significant quantities to surface waters and all illicit discharges of any quantity within the Facility including spills and illicit discharges from vessels that are at the Facility for service. The spill / illicit discharge reports shall identify the following:

1. The time and date of the spill or illicit discharge;
2. The cause of the spill or illicit discharge;
3. The materials or wastes involved in the spill or illicit discharge;
4. The estimated volume of the spill or illicit discharges;
5. The specific location where the spill or illicit discharge originated including storm water risk level;
6. The fate of the spill or illicit discharge (e.g., San Diego Bay, etc.);
7. The physical extent or size of the area(s) affected by the spill;
8. Whether the spill or illicit discharge contained pollutants;
9. The public agencies notified;
10. The corrective actions taken or planned; and
11. The measures taken or planned to prevent or minimize future spills or illicit discharges.

The reports shall be submitted annually to the San Diego Water Board in accordance with Table E-9 of this MRP.

The Discharger shall include in its Annual Report a summary of the spills and illicit discharges that occurred in or on the Facility during the annual reporting period. The spill/illicit discharge summary report shall indicate the total number of spills and illicit discharges for the year, categorize the spills and illicit discharges, and provide the percentages of each type of spill or illicit discharge in a graphical representation. The summary report shall also indicate the efforts the Discharger used in during the annual reporting period to prevent or minimize spills.

E. Floating Dry Dock Submergence

1. **Monitoring Questions.** This dry dock monitoring program is designed to answer the following primary question:

   a. Is the dry dock adequately cleaned prior to flooding?

   b. Are pollutants being prevented from contact with Bay waters prior to flooding?

2. **Floating Dry Dock Submergence Notice.** The Discharger shall provide written notification to the San Diego Water Board at least 72 hours prior to the flooding of its floating dry dock. If the dry dock has to be flooded on short notice and the 72 hour notification time cannot be met, the Discharger shall notify the San Diego Water Board as early as possible and include information on why the notification time could not be met.

3. **Floating Dry Dock Video.** The Discharger shall record on video (using a readily available electronic format) the condition of its floating dry dock immediately prior to each flooding when industrial activity has occurred in the dry dock. Quarterly, the Discharger shall submit a copy of the recording to the San Diego Water Board. If flooding is to occur at night, video shall be taken during daylight hours as close to flooding as possible. The Discharger does not need to record on video the condition of the dry dock prior to the flooding when the dry dock has not had industrial activity occur and a flooding evolution is required for training or other purposes.

4. **Floating Dry Dock Certification.** The Discharger must submit a quarterly certification statement regarding the condition of the dry dock prior to each flooding event during the reporting period. If the floating dry dock was not flooded during the quarter, the Discharger shall document in the quarterly report that no flooding occurred during that monitoring period.

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. The Discharger shall report all instances of noncompliance not reported under Attachment D, Sections V.E, V.G, and V.H, of this Order at the time monitoring reports are submitted.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall initially submit Self-Monitoring Reports (SMRs) by hard copy to the San Diego Water Board office and electronically using the State Water Board' s California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The San Diego Water Board shall notify the Discharger when they may stop submitting hard copy SMRs. The CIWQS website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP. The Discharger shall submit quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with quarterly SMR
Daily	Permit effective date	(Midnight through 11:59PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	Submit with quarterly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
Annually	Permit effective date	July 1 through June 30	September 1
Annual Storm Water Report (IX.A.7 of this MRP)	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	July 1 through June 30	September 1 Separate report submitted with Annual Report

C. Reporting Protocols

1. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

2. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the Reporting Level (RL), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

3. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

4. Multiple Sample Data. When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even

number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

5. The Discharger shall submit SMRs in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

   c. Hard copy SMRs must be submitted to the San Diego Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

      California Regional Water Quality Control Board
      San Diego Region
      Attention: Source Control Regulation Unit
      2375 Northside Drive, Suite 100
      San Diego, CA 92108

      If the San Diego Water Board office is moved, the San Diego Water Board shall provide a new address for report submittal.

D. Discharge Monitoring Reports (DMRs)

1. At any time during the term of this permit, the State or San Diego Water Board may notify the Discharger to electronically submit DMRs that will satisfy federal requirements. Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

E. Other Reports

Special Reports. As specified in this Order, special reports or program components shall be submitted in accordance with the following reporting requirements.

Table E-10. Reporting Requirements for Special Provisions Progress Reports

Report Name	Section No.	Report Due Date
Industrial Storm Water Monitoring Location Report	MRP section II.B.1	November 30, 2014
Toxicity Reduction Evaluation (TRE) Work Plan	MRP section V.F.1	Within 30 days of a requirement to complete a TRE Work Plan
Water and Sediment Monitoring Plan	MRP section VI.D	Within 12 months of the effective date of this Order
Annual Storm Water Risk Level Designation Report	Order section IV.B.2	Annually by September 1st
Small Municipal Separate Storm Sewer System (MS4) – Storm Water Management Program	Order section IV.D.2	Within 18 months of the effective date of this Order
Small Municipal Separate Storm Sewer System (MS4) – Storm Water Monitoring Plan	Order section VII.B.2	Within 24 months of the effective date of this Order
Future Development of Chronic Toxicity Effluent Limitations for Industrial High Risk Storm Water Areas	Order section VI.C.2.a	At Discharger's Discretion
Topside Chlorinator/ Dechlorinator Units Water Quality Effects Study Work Plan	Order section VI.C.2.b	Within 12 month from the effective date of this Order
Topside Chlorinator/ Dechlorinator Units Water Quality Effects Study Implementation	Order section VI.C.2.b	Within 60 days after submittal of the workplan
Revised Utility Vault Plan	Order section VI.C.3.a	Within 1 year of the effective date of this Order
BMP Plan for Industrial Process Wastewater Discharges	Order section VI.C.3.b	Within 1 year of the effective date of this Order
Pollution Prevention Plan (PPP) Work Plan and Time Schedule	Order section VI.C.3.c	Within 90 days of the effective date of this Order
PPP	Order section VI.C.3.c	Within 9 months of the effective date of this Order

ATTACHMENT F – FACT SHEET

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Tables

ATTACHMENT F – FACT SHEET

As described in section II.E of this Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this Fact Sheet as findings of the San Diego Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

A. The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	9 000000538
Discharger	United States Department of the Navy
Name of Facility	Naval Base Point Loma (NBPL) Complex
Facility Address	140 Sylvester Road, Building 140 Room 234
	San Diego, CA 92106
	San Diego
Facility Contact, Title and Phone	Donald 'Angus' MacKelvey, Installation Environmental Program Director for NBPL, (619) 533-0526
Authorized Person to Sign and Submit Reports	S.F. Adams, Captain, U.S. Navy Commanding Officer, (619) 553-7400
Mailing Address	Same as Facility Address
Billing Address	Same as Facility Address
Type of Facility	Naval Base
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	Not Applicable
Facility Design Flow	Not Applicable
Watershed	San Diego Bay
Receiving Water	San Diego Bay and Pacific Ocean (storm water only)
Receiving Water Type	Enclosed Bay and Ocean Waters

B. The United States (U.S.) Department of the Navy (Navy or Discharger) is the owner and operator of Naval Base Point Loma Complex (NBPL or Facility), a U.S. Naval Base. The NBPL is comprised of nine installations which are described in Section II and are hereinafter jointly referred to as the "Facility".

For the purposes of this Order, references to the "discharger" or "Discharger" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

C. The Discharger was previously regulated by Order No. R9-2002-0002, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109363, for wastewater discharges from multiple discharge points within the Facility to San Diego Bay, a water of the United States (U.S.). Order No. R9-2002-002 was the first comprehensive NPDES permit for the Facility. The regulated discharges included wastewater from the following sources/activities:

- Industrial storm water,
- Utility vault and manhole dewatering,
- Steam condensate,
- Diesel engine cooling water,
- USS ARCO dry dock ballast water,
- Magnetic Silencing Facility (MSF) pier washing,
- Marine mammal pools,
- Returned unused San Diego Bay water,
- Abalone tank discharges,
- Pier boom cleaning,
- Small boat rinsing, and
- Miscellaneous facility discharges (e.g. landscape watering runoff, potable water & fire system maintenance).

Order No. R9-2002-0002 was adopted on September 11, 2002, and expired on September 11, 2007. The terms and conditions of the 2002 Order were automatically continued and remained in effect until a new Waste Discharge Requirements (WDRs) and NPDES permit was adopted pursuant to this Order.

D. The Discharger filed a report of waste discharge (ROWD) dated May 31, 2007 and an updated ROWD dated May 17, 2012 in application for reissuance of its WDRs and NPDES permit for the Facility. The application was deemed complete on February 10, 2014. Site visits were conducted by the San Diego Water Board on September 23, 2013, and April 3, 2014, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

A. Installations.

The Discharger manages several military installations in the San Diego area under the Commander, Navy Region Southwest (CNRSW) command structure. These installations are aligned into three major naval bases, including Naval Base Point Loma (NBPL); Naval Base San Diego (NBSD), and Naval Base Coronado (NBC). This Order regulates the Naval Base Point Loma Complex which is comprised of the following nine installations:

- Naval Base Point Loma (NBPL-Main Base; Naval Submarine Base, San Diego [SUBASE]);
- Fleet Logistics Center San Diego (FLC San Diego; previously Fleet and Industrial Supply Center [FISC]);
- Naval Mine and Anti-Submarine Warfare Complex (NMAWC; previously Fleet Anti-Submarine Warfare Training Center, Pacific [FASW]);
- Fleet Combat Training Center, Pacific (FCTCPAC) and Commander Third Fleet;
- Fleet Intelligence Training Center, Pacific (FITCPAC);
- Magnetic Silencing Facility (MSF);
- Naval Facilities Command Southwest, Taylor Street Facility (NAVFAC SW TSF);

- Space and Naval Warfare Systems Center Pacific, Point Loma Campus (SSC Pacific PLC); and
- Space and Naval Warfare Systems Center Pacific, Old Town Campus (SSC Pacific OTC).

1. **Naval Base Point Loma – Main Base (previously SUBASE San Diego).** The NBPL-Main Base is located at Ballast Point, along the eastern shore of the Point Loma Peninsula, in San Diego, California. Main Base is located within the *Point Loma Hydrologic Area* (908.10) of the *Pueblo San Diego Hydrologic Unit* (908.00). The installation is 294 acres of mainly moderately steep coastline, and the majority of Main Base facilities are on approximately 30 acres of relatively level land around Ballast Point. Approximately 20 percent of the total Main Base area is impervious to storm water infiltration. Main Base provides support to the U.S. Pacific Fleet Submarine Force and other sea-going and shore-based tenant commands.

   The mission of NBPL–Main Base is to provide support to the U.S. Pacific Fleet Submarine Force. The installation provides shore facilities, three deep draft piers, industrial maintenance support buildings, a floating dry dock, bachelor quarters and dining facilities, submarine training facilities, torpedo retrievers and support craft, a torpedo/missile magazine complex, and the attendant support infrastructure of utilities, roads, and grounds.

   The three piers at Main Base are used to berth submarines, surface ships, and the USS ARCO, a floating dry dock. Ship support services on the three piers include loading supplies and equipment onto the submarines and surface ships, as well as pier-side maintenance of submarines and surface ships. Pier side maintenance may include all of the activities conducted on the USS ARCO, but are less complex. Ship maintenance activities may also be conducted on the piers. Boats, ship sections, or parts may be placed on storage racks on the piers or adjacent land for maintenance.

   The USS ARCO supports full-service ship repair and maintenance activities. Ship repair and maintenance activities include hydro-blasting (no abrasive blasting), metal grinding, painting, tank cleaning, removal of bilge and ballast water, removal of anti-fouling paint, sheet-metal work, electrical work, mechanical repair, engine repair, hull repair, and sewage disposal. At the USS ARCO, wastewaters generated during ship repair and maintenance activities are contained in two separate 1,500-gallon holding tanks. Storm water runoff from the USS ARCO dock floor is also collected in these holding tanks. The USS ARCO holding tanks discharge to the NBPL-Main Base Bilge Oily Waste Treatment System (BOWTS) for treatment. Once treated by the BOWTS, the water is then discharged to the sanitary sewer system via a City of San Diego permitted connection. When the USS ARCO is flooded, there is the potential for Bay water to come into contact with waste materials. The dry dock must be thoroughly cleaned and inspected before flooding. The Discharger is required to implement a BMP plan to prevent the discharge of waste from the USS ARCO.

   Main Base also has several Southwest Regional Maintenance Center (SWRMC) repair shops. The SWRMC repair shops conduct repairs on various parts of the vessels, such as mast repair, antenna repair or mechanical repairs. All work is done indoors and has no exposure to storm water.

   Point source discharges from Main Base are discharges associated with portable topside chlorinator units, pier boom cleaning, utility vaults, storm water, and miscellaneous facility-related discharges. Miscellaneous facility-related discharges include fire suppression

sprinkler system flushing, emergency eye wash/shower station maintenance, air conditioner condensate, landscape watering, and seawater infiltration.

Table F-2. Discharges from the Main Base

Types of Discharge	Discharge Point Nos.
Topside Chlorinator/Dechlorinator Unit Wastewater	CS-001 through CS-003
Pier Boom Cleaning	BW-001
Utility Vault and Manhole Dewatering	UV-003, UV-008 through UV-018
Vessel Seawater Cooling Overboard Water	CW-001
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]
Industrial Storm Water	[1]
USS ARCO Flood Water	[2]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.
[2] USS ARCO Flood Water is not discharged from one point, but is listed here because it represents a potential for pollutant discharge.

2. **Fleet Logistics Center San Diego (FLC San Diego) (previously FISC).** FLC San Diego is on the east side of the Point Loma Peninsula, adjacent to San Diego Bay. It is within the *Point Loma Hydrologic Area* (908.10) of the *Pueblo San Diego Hydrologic Unit* (908.00), and consists of 200 acres of moderately steep, mostly undeveloped coastline. Most buildings are located at the shoreline, and approximately 10 percent of the total area is impervious to storm water infiltration. The primary purpose of the FLC San Diego installation is bulk storage and transportation of petroleum products to the Department of the Navy and the Department of Homeland Security.

   FLC San Diego has recently replaced the aging bulk fuel storage tanks and support facilities and an aged pump house, dispensing systems, distribution piping and fuel oil reclamation facility. FLC San Diego now has eight new above ground storage tanks (ASTs), a Fuel Oil Reclamation (FOR) facility, a lube oil storage facility, a fire water manifold, a control tower, a truck rack facility, a pump house, and four storm water retention basins. All of the new tanks have secondary containment. The construction was referred to as MILCON P-401 and was completed in December 2013.

   The primary industrial activities at FLC San Diego include the fueling of ships and associated raw materials (fuels, oils) storage, small boat repair work, and spill response functions.

   Point source discharges from FLC San Diego are listed in Table F-3 and include discharges associated with marine mammal pools, marine mammal enclosure cleaning, utility vault and manhole dewatering, storm water, and other miscellaneous facility-related discharges.

Table F-3. Discharges from the FLC San Diego

Types of Discharge	Discharge Point Nos.
Marine Mammal Pool Wastewater	MP-002
Marine Mammal Enclosure Cleaning Wastewater	ME-003
Utility Vault and Manhole Dewatering Water	UV-002 and UV-006
Miscellaneous Discharges	Various Locations

Types of Discharge	Discharge Point Nos.
Municipal Storm Water	[1]
Industrial Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

3. **Naval Mine and Anti-Submarine Warfare Complex (NMAWC) (previously ASW).** NMAWC is located at the intersection of North Harbor Drive and Nimitz Boulevard in San Diego, north of Main Base and west of the San Diego International Airport. NMAWC is in the *Point Loma Hydrologic Area* (908.10) of the *Pueblo San Diego Hydrologic Unit* (908.00), and the facility covers approximately 38 acres of mostly level land at the north end of San Diego Bay. Approximately 80 percent of the total area is impervious to storm water infiltration and consists of paved surfaces and buildings. This installation has over 40 buildings and trains personnel in the operation, maintenance, and tactical use of mine warfare, sonar, and other anti-submarine warfare equipment. The buildings at NMAWC are primarily living quarters and classroom areas and, as such, are considered a non-industrial land use.

   There are three small piers at NMAWC. One is used for equipment loading/unloading for Explosive Ordinance Disposal Unit boats, and the other two are used as a small marina to store private boats and recreational boats for the Morale, Welfare, and Recreation Department (MWR). In addition to training, activities at NMAWC include facility maintenance (buildings, utilities, and grounds), food preparation, and minor maintenance conducted on small boats.

   Starting in the fall of 2013, the marine mammal training pools and marine mammal enclosures were temporarily relocated to NMAWC for approximately four years. The temporary relocation of the marine mammals is due to anticipated noise impacts of in-water construction during the replacement of the existing fuel pier located at NBPL.

   Point source discharges subject to NPDES permitting from NMAWC are listed in Table F-4 below and are classified as discharges associated with small boat rinsing, utility vault and manhole dewatering, storm water, and other miscellaneous facility-related discharges:

Table F-4. Discharges from NMAWC

Types of Discharge	Discharge Point Nos.
Small Boat Rinsing Wastewater	BR-002
Utility Vault and Manhole Dewatering Water	UV-007
Temporary Marine Mammal Pool Discharge	MP-003
Temporary Marine Mammal Enclosure Cleaning	ME-004
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

4. **Fleet Combat Training Center, Pacific (FCTCPAC) and Commander Third Fleet.** FCTCPAC is located on the west side of the Point Loma Peninsula and is within the *Point Loma Hydrologic Area* (908.10) of the *Pueblo San Diego Hydrologic Unit* (908.00). FCTCPAC consists of 91.3 acres of native coastline, and approximately 35 percent of the total area is impervious to storm water infiltration. The primary mission of FCTCPAC is to provide electronic training facilities to support the Pacific Fleet. Activities include training, facility maintenance, and material storage.

Point source discharges subject to NPDES permitting from FCTCPAC are listed in Table F-5 below and include utility vault and manhole dewatering, storm water, and other miscellaneous facility-related discharges.

Table F-5. Discharges from FCTCPAC

Types of Discharge	Discharge Point Nos.
Utility Vault and Manhole Dewatering Water	UV-004
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

5. **Fleet Intelligence Training Center, Pacific (FITCPAC).** FITCPAC is a training and administrative center on Harbor Drive in San Diego. A basic description for FITCPAC's mission is to train Fleet Naval Intelligence professionals and operators in intelligence analysis, technologies and processes to ensure they prevail in combat operations at sea and ashore. The U.S. Pacific Command Joint Intelligence Training Activity, Pacific (JITAP) is co-located with the U.S. Pacific Fleet's Navy Fleet Intelligence Training Center, Pacific (FITCPAC) at the western end of the San Diego Airport Complex (Lindbergh Field). JITAP capabilities include the Joint On-Line Training Tool (JOLTT), a network-server application that allows a training command/activity to deliver on-line training and performance support to students via network both locally and worldwide. JOLTT was co-developed by JITAP and the Navy Fleet Intelligence Training Center, Pacific (FITCPAC) to support delivery of exportable training over the Joint Worldwide Intelligence Communication System (JWICS). The Navy's Regional Operation Center (ROC) is also located on the FITCPAC compound. The operations center is primarily a command, control and communications center for emergencies. The compound is used primarily for training and administrative functions with no industrial activity. Point source discharges subject to NPDES permitting from FITCPAC are listed in Table F-6 below and include storm water and other miscellaneous facility-related discharges:

Table F-6. Discharges from FITCPAC

Types of Discharge	Discharge Point Nos.
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

6. **Magnetic Silencing Facility (MSF).** MSF is located in the northern portion of Main Base, within the *Point Loma Hydrologic Area* (908.10) of the *Pueblo San Diego Hydrologic Unit* (908.00). MSF consists of 19.7 acres of moderately steep coastline, and approximately 20 percent of the total area is impervious to storm water infiltration. MSF has two piers that are used about five times per year as berths for Navy ships that are being depermed (demagnetized or degaussed). Deperming operations involve covering the ship with a metal cable mesh and supplying an electrical current to demagnetize the vessel. When ships are berthed at the pier, the ships only receive support services associated with deperming.

   The activities at MSF are limited to ship deperming, facility maintenance, material/waste storage, and operating the abalone breeding tanks. Point source discharges subject to NPDES permitting from MSF are listed in Table F-7 below and include pier washing,

abalone tanks wastewater, municipal storm water, and other miscellaneous facility-related discharges:

Table F-7. Discharges from MSF

Types of Discharge	Discharge Point Nos.
Pier Washing Wastewater	PW-001
Abalone Tank Water	ABL-001
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

7. **Naval Facilities Engineering Command Southwest, Taylor Street Facility (NAVFAC SW TSF).** NACFAC SW TSF is located at 4653 Pacific Highway in San Diego, California. It is in the *Mission San Diego Hydrologic Sub Area* (907.11) of the *Lower San Diego Hydrologic Area* (907.10) of the *San Diego Hydrologic Unit* (907). The facility is approximately 3.2 acres of relatively flat land, and approximately 100 percent of the land is impervious to storm water infiltration due to the presence of buildings and paved surfaces. NAVFAC SW TSF is used as office and shop areas for facility maintenance activities and, as such, is considered a non-industrial land use.

   Point source discharges subject to NPDES permitting from NAVFAC SW TSF are listed in Table F-8 below and include municipal storm water and other miscellaneous facility-related discharges:

Table F-8. Discharges from NAVFAC SW TSF

Types of Discharge	Discharge Point Nos.
Miscellaneous Discharges	Various Locations
Municipal Storm Water	[1]

[2] Various locations as discussed in section II.B.1 of this Fact Sheet.

8. **Space and Naval Warfare Systems Center Pacific, Point Loma Campus (SSC Pacific PLC)**. The SSC Pacific PLC is located along the east shore, west shore, and interior areas of the Point Loma Peninsula. The facility is within the Point Loma Hydrologic Area (908.10) of the Pueblo San Diego Hydrologic Unit (908.00). The facility consists of 740 acres; 117 of which are developed. Approximately 20 percent of the total area is impervious to storm water infiltration.

   The mission of SSC Pacific PLC is to be the Navy's full-spectrum research, development, test and evaluation (RDT&E), engineering, and fleet support center for command, control, and communication systems and ocean surveillance and the integration of those systems. The facility has four piers, used to berth small boats, barges, and dolphin and sea lion pens for the marine mammal program. The activities of SSC Pacific PLC include facility maintenance, loading supplies and equipment, minor maintenance of small boats, activities to support RDT&E operations, and the Marine Mammal Training Program. Boat repair and maintenance activities include metal grinding, welding, mechanical repair and engine repair. The majority of these operations are conducted inside buildings.

   Point source discharges subject to NPDES permitting from SSC Pacific PLC are listed in Table F-9 and are associated with utility vault dewatering; marine mammal pools; returned,

unused San Diego Bay water; marine mammal enclosure cleaning; small boat rinsing; pier washing; storm water; and other miscellaneous facility-related discharges:

Table F-9. Discharges from SSC Pacific PLC

Types of Discharge	Discharge Point Nos.
Utility Vault and Manhole Dewatering Water	UV-001 and UV-005
Pier Piling and Wing Wall Washing Wastewater	PW-002
Marine Mammal Pool Water	MP-001
Marine Mammal Enclosure Cleaning Wastewater	ME-001 and ME-002
Returned, Unused Bay Water	UBW-001
Small Boat Rinsing Wastewater	BR-001
Miscellaneous Discharges	Various Locations
Industrial Storm Water	[1]
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

9. **Space and Naval Warfare Systems Center Pacific, Old Town Campus (SSC Pacific OTC).** SSC Pacific OTC is located at 4297 Pacific Highway in San Diego, California. It is within the *Lindberg Hydrologic Sub Area* (908.21) or the *San Diego Mesa Hydrologic Area* (908.20) of the *Pueblo San Diego Hydrologic Unit* and consists of approximately 70 acres. Approximately 95 percent of the total area is impervious to storm water infiltration. SSC Pacific OTC's mission is to provide personnel with knowledge superiority by developing, delivering, and maintaining effective, capable, and integrated command, control, communications, computer, intelligence, and surveillance systems. The activities of SSC Pacific OTC include facility maintenance, loading supplies and equipment, electronic assembly and testing, metal grinding, welding, painting operations, and activities to support RDT&E operations. The majority of these operations are conducted inside buildings.

   Point source discharges subject to NPDES permitting from SSC Pacific OTC are listed in Table F-10 and include municipal storm water and other miscellaneous facility-related discharges:

Table F-10. Discharges from SSC Pacific OTC

Types of Discharge	Discharge Point Nos.
Miscellaneous Discharges	Various Locations
Industrial Storm Water	[1]
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

B. Description of Wastewater Discharges

Wastewater discharges at NBPL consist of the following:

1. Storm Water Discharges

A total of approximately 197 storm water discharge points drain storm water runoff from the Facility. In the ROWD submitted in May 2012, the Discharger indicated that there were

industrial runoff points from many of the installations at the Facility. All installations at the Facility have municipal storm water discharges.

This Order establishes requirements for storm water discharges from industrial and non-industrial areas of the Facility (including Industrial High Risk Areas, Industrial Low Risk Areas, Industrial No Exposure Areas, and Small MS4 Areas).

a. Small Municipal Separate Storm Sewer System Areas (Small MS4s)

Section 402(p) of the Clean Water Act (CWA) establishes a framework for regulating storm water discharges under the NPDES Program. In 1990, the United States Environmental Protection Agency (USEPA) promulgated regulations for permitting storm water discharges from industrial sites and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, USEPA promulgated regulations, known as Phase II regulations, requiring permits for storm water discharges from Small MS4s.

As defined by 40 CFR section 122.26(b)(8), a MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a publicly owned treatment works (POTW).

A Small MS4 is an MS4 that is not permitted under the municipal Phase I regulations, but is permitted under the municipal Phase II regulations. A Small MS4 is owned or operated by the U.S., a state, a city, a town, a borough, a county, a parish, a district, an association, or another public body having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes. Small MS4s include systems similar to separate storm sewer systems in large municipalities, such as systems at military bases. In this Order, small MS4 is also referred to as Small (Military Base) MS4.

Storm water runoff from non-industrial portions of the Facility such as administrative buildings, roads, parking lots, and other municipal type discharges, are subject to regulation under Phase II MS4 requirements.

This Order establishes requirements for Small MS4 storm water discharges from the Facility based on Phase II MS4 requirements, similar to those established in the State Water Resources Control Board (State Water Board) General NPDES Permit for the Discharge of Storm Water From Small Municipal Separate Storm Sewer Systems (WQ Order No. 2013-0001-DWQ), adopted on February 5, 2013.

b. Industrial Storm Water

Order No. R9-2002-0002 regulated industrial storm water runoff from “Industrial High Risk Areas” through the implementation of a storm water pollution prevention plan (SWPPP), copper and zinc bench mark values, a toxicity effluent limitation, and first flush diversion requirements.

This Order establishes requirements for the discharge of storm water runoff from “Industrial High Risk Areas,” which are defined in section IV.B.1 of this Order as *“All areas where wastes or pollutants of significant quantities form ship construction,*

modification, repair, and maintenance activities (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substance, toxic pollutants, non-conventional pollutants, materials of petroleum origin, or other substances of water quality significance) are subject to precipitation, run-on, and/or runoff."

This Order also establishes requirements for storm water runoff from industrial areas not associated with ship construction, modification, repair, or maintenance activities, and are designated as "Industrial Low Risk Areas," and from "Industrial No Exposure Areas," where all industrial materials and activities are protected from contact with storm water.

Section IV.B.1. of this Order defines Small MS4 Areas, Industrial No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas. Section IV.B.2 of this Order requires that the risk level of storm water discharges shall be categorized annually by the Discharger based on the activities conducted in the drainage area for each outfall.

Pollutants that may be present in the discharge include pollutants that the storm water is likely to contact, including, but not limited to sediment, solids, oil and grease, and metals.

2. Non-Storm Water Small MS4 Discharges

Discharges through the MS4 of material other than storm water to waters of the U.S. are effectively prohibited under section IV.F of this Order except as allowed under the provisions of section IV.F of this Order or as otherwise authorized by a separate NPDES permit. A list of authorized non-storm water discharges is provided in section IV.F of this Order and includes diverted stream flows, rising ground water, uncontaminated groundwater, springs, drinking fountain water, emergency eye wash/shower water, condensate, and several other categories of discharge. These discharges are authorized under this Order unless the Discharger or the San Diego Water Board identifies the discharges as a significant source of pollutants to waters of the U.S. or physically interconnected MS4. If the discharges meet the conditions in section IV.F., the Discharger must ensure that steps are taken to prevent or reduce the contact of non-storm water discharges with significant materials or equipment; and minimize, to the extent practicable, the flow or volume of non-storm water discharges. The Discharger is required to prepare a Storm Water Management Plan (SWMP) with Best Management Practices (BMPs) for MS4 discharges including authorized non-storm water.

3. Utility Vault and Manhole Dewatering

Dewatering of electrical, steam, telephone, and cable utility vaults and manholes is performed at the Facility, and the water may be discharged to either the San Diego Bay or the Pacific Ocean.

The Facility has 18 electrical vaults that can have point source discharges; 10 of the 18 vaults are located on the three piers on the Main Base. The other 8 vaults are located on land, inside buildings, and are associated with electrical switching or substations. These vaults are subject to groundwater intrusion or storm water infiltration. The 10 pier vaults are subject to bay water intrusion and these vaults can also accumulate storm water during rain events. Automatic sump pumps are installed in each of the 18 vaults. For the 10 vaults located on the piers, the automatic sump pumps pump water directly from the vault to San Diego Bay or the Pacific Ocean. For the 8 other vaults, the automatic sump pumps pump the water onto the ground surface around the vault buildings, which may reach the storm drain system and thus discharge to San Diego Bay or the Pacific Ocean.

In addition to the electrical vaults, electrical, telephone, and cable utility manholes are located at the Facility installations; steam utility manholes are located at NMAWC. The electrical, telephone, cable, and steam utility manholes can accumulate storm water as well as groundwater that must be removed when work is required or maintenance is to be performed. The steam utility manholes can also accumulate steam condensate. All manholes at the Facility, when required, are manually dewatered with a pump truck or portable pump. The Navy has implemented procedures to eliminate manhole dewatering discharges; when manually dewatering manholes, water is pumped into an adjacent utility manhole or transferred to the sanitary sewer system. In rare emergency situations, the manhole could be dewatered onto the ground surface.

In accordance with Order No. R9-2002-002, NAVFAC SW has implemented the *Pollution Prevention Plan for Utility Vault Dewatering Discharges* (June 2011). Practices include inspections of utility vaults and manholes for potential pollutant sources and dewatering utility manholes into adjacent utility manholes or the sanitary sewer system.

Potential pollutants that may be found in the discharge include, but are not limited to, contaminants in the bay water that accumulates in pier vaults, contaminants in groundwater that accumulates in landside vaults and manholes, pollutants in storm water that accumulates in utility vaults and manholes, and pollutants from electrical and steam equipment (i.e., oils, grease, metals) located in the vaults and manholes. A map of the utility vault locations is shown in Attachment B. A line drawing for the utility vault dewatering discharge is shown in Attachment C (Figure C-9).

Prior to the adoption of Order No. R9-2002-0002 for the Facility, discharges from utility vaults and manholes were regulated by the statewide *General Order for Discharges from Utility Vaults and Underground Structures to Surface Waters* (Order No. 96-12-DWQ, NPDES No. CAG990002). At the time of adoption of Order No. R9-2002-002, the State Water Board was awaiting USEPA approval of the re-issued General Order (Order No. 2001-11-DWQ). In order to regulate all of the discharges at the Facility under one Order, the San Diego Water Board incorporated the pertinent specifications, limitations, and monitoring requirements of Order No. 2001-11-DWQ into Order No. R9-2002-002. The State Water Board has since re-issued the General Order again, the most recent version being Order No. 2006-0008-DWQ, *General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters*.

4. Industrial Process Wastewater

a. Portable Topside Chlorinator/Dechlorinator Unit Wastewater. The class of submarine that is typically moored at the Facility does not have a means to prevent biofouling in the cooling water system while the submarines are moored. At the Main Base piers, the Discharger introduces sodium hypochlorite (NaOCl) produced by electrolysis using portable topside chlorinator units into the cooling water system to prevent biofouling. The portable topside chlorinators are used only for the specific class of submarine that is typically moored at the Facility. The chlorinators cannot be used for other classes of submarine. For other submarines without internal biofouling prevention equipment, the cooling systems must be manually cleaned. Wastewater from this cleaning activity is routed to the sanitary sewer system and is not discharged to San Diego Bay.

Water from San Diego Bay is extracted from the cooling water intake system and, converted into chlorine by electrolysis. Seawater is supplied to the chlorinator cooling water system from the auxiliary sea water (ASW) constant vent, which is located below the water line on the submarine. The chlorinator supply hose is attached to the ASW constant vent metal grate by divers and held on by magnetic fasteners.

An electronic interlock cable between the portable topside chlorinator unit and the portable dechlorinator unit automatically limits the entire chlorination/dechlorination cycle to two hours per treatment cycle. The portable dechlorinator unit, located inside the submarine, uses sodium bisulfite ($NaHSO_3$) to chemically reduce the chlorine to chlorides. The chlorinator unit cannot operate unless the interlock cable from dechlorinator unit is connected. Measurements are taken downstream of the dechlorinator injection point before water is discharged to San Diego Bay to make sure that the target concentration for chlorine is non-detect. Because the portable dechlorinator unit cannot be adjusted, the portable chlorinator is adjusted if the chlorine concentration is greater than non-detect. After dechlorination, cooling water is discharged back to San Diego Bay. Discharges can occur from submarines at any one of the three piers at Main Base or the USS ARCO where submarines are moored through Discharge Point Nos. CS-001 through CS-003. One discharge point is assigned to each pier; North, Middle, and South.

The chlorinator/dechlorinator units run two hours per day at approximately 20 gallons per minute (gpm). The total discharge flows from the cooling system range from 400 gpm to 1,500 gpm. Six submarines are home ported in San Diego. However, fewer than six submarines are typically in port at any given time. Generally, the chlorinator units will not be operated at the same time. Assuming three submarines are in port and the discharge flow is at 400 gpm for two hours per day, 365 days per year, the annual discharge volume would be 52,560,000 gallons per year

Pollutants that may be present in the discharge include, but are not limited to, chlorine, contaminants in San Diego Bay water supplied to the chlorinator units, excess sulfites and sulfates, chlorinated organic chemical reaction products, lowered pH, and suppressed dissolved oxygen content. A map of the chlorinator/dechlorinator discharge locations at Main Base is shown in Attachment B. A line drawing for the chlorinator/dechlorinator discharges is shown in Attachment C (Figure C-1).

b. Pier Washing Wastewater. The Deperming Pier at MSF is located just west of privately-owned bait barges, which supply bait for the commercial fishing operations in San Diego Bay. As a consequence, the area has a large marine bird population that roost at the Deperming Pier and deposit a significant amount of guano. To minimize the health and safety issues resulting from the accumulated guano, the pier is power-washed with Bay water three times per week. A pump located on the pier is used to supply Bay water for a high-pressure pier-deck wash down. The wash water generated discharges through pier drains directly into San Diego Bay. The discharge volume for each pier cleaning is approximately 43,200 gallons. MSF pier washing is completed three times per week with an annual discharge volume of approximately 6,739,200 gallons. In the event that the Bay water pumping system is inoperable, the deck is washed with potable water and that wash water is discharged through the same pier drains, directly into San Diego Bay.

Pier 160 at SSC Pacific PLC has similar problems due to the proximity of the bait barge.

To minimize the accumulation of bird guano, the Discharger plans to occasionally wash the pier pilings and the tops of the pier wing walls using high-pressure potable water and/or brushes. The wash water will also be discharged directly into San Diego Bay. The quantity of discharge is expected to be approximately 21,600 gallons per wash event, and at an assumption of one washing event per month, the estimated annual volume would be 259,000 gallons. If the main pier deck is cleaned, the wash water will be collected and discharged to the sanitary sewer.

Piers and docks in addition to Pier 160 pilings and wing walls and the Deperming Pier are occasionally washed to remove guano and to improve health and safety. Bay or potable water sometimes at high-pressure and/or brushes are used to wash these piers and docks. The wash water is discharged directly into San Diego Bay. Pollutants will be similar to washing at Pier 160 and the Deperming Pier.

Pollutants that may be found in the discharge include contaminants already present in San Diego Bay or potable water used to wash the piers, pollutants removed from the Deperming Pier surface during the wash down (primarily coliform bacteria from bird guano), and pollutants removed from the pier pilings, dock, and/or tops of the wing walls at SSC Pacific PLC during wash down. A map of the pier washing discharge location at the MSF Deperming Pier and the piling and wing wall washing discharge at SSC Pacific PLC is shown in Attachment B. A line drawing for the pier washing discharge at the MSF Deperming Pier and the piling and wing wall washing discharge at SSC Pacific PLC is show in Attachment C (Figure C-2).

c. Marine Mammal Pool Discharges and Enclosure Cleaning Wastewater

i. Marine Mammal Training Pools. Two Facility installations, FLC San Diego and SSC Pacific PLC, have similar processes associated with training dolphins. Both installations discharge pool water to San Diego Bay. SSC Pacific PLC also has smaller pools for sea lions that discharge to the San Diego Bay. Starting in the fall of 2013, the marine mammal training pools were temporarily relocated to NMAWC for approximately four years. The temporary relocations of the marine mammals is due to anticipated noise impacts of in-water construction during the replacement of the existing fuel pier located at NBPL.

At any time, FLC San Diego maintains as many as four pools for dolphins and as few as zero. SSC Pacific PLC maintains as many as six pools for dolphins. These pools range in size from 10,000 to 23,500 gallons, and all pools are operated in the same manner. When dolphins are in the pools, fresh seawater is circulated continuously by being pumped in from San Diego Bay, and then discharged back to San Diego Bay after circulation. At SSC Pacific PLC, there are three small pools (<1,500 gallons each) used in the same manner for sea lions. Pool heaters are sometimes used to increase water temperature in dolphin pools by up to 20°F above ambient bay temperature. Warm water has been proven to enhance the healing ability of Atlantic Bottlenose Dolphins in certain illness cases. The warmer water is used in an open circuit pool operation and run back into the bay, untreated by any chemicals.

Another discharge associated with this operation is the movement of marine mammals to the Veterinarian Lab. During these short movements, animals are kept wet using potable water hoses along the way. Discharge volumes are minimal and no chemicals are used during these short movements.

This San Diego Bay water is not processed nor are any chemicals added directly to the pool systems. The dolphin pools and sea lion pools are used approximately once per month with an average usage for all animals of five days each month at the Facility. When the pools are not in use, there is no discharge.

The maximum discharge rate at FLC San Diego is 200 gpm and at SSC Pacific PLC the maximum discharge rate is 100 gpm. The pumps are used 24 hours a day while the dolphins are in the pools; the estimated annual discharge volume at FLC San Diego is 17,280,000 gallons, and the estimated annual discharge volume at SSC Pacific PLC is 8,640,000 gallons to San Diego Bay through Discharge Points No. MP-001 and MP-002.

Pollutants that may be found in the discharge include, but are not limited to, contaminants in San Diego Bay water supplied to the marine mammal pools, contaminants from pump and piping system, excess feed, and fecal coliform from the mammals' feces. A map of the dolphin pools discharge location at the MSF and SSC Pacific PLC is shown in Attachment B. A line drawing for the mammal pool discharge at the MSF and SSC Pacific PLC is shown in Attachment C (Figure C-3).

ii. **Marine Mammal Enclosure Cleaning Wastewater**. Two Facility installations have similar processes associated with marine mammal enclosures: pier 122 at FLC San Diego and piers 159 and 302 at SSC Pacific PLC. Starting in the fall of 2013, the marine mammal enclosures were temporarily relocated to NMAWC for approximately four years. The temporary relocation of the marine mammals is due to anticipated noise impacts of in-water construction during the replacement of the existing fuel pier located at NBPL.

The total weight of marine mammals maintained in the program is approximately 32,400 lbs. These installations use high-pressure heated potable water (maximum: 170° F) to remove fecal matter and any other waste from the deck areas within the sea lion enclosures daily. The equipment used causes the water to quickly turn to a spray mist and cool rapidly within a few feet of the nozzle. Unheated bay water is also used to clean the decks leading to and surrounding the marine mammal enclosures and marine mammal enclosure netting (sea lions and dolphins). Water from these cleaning processes discharges directly to San Diego Bay. Brooms may be used with the water in the cleaning process. No chemicals are added during the cleaning process. In addition, sprinklers of potable water or sea water are used during the summer months to cool sea lions and older dolphins resting at the surface, SCUBA diving gear is rinsed with potable water, potable water is used to rinse open sores that sometimes develop on marine mammals, and rub lines are cleaned with high pressure and/or high pressure heated potable water.

The daily discharge to clean and remove sea lion fecal matter is about 672 gallons per day (gpd). The daily discharge to clean the deck areas leading to the marine mammal enclosures is approximately 1,800 gpd. The approximate daily discharge for cleaning the enclosure netting is 15,000 gpd. The total annual discharge from enclosure cleaning is approximately 6,377,280 gallons into San Diego Bay through Discharge Points No. ME-001, ME-002, and ME-003.

Pollutants that may be found in the discharge include contaminants in the potable and San Diego Bay water, fecal coliform from the sea lion feces and other contaminants on the enclosure surfaces, and contaminants that could be picked up

as the water passes through the high-pressure heated water system. A map of the marine mammal enclosure cleaning discharge locations at MSF and SSC Pacific PLC is shown in Attachment B. A line drawing for the marine mammal enclosure cleaning discharge is shown in Attachment C (Figure C-4).

d. Returned Unused Bay Water (SSC Building 111). SSC Building 111 laboratories use water from San Diego Bay, which is continually pumped from Pier 160 into a 500-gallon flow-through tank located on the roof of Building 111. The water is piped into the building and, after use in the laboratories, is discharged to the sanitary sewer. Unused water continually flows from the rooftop tank to prevent stagnation in the tank. Ancillary discharges associated with this operation include routine back-flushing of sand filters (approximately 4 times per year) and pressure washing of piping systems with potable water to remove mussels and other sea organisms (approximately one time per year); no chemicals are added. The rooftop tank pump is rated at 25 gpm, and the discharge occurs 24 hours per day, 365 days per year. The annual discharge volume is approximately 13,140,000 gallons. The Returned, Unused Bay Water is not treated or processed in any way before being discharged to the base storm drain system and into San Diego Bay through Discharge Point No. UBW-001.

The discharge rate will change when the abalone tanks are moved. Returned Unused Bay Water will be used to supply the abalone tanks with water. During cold weather, the entire flow may be diverted into the abalone tanks resulting in no discharge of Returned Unused Bay Water. During warm weather, approximately 5 gpm of Returned Unused Bay Water may be discharged.

Pollutants that may be found in the discharge include, but are not limited to, contaminants in the San Diego Bay water and pollutants that could be picked up as the water passes through the water supply and discharge system. A map of the Returned Unused Bay Water discharge location at SSC Pacific PLC Building 111 is shown in Attachment B. A line drawing for the unused Bay water discharge is shown in Attachment C (Figure C-5).

e. Abalone Tank Wastewater. Water from San Diego Bay is pumped to a bioassay trailer and abalone tanks located at MSF. The water is used for the abalone breeding/maturation tanks. Two 3-horsepower pumps rated at 25 gpm draw water from the Bay. Only one pump is used at a time, while the second pump serves as a backup. Two separate discharges are unused Bay water and water from the abalone tanks. The water in the abalone tanks is continuously flowing and is discharged back to San Diego Bay (at approximately 9 gpm). The weight of abalone produced per year is approximately 50 pounds and the total weight of feed in a calendar month is approximately 200 lbs/month. Other discharges associated with this operation include routine back-flushing of sand filters (approximately once per week) and pressure washing of piping systems with potable water to remove mussels and other sea organisms (approximately once per year).

The total daily discharge from the abalone tanks is approximately 12,960 gallons. The unused bay water is continuously flowing and is discharged to San Diego Bay (at approximately 6 gpm). The total daily discharge of Returned Unused Bay Water is approximately 8,640 gallons. The total annual discharge to San Diego Bay from the abalone tanks and unused Bay water is approximately 7,884,000 gallons from Discharge Point No. ABL-001.

Pollutants that may be found in the discharge include but are not limited to contaminants in the Bay water, excess food waste particles, fecal matter, and pollutants that could be picked up as the water passes through the pump, piping, bioassay trailer and abalone tanks. A map of abalone tanks and bioassay trailer water discharge locations at MSF is shown in Attachment B. A line drawing for the abalone tanks and bioassay trailer water discharge is shown in Attachment C (Figure C-6).

f. Pier Boom Cleaning Wastewater. Marine growth on oil containment booms placed around the moored submarines, ships, and piers at the Facility can cause the booms to sink. The marine growth is washed off with high-pressure potable water. The booms are removed from the water and taken to a barge for the cleaning process. All booms are cleaned twice per year on a quarterly piece-by-piece rotating basis. The pressure washer discharges 5 gpm and is operated six hours per day for two to three weeks per quarter.

When boom cleaning is performed, the daily discharge is 1,800 gallons. The annual discharge is approximately 108,000 gallons. In the event that the booms become contaminated with oil or fuel, the oil booms are placed on a barge, transported to across San Diego Bay to NBSD, and cleaned on a wash pad with a high-pressure washer. The wastewater generated by this process is collected and subsequently treated at the NBSD BOWTS and discharged to the sanitary sewer.

Boom cleaning discharges at the Facility can occur at any pier where oil booms are installed. However, boom cleaning typically occurs at a barge designated for that purpose, located at the shoreline between the north and middle piers at the Main Base and would be discharged through Discharge Point No. BW-001. Pollutants that may be found in the discharge include but are not limited to, contaminants in the potable water used in the pressure wash; any contaminants that the water comes into contact with as it passes through the pressure-wash equipment; and contaminants washed from the surfaces of the pier booms. A map of the boom cleaning discharge location at the Main Base is shown in Attachment B. A line drawing for the boom cleaning discharge is shown in Attachment C (Figure C-7).

g. Small Boat Rinsing Wastewater. SSC Pacific PLC uses high-pressure heated potable water and Explosive Ordinance Disposal Training and Evaluation Unit 1 (EODTEU-1) at NMAWC uses potable water to rinse small boats coming out of the San Diego Bay.

At SSC Pacific PLC, boats are rinsed off with potable water at Pier 160 and the adjacent boat ramp. An ancillary discharge associated with this operation is the occasional rinsing of equipment that has been removed from the Bay or Ocean. Potable water is used to rinse salt, marine growth, and marine mammal fecal matter from small boats and equipment and to flush seawater from boat engine cooling systems. High-pressure heated potable water (maximum: 170° F) is used, as necessary, to remove marine growth and any marine mammal fecal matter. The equipment used causes the water to quickly turn to a spray mist and cool rapidly within a few feet of the nozzle. The maximum discharge rate for small boat rinsing is 3.2 gpm. For about three hours a day, the rinsing discharges are approximately 576 gpd. The maximum discharge rate for boat engine flushing at SSC PLC is 8 gpm. To flush SSC PLC boats, it takes approximately 20 minutes per day and the flushing discharges at 160 gpd. Water from

rinsing and flushing boats at SSC PLC is discharged to San Diego Bay through Discharge Point No. BR-001.

EODTEU-1 boats are rinsed off and engines are flushed with potable water at NMAWC, Building 19. The maximum discharge rate for small boat rinsing is 7.5 gpm; two boats are cleaned for about 20 minutes each three times a week, and the rinsing discharge is 300 gpd. To flush an EODTEU-1 boat takes about one minute, and occurs on average three times per week with a rinsing discharge of 15 gpd. Water from the cleaning and rinsing processes at NMAWC discharges into San Diego Bay through Discharge Point No. BR-002.

Pollutants that may be found in the discharge include but are not limited to contaminants in the fresh water, fecal coliform from the marine mammal feces and other contaminants found on boat surfaces, pollutants that could be picked up as the water passes through the high-pressure heated water system and over the surface of the boats, and oils that could be picked up in the cooling water during engine flushing. A map of the small boat rinsing discharge location SSC Pacific PLC is shown in Attachment B. A line drawing for the small boat rinsing discharge is shown in Attachment C (Figure C-8).

h. USS ARCO. The USS ARCO is a floating dry dock Armed Forces vessel, owned and operated by the U.S. Navy that is used to repair submarines and other Navy ships and boats. The USS ARCO discharges of ballast waters to San Diego Bay. Ballast water discharge from U.S. Navy vessels will be regulated by the Uniform National Discharge Standards (UNDS) program administered by USEPA and the Department of Defense. The UNDS program was established under the authority of Clean Water Act (CWA) section 312 to develop national standards to control certain discharges, other than sewage, incidental to the normal operation of Armed Forces vessels within the navigable waters of the U.S. Once UNDS is fully implemented, section 312 of the CWA will preempt states from regulating discharges from Armed Forces vessels covered by the UNDS program.

Vessels under repair in the USS ARCO may discharge seawater cooling water to San Diego Bay. This cooling water will be regulated by UNDS when the vessel is in the water, but is regulated by this Order when the vessel is in dry dock. The seawater cooling overboard water discharges regulated under this Order are associated with vessels in the dry dock which draw water directly from San Diego Bay for cooling purposes. Water is pumped into the vessels in the dry dock and routed through heat exchangers where it absorbs heat and is then discharged to San Diego Bay at higher temperatures.

The USS ARCO is flooded to take on a vessel for repair and to launch the vessel after repair. Training episodes of flooding also occur occasionally. During flooding, there is a possibility of discharging pollutants if the dry dock is not fully cleaned prior to flooding. This Order includes a requirement for BMPs for dry dock maintenance and cleaning to prevent or minimize Bay water contact with pollutants prior to and during flooding.

C. Discharge Points and Receiving Waters

1. The nine installations of the facility are described in section II.A of this Fact Sheet and are shown in Attachment B (Figure B-1).

Wastewater is discharged into the San Diego Bay and the Pacific Ocean as summarized in Table F-11 below:

Table F-11. Discharge Locations

Facility Name	Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
North (November) Pier (Main Base)	CS-001	Topside Chlorinator / Dechlorinator	32º 41' 23" N	117º 14' 18" W	San Diego Bay
Middle (Mike) Pier (Main Base)	CS-002	Topside Chlorinator / Dechlorinator	32º 41' 21" N	117º 14' 11" W	San Diego Bay
South (Sierra) Pier (Main Base) & USS ARCO	CS-003	Topside Chlorinator / Dechlorinator	32º 41' 16" N	117º 14' 6" W	San Diego Bay
Deperming Pier Washing (MSF)	PW-001	Deperming Pier Washing	32º 41' 37" N	117º 14' 19" W	San Diego Bay
Pier Washing (SSC Pacific PLC)	PW-002	Pier Washing	32º 42' 13" N	117º 14' 8" W	San Diego Bay
Marine Mammal Pool (SSC Pacific PLC)	MP-001	Marine Mammal Training Pool Discharge	32º 42' 8" N	117º 14' 14" W	San Diego Bay
Marine Mammal Pool (FLC San Diego)	MP-002	Marine Mammal Training Pool Discharge	32º 41' 57" N	117º 14' 21" W	San Diego Bay
Marine Mammal Enclosure (SSC Pacific PLC)	ME-001	Marine Mammal Training Enclosure Discharge	32º 42' 15" N	117º 14' 8" W	San Diego Bay
Marine Mammal Enclosure (FLC San Diego)	ME-002	Marine Mammal Training Enclosure Discharge	32º 41' 9" N	117º 14' 11" W	San Diego Bay
Marine Mammal Enclosure (SSC Pacific PLC)	ME-003	Marine Mammal Training Enclosure Discharge	32º 41' 53" N	117º 14' 18" W	San Diego Bay
Unused Bay Water Bldg. 111 (SSC Pacific PLC)	UBW-001	Unused Bay Water	32º 42' 19" N	117º 14' 11" W	San Diego Bay
Abalone Tank and Unused Bay Water (MSF)	ABL-001	Abalone Tank Discharge	32º 41' 33" N	117º 14' 22" W	San Diego Bay
Boom-Cleaning Barge (Main Base)	BW-001	Pier Boom Cleaning Water	32º 41' 19" N	117º 14' 19" W	San Diego Bay
Small Boat Rinsing (SSC Pacific PLC)	BR-001	Small Boat Rinsing Water	32º 42' 13" N	117º 14' 11" W	San Diego Bay
Small Boat Rinsing (NMAWC)	BR-002	Small Boat Rinsing Water	32º 43' 21" N	117º 13' 10" W	San Diego Bay
Switch Station A (SSC Pacific PLC)	UV-001	Utility Vault and Manhole Dewatering	32º 42' 23" N	117º 14' 47" W	San Diego Bay
Switch Station B (FLC)	UV-002	Utility Vault and Manhole Dewatering	32º 42' 9" N	117º 14' 24" W	San Diego Bay
Switch Station C (Main Base)	UV-003	Utility Vault and Manhole Dewatering	32º 41' 17" N	117º 14' 20" W	San Diego Bay

Facility Name	Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Switch Station H (FCTCPAC)	UV-004	Utility Vault and Manhole Dewatering	32º 42' 37" N	117º 14' 58" W	San Diego Bay
Switch Station L (SSC Pacific PLC)	UV-005	Utility Vault and Manhole Dewatering	32º 41' 36" N	117º 15' 0" W	San Diego Bay
Switch Station P (FLC)	UV-006	Utility Vault and Manhole Dewatering	32º 42' 25" N	117º 14' 39" W	San Diego Bay
Switch Station V (NMAWS)	UV-007	Utility Vault and Manhole Dewatering	32º 43' 29" N	117º 13' 8" W	San Diego Bay
Pier 5003 Vault – 1 (Main Base)	UV-008	Utility Vault and Manhole Dewatering	32º 41' 24" N	117º 14' 16" W	San Diego Bay
Pier 5003 Vault – 2 (Main Base)	UV-009	Utility Vault and Manhole Dewatering	32º 41' 25" N	117º 14' 14" W	San Diego Bay
Pier 5000 Vault – 1 (Main Base)	UV-010	Utility Vault and Manhole Dewatering	32º 41' 19" N	117º 14' 15" W	San Diego Bay
Pier 5000 Vault – 2 (Main Base)	UV-011	Utility Vault and Manhole Dewatering	32º 41' 19" N	117º 14' 14" W	San Diego Bay
Pier 5000 Vault – 3 (Main Base)	UV-012	Utility Vault and Manhole Dewatering	32º 41' 21" N	117º 14' 11" W	San Diego Bay
Pier 5000 Vault – 4 (Main Base)	UV-013	Utility Vault and Manhole Dewatering	32º 41' 22" N	117º 14' 9" W	San Diego Bay
Pier 5000 Vault – 5 (Main Base)	UV-014	Utility Vault and Manhole Dewatering	32º 41' 22" N	117º 14' 7" W	San Diego Bay
Pier 5002 Vault – 1 (Main Base)	UV-015	Utility Vault and Manhole Dewatering	32º 41' 14" N	117º 14' 11" W	San Diego Bay
Pier 5002 Vault – 2 (Main Base)	UV-016	Utility Vault and Manhole Dewatering	32º 41' 15" N	117º 14' 10" W	San Diego Bay
Pier 5002 Vault – 3 (Main Base)	UV-017	Utility Vault and Manhole Dewatering	32º 41' 17" N	117º 14' 5" W	San Diego Bay
544 Vault (Main Base)	UV-018	Utility Vault and Manhole Dewatering	32º 41' 6" N	117º 14' 24" W	San Diego Bay
Small Municipal Separate Storm Sewer System (MS4) Discharges					
--	See Attachment K of this Order	Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment K of this Order	See Attachment K of this Order	San Diego Bay and Pacific Ocean
Industrial No Exposure Area Storm Water Discharges					
--	See Attachment K of this Order	Industrial No Exposure Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment K of this Order	See Attachment K of this Order	San Diego Bay and Pacific Ocean
Industrial Low Risk Area Storm Water Discharges					
--	See Attachment K of this Order	Industrial Low Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment K of this Order	See Attachment K of this Order	San Diego Bay and Pacific Ocean
Industrial High Risk Area Storm Water Discharges					

Facility Name	Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
--	See Attachment K of this Order	Industrial Low Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment K of this Order	See Attachment K of this Order	San Diego Bay and Pacific Ocean

D. Summary of Previous Requirements and Self-Monitoring Report (SMR) Data

1. Order No. R9-2002-0002 contained industrial storm water benchmarks of 63.6 µg/L for copper and 117 µg/L for zinc.

2. For the Main Base, the discharge of the first ¼ inch of storm water runoff from all high risk areas was required to be terminated no later than two years after the adoption of Order No. R9-2002-0002.

3. For the Main Base, effective four years after the adoption of Order No. R9-2002-0002, the Order had two acute toxicity effluent limitations for industrial storm water. The primary effluent limitation required that undiluted storm water runoff associated with industrial activity shall not produce less than 90% survival, 50% of the time. The secondary effluent limitation required not less than 70 percent survival 10% of the time.

4. Provisions D.1, D.2, and D.3 contained in Order No. R9-2002-0002 required the Discharger to do the following:

   a. The Discharger shall reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of *best available technology economically achievable* (BAT) for toxic and non-conventional pollutants, and *best conventional pollutant control technology* (BCT) for conventional pollutants.

   b. The Discharger shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that complies with the requirements in Attachment D, section A of Order No. R9-2002-0002 and that includes *Best Management Practices* (BMP) that achieve BAT and BCT.

   c. The Discharger shall implement the Marine Pollution Control Devices (MPCD) requirements for discharges from the USS ARCO floating dry dock when they are developed pursuant to the *Uniform National Discharge Standards* (UNDS) for Armed Forces Vessels.

5. Order No. R9-2002-0002 also established requirements for utility vault and manhole dewatering discharges, steam condensate, cooling water, USS ARCO ballast water, pier cleaning water, dolphin pools, unused San Diego Bay water, abalone tanks and bioassay trailer discharges, pier boom cleaning, marine mammal enclosure cleaning, small boat rinsing, and miscellaneous discharges.

6. The industrial storm water acute toxicity monitoring results are summarized below:

a. In the 2012/2013 storm year, the Navy collected 10 samples at 9 sites. 50% of the samples had survival greater than 90%. 90% of the samples had survival greater than 70%.

b. In the 2011/2012 storm year, the Navy collected 13 samples at 10 sites. 46% of the samples had less than 90% survival. 46% of the samples had less than 70% survival.

c. In the 2009/2010 storm year, the Navy collected 11 samples at 11 sites. 27% of the samples had survival less than 90%. 18% of the samples had survival less than 70%.

d. In the 2008/2009 storm year, the Navy collected 11 samples. 73% of the samples had survival less than 90%. 55% of the samples had survival less than 70%.

7. The industrial storm water copper and zinc benchmark monitoring results are summarized below:

Table F-12. Storm Water Exceedances

Reporting Period	Number of Outfall Discharge Events Exceeding Copper Benchmark	Number of Outfall Discharge Events Exceeding Zinc Benchmark
April – June 2007	14	20
January – March 2008	7	11
October – December 2008	26	38
October – December 2009	10	18
January – March 2010	11	19
October – December 2010	10	14
April – June 2011	2	11
Jan - March 2012	4	7
Oct - Dec 2012	1	2
Jan - March 2013	12	21
April - June 2013	3	5

E. Compliance Summary

1. The storm water toxicity effluent limitation in section B.4.a of Order No. R9-2002-0002 as summarized above in section II.D.3 of this Fact Sheet was violated as follows:

   a. In the 2012/2013 storm year, there were no acute toxicity effluent violations.

   b. In the 2011/2012 storm year, the secondary acute toxicity effluent limitation of 70% survival was not met.

   c. In the 2009/2010 storm year, the secondary acute toxicity effluent limitation of 70% survival was not met.

   d. In the 2008/2009 storm year, the primary effluent limitation of 90% survival and the secondary toxicity effluent limitation of 70% survival were not met.

2. The Discharger reported 10 discharges of unauthorized waste in violation of the prohibitions in section A of Order No. R9-2002-0002 from April 2012 through June 2013.

3. The Discharger reported industrial storm water discharge exceedances of the copper benchmark (63.6 µg/L) and the zinc benchmark (117 µg/L) as shown in Table F-12 above.

4. On September 23, 2013, the Facility was inspected by the San Diego Water Board to determine compliance with Order No. R9-2002-0002 and to verify the information contained in the ROWD. No violations were observed.

5. On May 30, 2012, the Facility was inspected by a US EPA contractor to determine compliance with Order No. R9-2002-0002. No violations were observed.

6. On June 6, 2011, the Facility was inspected by a USEPA contractor to determine compliance with Order No. R9-2002-0002. The following major findings were identified during the inspection:

    a. The Facility experienced two prohibited discharges which, according to the primary on-site Facility representative, were not reported to the San Diego Water Board as required by Order No. R9-2002-0002. On November 17, 2010, 0.5 gallons of lube oil spilled into San Diego Bay, and on April 28, 2011, between 1 and 10 gallons of fuel oil spilled into the Bay.

    b. The Discharger did not maintain or submit a log for any electrical vaults that discharge water via an automatic sump pump; however, the Discharger did monitor a representative sump discharge as required by Order No. R9-2002-0002 and did disclose the presence of the sump pumps in the 2010 Annual Report but did not provide the number of vaults with automatic sump pumps.

    c. Three port-a-potties designed to collect and store sanitary waste were observed near the middle of Pier 5002 of the NBPL-Main Base (formerly SUBASE), an identified industrial area, without secondary containment.

    d. A storage yard south of and adjacent to Building 511 at the Submarine Squadron Eleven Ship Spares/Storage, or “T-Shed”, has been designated by the Discharger as a high risk area. The Environmental Program Manager stated that if there are no high risk activities at the T-Shed storage area during a storm runoff event and the runoff does not appear to contain pollutants, then a sump pump may be manually activated causing the runoff to discharge directly to the Bay. The permit does not have a provision for any direct release of the first ¼ inch of storm runoff from a high risk area.

    e. During the 2009/2010 wet season, violated the secondary toxicity effluent limitation for industrial storm water. The Discharger identified copper and zinc as a possible source of the toxicity.

7. On April 20, 2010, the Facility was inspected by a USEPA contractor to determine compliance with Order No. R9-2002-0002. The following major finding was identified during the inspection:

    a. The Discharger's pier cleaning log did not contain the following required information: the duration, the personnel in charge of the cleaning, or a summary of visual observations of the discharge event.

F. Planned Changes

1. The abalone tank discharge (ABL-001) is currently located at the MSF in a trailer adjacent to the shore. The abalone tanks and discharge will be moved to SSC Pacific PLC Building 111. The discharge will be comingled with the unused bay water (UBW-001) prior to discharge to San Diego Bay. When ABL -001 is moved, a new sampling location will need to be chosen for ABL-001 and UBW-001 to ensure that sampling for flowrate occurs before the discharges are comingled.

2. The existing fueling pier at FLC – San Diego will be replaced with a new pier over the next 4 years. During this construction, the marine mammal pens at NBPL will be moved to a location on NMAWC in the west basin of Harbor Island.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (Water Code or CWC; commencing with section 13370). This Order shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The San Diego Water Board adopted a Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994 which was last amended on April 25, 2007. The Basin Plan was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Requirements of this Order implement the Basin Plan. Beneficial uses applicable to the San Diego Bay and the Pacific Ocean are as follows:

Table F-13. Basin Plan Beneficial Uses.

Discharge Point	Receiving Water Name	Beneficial Use(s)
CS-001 through CS-003, PW-001 and PW-002, MP-001 and MP-002, ME-001 through ME-003, UBW-001, ABL-001, BW-001, BR-001 and BR-002, UV-001 through UV-018, and storm water discharges as identified in Attachment M of this order.	San Diego Bay	Industrial service supply (IND); navigation (NAV); contact water recreation (REC1); non-contact water recreation (REC2); commercial and sport fishing (COMM); preservation of biological habitats of special significance (BIOL); estuarine habitat (EST); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and, shellfish harvesting (SHELL).
Storm Water Discharges, as identified in Attachment M of this order.	Pacific Ocean	IND, REC1, REC2, NAV, COMM, aquaculture (AQUA), BIOL, WILD, RARE, MAR; MIGRA, SPWN, and SHELL.

2. **Thermal Plan**. The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal Plan contains temperature objectives for surface waters.

   The Thermal Plan defines elevated temperature waste as "*liquid, solid, or gaseous material including thermal waste discharged at a temperature higher than the natural temperature of receiving water*." The Thermal Plan also defines a new discharge as "*any discharge (a) which is not presently taking place unless waste discharge requirements have been established and construction as defined in Paragraph 10 has commenced prior to adoption of this plan or (b) which is presently taking place and for which a material change is proposed but no construction as defined in Paragraph 10 has commenced prior to adoption of this plan."* Because the discharges of small boat rinse water and marine mammal enclosure cleaning water with temperatures in excess of 170°F meet the criteria of an elevated temperature waste, and because these discharges commenced subsequent to adoption of the Thermal Plan, discharges of boat rinse water and marine mammal enclosure cleaning water are considered new discharges of elevated temperature waste for the purposes of this Order.

   Thermal objectives for new discharges to an enclosed bay are applicable for the boat rinse water and marine mammal enclosure cleaning water. These objectives are:

   a. Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving waters by more than 20°F.

   b. Thermal waste discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited.

   Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, and 2012. The State Water Board

adopted the latest amendment on October 16, 2012, and it became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-14. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
Storm Water Discharges, as identified in Attachment M of this order.	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Sediment Quality.** The State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement the sediment quality objectives of this Plan.

5. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** Federal water quality criteria were adopted by USEPA through the NTR in 40 CFR section 131.36 (promulgated on December 22, 1992, amended on May 4, 1995 and November 9, 1999). About forty criteria in the NTR applied to California waters. On May 18, 2000, USEPA published the CTR in the Federal Register (65 Fed. Register 31682-31719), adding 40 CFR section 131.38. The CTR established new priority pollutant criteria for California waters and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These regulations contain federal water quality criteria for priority pollutants.

6. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the San Diego Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

7. **Antidegradation Policy.** Federal regulations at 40 CFR section 131.12 require that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is deemed to incorporate the

federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68 16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The San Diego San Diego Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

10. **Atomic Energy Act.** Pursuant to the *Atomic Energy Act*, the San Diego Water Board does not have jurisdictional authority to regulate the discharge of radioactive wastes from U.S. naval nuclear propulsion plants and their support facilities. The U.S. Department of the Navy and the Department of Energy have jurisdiction for discharges of radioactive material. The Navy has a monitoring program for the discharge of radioactive wastes from naval vessels. Consistent with the Atomic Energy Act, this Order does not regulate the discharge of radioactive wastes and does not include monitoring for radioactivity.

11. **Uniform National Discharge Standards (UNDS).** In 1996, Congress passed legislation amending CWA section 312 to provide the Department Of Defense and the USEPA authority to jointly establish UNDS for incidental discharges from vessels of the Armed Forces in state waters and the contiguous zone. This comprehensive, three-phase, regulatory program applies to vessels of the Armed Forces including, but not limited to, the Navy, Military Sealift Command, Marine Corps, Army, Air Force, and Coast Guard. UNDS is designed to enhance environmental protection of coastal waters by creating protective standards to reduce environmental impacts associated with vessel discharges, stimulate the development of improved pollution control devices, and advance the development of environmentally sound ships by the Armed Forces. The Phase I final rule and preamble language, including a summary of the Phase I process and findings (64 Fed. Reg. 25126; 40 CFR part 1700), was published in the Federal Register on May 10, 1999. Phase I of UNDS determines the types of vessel discharges that require control by a Marine Pollution Control Device (MPCD) and those that do not require control, based on consideration of the anticipated environmental effects of the discharge and other factors listed in the CWA. In Phase I, the USEPA and the Department Of Defense identified 25 discharges to be controlled by MPCDs. Phase II of UNDS development focuses on promulgating MPCD performance standards for those vessel discharges identified during Phase I as requiring an MPCD. In this Phase, Department Of Defense and USEPA are establishing discharge performance standards for different classes, types, and sizes of vessels. These standards are specific to existing vessels as well as future (new design) vessels and will be promulgated in batches for efficiency purposes. A draft rule establishing MPCD for the first

batch of 11 discharges was promulgated in July 2013. A final rule for this first batch of discharges is expected in June 2014. Phase III of UNDS development will focus on establishing requirements for the design, construction, installation, and use of MPCDs. After completion of Phase III, states will be prohibited from regulating these UNDS discharges. In anticipation of the completion of UNDS, this Order does not regulate vessel discharges with applicable MPCDs (as BMPs) identified in the draft UNDS rule.

D. Impaired Water Bodies on CWA 303(d) List

Under Section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On October 11, 2011 USEPA gave final approval to California's 2010 Section 303(d) List of Water Quality Limited Segments. The San Diego Bay, as a whole, is listed as impaired for polychlorinated biphenyls (PCBs). Additional portions of the San Diego Bay are listed as impaired for additional parameters. The Pacific Ocean adjacent to the Facility is not listed as impaired. Table F-15 below lists the San Diego Bay impairments near the Facility. Total Maximum Daily Loads (TMDLs) have not been developed for waters adjacent to the Facility.

Table F-15. San Diego Bay 303(d) Impairments near the Facility

Water Body	Location	Constituent	Installation
San Diego Bay	Whole Bay	Polychlorinated biphenyls (PCBs)	NMAWC, SSC Pacific PLC, Main Base, MSF, FLC – San Diego, FITCPAC
San Diego Bay	Shoreline, Shelter Island Shoreline Park	Enterococcus	Near SSC Pacific PLC[1]
San Diego Bay	Shoreline, Shelter Island Shoreline Park	Fecal Coliform	Near SSC Pacific PLC[1]
San Diego Bay	Shoreline, Shelter Island Shoreline Park	Total Coliform	Near SSC Pacific PLC[1]
San Diego Bay	Shelter Island Yacht Basin	Dissolved Copper	Near SSC Pacific PLC[1, 2]
San Diego Bay	Americas Cup Harbor	Copper	NMAWC
San Diego Bay	Shoreline, at Harbor Island (West Basin)	Copper	NMAWC and FITCPAC
San Diego Bay	Shoreline, at Spanish Landing	Total Coliform	NMAWC and FITPAC
San Diego Bay	Near Sub Base (NBPL Main Base)	Benthic Community Effects	NMAWC, SSC Pacific PLC, Main Base, MSF
San Diego Bay	Near Sub Base (NBPL Main Base)	Toxicity	NMAWC, SSC Pacific PLC, Main Base, MSF
San Diego Bay	Near Sub Base (NBPL Main Base)	Sediment Toxicity	NMAWC, SSC Pacific PLC, Main Base, MSF

[1] These impairments are not adjacent to the Facility but are near the Facility.

[2] A TMDL has been developed for Shelter Island Yacht Basin. Information regarding the Shelter Island Yacht Basin is included for informational purposes only due to the proximity to the Facility. The technical report for the Shelter Island Yacht Basin TMDL does not indicate the Facility is an applicable discharger, thus the implementation of this TMDL is not applicable to this Order.

E. Other Plans, Polices and Regulations

1. **Bays and Estuaries Policy.** The State Water Board adopted a Water Quality Control Policy for Enclosed Bays and Estuaries of California (Bays and Estuaries Policy) on May 16, 1974 (last amended in 1995). The Bays and Estuaries Policy establishes principles for management of water quality, quality requirements for waste discharges, discharge prohibitions, and general provisions to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. These principles, requirements, prohibitions and provisions have been incorporated into this Order.

   a. The Bays and Estuaries Policy contains the following principle for management of water quality in enclosed bays and estuaries, which includes San Diego Bay:

      i. The discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a San Diego Water Board only when the San Diego Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge. For the purpose of this policy, ballast waters and innocuous non-municipal wastewaters such as clear brines, washwater, and pool drains are not necessarily considered industrial process wastes, and may be allowed by San Diego Water Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

         For the purpose of the Bays and Estuaries Policy and this Order, the discharges of dechlorinated discharges from topside chlorinating/dechlorinating units, ballast water, pier washing wastewater, marine mammal training pool and cleaning wastewater, returned unused San Diego Bay water from Building 111, abalone tank wastewater, pier boom cleaning wastewater, small boat rinsing wastewater, other miscellaneous facility-related discharges identified in the Discharger's ROWD storm water, and utility vault dewatering wastewater will be considered innocuous non-municipal wastewaters and, as such, are not considered industrial process wastes subject to prohibition.

      ii. The Bays and Estuaries Policy also prohibits the discharge or by-passing of untreated wastes. This Order prohibits the discharge and by-passing of untreated waste except for dechlorinated discharges from topside chlorinating/dechlorinating units, ballast water, pier washing wastewater, marine mammal training pool and cleaning wastewater, returned unused San Diego Bay water from Building 111, abalone tank wastewater, pier boom cleaning wastewater, small boat rinsing wastewater, other miscellaneous facility-related discharges identified in the Discharger's ROWD storm water, and utility vault dewatering wastewater.

   b. The following Principles for the Management of Water Quality in Enclosed Bays and Estuaries, as stated in the Bays and Estuaries Policy, apply to all of California's enclosed bays and estuaries including San Diego Bay:

      i. Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.

ii. Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.

iii. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.

iv. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.

v. Non-point sources of pollutants shall be controlled to the maximum practicable extent.

The San Diego Water Board has considered the Principles for the Management of Water Quality in Enclosed Bays in Estuaries, in adopting this Order. The terms and conditions of this Order are consistent with the Principles for the Management of Water Quality in Enclosed Bays and Estuaries.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the U.S. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the CFR: 40 CFR section 122.44(a) requires that permits include applicable technology-based effluent limitations (TBELs) and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** Ship repair and maintenance activities may result in the discharge of pollutants and wastes to waters of the U.S. Discharge Prohibition III.A prohibits the discharge of wastes associated with ship repair and maintenance activities. This prohibition is based on the requirements of the Enclosed Bays and Estuaries Policy and is retained from Order No. R9-2002-0002.

2. **Discharge Prohibition III.B.** As discussed in section III.C.2 of this Fact Sheet, the discharges from small boat rinsing, marine mammal pools, and marine mammal enclosure cleaning are considered a new discharge of elevated temperature waste. The specific water quality objective for enclosed bays for new discharges contained in the Thermal Plan states that “elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving waters by more than 20°F.” Discharge Prohibition III.B is based on the requirements of the Thermal Plan.

3. **Discharge Prohibitions III.C, III.D, and III.E.** The Basin Plan prohibitions are incorporated by reference in this Order. Prohibition III.C, III.D, and III.E are carried over from the previous Order and require the Discharger to comply with the Basin Plan prohibitions.

4. **Discharge Prohibition III.F.** This prohibition of non-storm water discharges not specifically regulated by this Order or a separate NPDES order is based on a Basin Plan prohibition.

5. **Discharge Prohibition III.G.** Waste discharges from ship repair and maintenance activities on ships, piers, and shoreside facilities can cause high concentrations of copper, zinc, other metals, and oil and grease in industrial storm water runoff. High concentrations of these pollutants in the industrial storm water runoff can be toxic to aquatic organisms. Discharge Prohibition III.F is based on the toxicity requirements contained in the Basin Plan and prohibits the discharge of the first ¼ inch (first flush) of storm water runoff from High Risk areas unless the discharge can be demonstrated to meet the limits of this Order.

6. **Discharge Prohibition III.H.** This Prohibition is based on the requirements of the Bays and Estuaries Policy and is consistent with prohibitions established for similar facilities.

7. **Discharge Prohibition III.I.** This Order prohibits the discharge of hazardous substances equal to or in excess of reportable quantities listed in 40 CFR part 117 and/or CFR part 302.

8. **Discharge Prohibition III.J.** This prohibition to discharge total residual chlorine for more than two hours per calendar day is based on the Ocean Plan. This Order contains a total residual chlorine effluent limitation based on an Ocean Plan water quality objective applying to intermittent discharges not exceeding two hours.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharges authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3.

The CWA requires that TBELs be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including Biochemical Oxygen Demand 5-day @ 20 ºC (BOD), Total Suspended Solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of BPJ to derive TBELs on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the San Diego Water Board must consider specific factors outlined in 40 CFR 125.3.

2. Applicable TBELs

a. **Topside Chlorinator/ Dechlorinator Units.** The UNDS program overseen through a partnership between the USEPA and the Department of Defense is developing MPCDs for certain discharges from Armed Forces vessels including cooling water. The discharge of dechlorinated cooling water will be regulated by UNDS. This Order requires the development of a BMP plan for the chlorinator /dechlorinator units that incorporates BMPs included in the July 2013 draft federal rule proposing MPCDs for vessel cooling water discharges.

b. **Utility Vaults**. The State Water Board found in section V.B.2 of the Fact Sheet to Order No. 2006-0008-DWQ that it is not feasible to establish numeric effluent limitations for pollutants in discharges from utility vaults and underground structures. Instead, the State Water Board included a provision in Order No. 2006-0008-DWQ requiring implementation of pollution prevention practices to control and abate the discharge of pollutants to surface waters, achieve compliance utilizing BAT and BCT requirements, and achieve compliance with applicable water quality standards. Federal Regulations at 40 CFR sections 122.44(k)(3) and (4) authorize the San Diego Water Board to require BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible and when the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. Consistent with the requirements of the Order No. 2006-0008-DWQ and Order No. R9-2002-0002, this Order includes a provision requiring the Discharger to continue the implementation and maintenance of their BMPs and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan) which includes BMPs to reduce the discharge of pollutants from utility vault and manhole dewatering. The Utility Vault Plan requirements have been revised from Order No. R9-2002-0002 to reflect the requirements in Order No. 2006-0008-DWQ.

c. **Pier Washing, Pier Boom Cleaning, and Small Boat Rinsing**. Due to the nature of activities associated with discharges from pier washing, pier boom cleaning, and small boat rinsing, it is impractical to collect and treat the associated wastewaters prior to discharge. Therefore, the San Diego Water Board finds that it is not feasible to establish numeric effluent limitations for pollutants in discharges from pier washing, pier boom cleaning, and small boat rinsing. In accordance with 40 CFR sections 122.44(k)(3) and (4), the San Diego Water Board finds that the implementation of BMPs in lieu of numeric effluent limitations are appropriate. This Order includes a provision requiring the implementation of BMPs to control and abate the discharge of pollutants from pier washing, pier boom cleaning, and small boat rinsing.

d. **Unused Bay Water from Building 111.** Water from San Diego Bay is pumped to a holding tank at the top of Building 111 for use in the laboratories within the building and the Abalone Tanks adjacent to the building. Wastewater from the laboratories is routed to the sanitary sewer. Unused stored Bay Water is periodically allowed to flow back to the Bay. The amount of water returned to the Bay is minimal (oftentimes zero) and does not contain any additives.

e. **Marine Mammal Training Pool, Marine Mammal Enclosure, and Abalone Tank Discharges.** 40 CFR section 122.24 and Appendix C of 40 CFR part 122 contain the definition and criteria for determining whether an aquatic animal production facility is a point source discharge subject to the NPDES permit program. Federal courts have recently issued rulings that aquatic facilities, which do not meet the definition of a Concentrated Aquatic Animal Production Facility (CAAPF) in 40 CFR section 122.24, are not point source discharges and therefore are not required to obtain NPDES permit coverage. These sections of 40 CFR are reproduced below. Most recently, on October 19, 2009, the U.S. District Court for the Western District of Washington issued a decision upholding the position that where a CAAPF falls below certain thresholds, they will not be considered "point sources" subject to NPDES permit requirements.

Concentrated Aquatic Animal Production Facility (CAAPF) which are defined in 40 CFR § 122.24 and Appendix C to Part 122.

Appendix C to Part 122—Criteria for Determining a Concentrated Aquatic Animal Production Facility (§122.24)

A hatchery, fish farm, or other facility is a concentrated aquatic animal production facility for purposes of §122.24 if it contains, grows, or holds aquatic animals in either of the following categories:

(a) Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include:

(1) Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and

(2) Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

(b) Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:

(1) Closed ponds which discharge only during periods of excess runoff; or

(2) Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

"Cold water aquatic animals" include, but are not limited to, the Salmonidae family of fish; e.g., trout and salmon.

"Warm water aquatic animals" include, but are not limited to, the Ameiuride, Centrarchidae and Cyprinidae families of fish; e.g., respectively, catfish, sunfish and minnows.

The dolphins and sea lions at NBPL live in a relatively warm water environment in San Diego Bay. Combining all marine mammal training activities, the total weight of marine mammals maintained in the program is approximately 32,400 pounds. The Facility produces approximately 50 pounds of abalone per year. Based on this information, the Facility falls below the aquatic animal production threshold described in 40 CFR section 122.24 and Appendix C of 40 CFR part 122. The San Diego Water Board has determined that the marine mammal training discharges from the pools and enclosures and the abalone tank discharge at NBPL are not a significant contributor of pollution to waters of the U.S. and does not warrant a case-by-case designation as a CAAPF point source discharge pursuant to 40 CFR section 122.24(c). Based on these considerations, the Facility does not meet the definition of a CAAPF, and is not required to obtain NPDES permit coverage for these discharges.

Although the aquatic animal discharge from the Facility does not require an NPDES permit, the San Diego Water Board is still required to regulate the Facility as a nonpoint source discharge, using the administrative permitting authorities provided in state law pursuant to the California Water Code. This Order serves as state WDRs which implement nonpoint source requirements as well as an NPDES Permit. This Order requires the Navy to develop and implement a BMP Plan for marine mammal enclosure cleaning, marine mammal training pool discharges, and abalone tank discharges in Provision VI.C.3.b. Monitoring to track the size and frequency of these discharges is required by this Order. Due to the nature of the marine mammal enclosure cleaning, it is impractical to collect an accurate, representative sample of these discharges. A log is required in lieu of sample collection for the marine mammal pool discharges because the discharges are short term and are a result of taking animals from San Diego Bay and then returning them to the Bay. Only flow reporting is required for the abalone tank discharges to ensure that the operation does not increase significantly. Because the discharge is very small and any water contamination would harm the abalone, no additional monitoring is required at this time.

f. **Small (Military Base) MS4.** In accordance with 40 CFR section 122.44(k), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits. The Discharger must implement BMPs that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. This Order requires the Discharger to develop and implement a SWMP that describes BMPs, measurable goals, and timetables for implementation in the six minimum control measures identified in 40 CFR section 122.34(b). This approach is consistent with the requirements of the current Naval Base San Diego Permit which includes regulation of Phase II MS4 storm water discharges (Order No. R9-2013-0064).

g. **Industrial Storm Water**. In accordance with 40 CFR section 122.44(k), Order No. R9-2002-0002 determined that the implementation of BMPs for the discharge of industrial storm water were appropriate. To carry out the purpose of the CWA, Order No. R9-2002-0002 required the Discharger to develop and implement a SWPPP, as authorized by CWA section 304(e) and section 402(p), for toxic pollutants and hazardous substances, and for the control of storm water discharges. The requirement to implement an appropriate SWPPP for areas associated with industrial activity is retained from Order No. R9-2002-0002.

In addition to the retention of a SWPPP, this Order establishes Numeric Action Levels (NALs) for storm water from Industrial High Risk Areas and Industrial Low Risk Areas in lieu of benchmarks.

The statewide Industrial Storm Water General Permit was adopted on April 1, 2014, by the State Water Board and will be effective on July 1, 2015. This statewide Industrial Storm Water General Permit contains NALs based on benchmarks in USEPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)* which became effective May 27, 2009. Consistent with the intent of the State Water Board, this Order establishes NALs with a tiered compliance strategy. The San Diego Water Board finds that the State Water Board's NALs serve as an appropriate set of technology-based, measureable criteria that demonstrate compliance with BAT/BCT.

h. **Non-storm water Discharges.** Non-storm water discharges as described in section IV.F of this Order include a wide variety of sources and may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections must be addressed through structural as well as non-structural BMPs. The San Diego Water Board recognizes, however, that certain non-storm water discharges may be necessary for general operation. Therefore, this Order authorizes such discharges provided they meet certain conditions that will minimize the discharge of pollutants to the receiving waters.

i. **Dry Dock Operation Discharge Specification.** Dry dock operations represent a high risk of discharge of pollutants if not conducted properly. Good BMPs and housekeeping on a regular basis is essential to prevent the release of pollutants.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels with the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but no numeric criterion or objective for the pollutant has been established, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state' s narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other

state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the San Diego Bay contained in the Basin Plan are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving waters.

The CTR promulgated toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. Priority pollutant water quality criteria in the CTR are applicable to discharges to the San Diego Bay. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply: in accordance with 40 CFR section 131.38(c)(3), freshwater criteria apply to areas where salinities are at or below 1 part per thousand (ppt) 95 percent or more of the time. The San Diego Water Board has determined that because the discharges are to San Diego Bay, saltwater CTR criteria are applicable. The CTR criteria for saltwater aquatic life or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the San Diego Bay, a water of the U.S. in the vicinity of the discharges.

The SIP procedures for implementation of CTR and NTR criteria are not explicitly applicable to storm water discharges. However, the toxicity objectives contained in the Basin Plan and the Bays and Estuary Policy are applicable to the discharge of storm water from Facility to the San Diego Bay. The applicable toxicity limitations are discussed in this section of the Fact Sheet.

The SIP procedures for implementation of CTR and NTR criteria are applicable to non-storm water discharges. The non-storm water discharges from the Facility to San Diego Bay include discharges associated with portable topside chlorinator units, pier washing, marine mammal pools, marine mammal enclosure cleaning, returned unused San Diego Bay water from Building 111, the abalone tank, pier boom cleaning, small boat rinsing, and utility vault and manhole dewatering. A Reasonable Potential Analysis (RPA) was conducted for the non-storm water discharges to the San Diego Bay using all the available data.

Representative monitoring of utility vault and manhole dewatering discharges was conducted and evaluated at various locations and submitted in the annual reports for years 2003, 2004, 2007, and 2008 and in the Discharger's *Case Study for Utility Vault and Manhole Dewatering Discharges at Naval Base Point Loma, Naval Base San Diego, and Naval Base Coronado*.

Receiving water monitoring in the vicinity of the discharges was not conducted.

Monitoring for priority pollutants in the discharges associated with portable topside chlorinator units, pier washing, marine mammal pools, marine mammal enclosure cleaning, unused returned San Diego Bay water from Building 111, the abalone tank, pier boom cleaning, and small boat rinsing, and receiving water monitoring was

conducted and submitted in the Discharger's May 2007 permit renewal application.

The table below summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the RPAs for this Order.

Table F-16. Applicable CTR/NTR Water Quality Criteria

Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
		Freshwater		Saltwater		Human Health for Consumption of:	
		Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms Only
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Antimony, Total Recoverable	4,300	Not Applicable		--	--	Not Applicable	4,300
Arsenic, Total Recoverable	36			69	36		--
Beryllium, Total Recoverable	No Criteria			--	--		--
Cadmium, Total Recoverable	9.36			42.25	9.36		--
Chromium (III)	No Criteria			--	--		--
Chromium (VI)	50			1,100	50		--
Copper, Total Recoverable	3.73			5.78	3.73		--
Cyanide, Total Recoverable	1			1	1		--
Lead, Total Recoverable	8.52			220.82	8.52		--
Mercury, Total Recoverable	0.051			--	--		0.051
Nickel, Total Recoverable	8.28			74.75	8.28		4,600
Silver, Total Recoverable	2.24			2.24	--		--
Selenium, Total Recoverable	71			290	71		--
Thallium, Total Recoverable	6.3			--	--		6.3
Zinc, Total Recoverable	85.62			95.14	85.62		--
Bromoform	360			--	--		360
Chlorodibromomethane	34			--	--		34
Chloroform	No Criteria			--	--		--
Dichlorobromomethane	46			--	--		46
Methyl Chloride	No Criteria			--	--		--
Methylene Chloride	1,600			--	--		1,600
Phenol	4,600,000			--	--		4,600,000
Acenaphthene	2,700			--	--		2,700
Acenaphthylene	No Criteria			--	--		--

Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
		Freshwater		Saltwater		Human Health for Consumption of:	
		Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms Only
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Anthracene	110,000			--	--		110,000
Benzo (a) Anthracene	0.049			--	--		0.049
Benzo (a) Pyrene	0.049			--	--		0.049
Benzo (b) Fluoranthene	0.049			--	--		0.049
Benzo (ghi) Perylene	No Criteria			--	--		--
Benzo (k) Fluoranthene	0.049			--	--		0.049
Bis (2-ethylhexyl) Phthalate	5.9			--	--		5.9
Butylbenzyl Phthalate	5,200			--	--		5,200
Chrysene	0.049			--	--		0.049
Dibenzo (a,h) Anthracene	0.049			--	--		0.049
Diethyl Phthalate	120,000			--	--		120,000
Dimethyl Phthalate	2,900,000			--	--		2,900,000
Di-n-butyl Phthalate	12,000			--	--		12,000
Di-n-octyl Phthalate	No Criteria			--	--		--
1,2-Diphenylhydrazine	0.54			--	--		0.54
Fluoranthene	370			--	--		370
Fluorene	14,000			--	--		14,000
Indeno (1,2,3-cd) Pyrene	0.049			--	--		0.049
Naphthalene	No Criteria			--	--		--
Nitrobenzene	1,900			--	--		1,900
Phenanthrene	No Criteria			--	--		--
Pyrene	11,000			--	--		11,000
1,2,4-Trichlorobenzene	No Criteria			--	--		--

b. **Dilution Credits.** Section 1.4.2 of the SIP establishes procedures for granting mixing zones and the assimilative capacity of the receiving water. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

In the absence of a dilution credit, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are applied end-of-pipe with no allowance for dilution within the receiving water.

3. Determining the Need for WQBELs

Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard.

The San Diego Water Board conducted the RPA in accordance with section 1.3 of the SIP. A summary of the results for the parameters which demonstrated reasonable potential, for each applicable discharge, is provided in the tables below.

Table F-17. Summary of RPA Results

Discharge Location No.	Parameter	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Reason[1]
CS-001 through CS-003 (Portable Topside Chlorinator Units)	Copper, Total Recoverable	23.38	0.82	3.73	MEC > C
	Nickel, Total Recoverable	23.84	0.278	8.28	MEC > C
Utility Vault and Manhole Dewatering (UV-001 through UV-018)	Arsenic, Total Recoverable	70	NA	36	MEC > C
	Chromium, Total Recoverable	59	NA	50.35	MEC > C
	Copper, Total Recoverable	520	NA	3.73	MEC > C
	Lead, Total Recoverable	130	NA	8.52	MEC > C
	Mercury, Total Recoverable	1.5	NA	0.051	MEC > C
	Nickel, Total Recoverable	32	NA	8.28	MEC > C
	Zinc, Total Recoverable	4,500	NA	85.62	MEC > C
	Benzo (a) Anthracene	0.087	NA	0.049	MEC > C
	Benzo (a) Pyrene	0.17	NA	0.049	MEC > C
	Benzo (b) Fluoranthene	0.48	NA	0.049	MEC > C
	Benzo (k) Fluoranthene	0.061	NA	0.049	MEC > C
	Chrysene	0.13	NA	0.049	MEC > C
	Indeno (1,2,3-cd) Pyrene	0.072	NA	0.049	MEC > C

[1] MEC = Maximum Effluent Concentration; B = Background Concentration; C = Criteria (Water Quality)
[2] Step 6 of section 1.3 of the SIP states that if B is greater than C and the pollutant is detected in the effluent, an effluent limitation is required and the analysis for the subject pollutant is complete.

4. WQBEL Calculations

a. **Utility Vaults.** As shown in Table F-17, the San Diego Water Board finds that discharges from utility vault and manhole dewatering have the reasonable potential to exceed water quality criteria for several priority pollutants. However, section V.C.3 of the Fact Sheet to Order No. 2006-0008-DWQ states that "*establishment of numeric effluent limitations for pollutants from utility vaults and underground structures is not feasible because: (1) utility companies have numerous short duration intermittent releases of water to surface waters from many different locations, and (2) treatment of all these releases to meet numeric effluent limitations would be impractical.*" Consistent with Order No. 2006-0008-DWQ and Order No. R9-2002-0002, the San Diego Water Board is not establishing effluent limitations for utility vaults and manholes in this Order. This Order includes a provision requiring the Discharger to continue the implementation and

maintenance of their Utility Vault Plan which includes BMPs to reduce the discharge of pollutants from utility vault and manhole dewatering.

b. **Discharges associated with pier washing, marine mammal enclosure cleaning, marine mammal pool, unused returned bay water, pier boom cleaning, and small boat rinsing**. Based on BPJ, the San Diego Water Board finds that discharges associated with pier washing, marine mammal enclosure cleaning, marine mammal pool, unused returned bay water, pier boom cleaning, and small boat rinsing exhibit reasonable potential to exceed water quality criteria for a number of priority pollutants. The minimal flow, duration, infrequent and disperse nature of these discharges precludes the implementation of practical treatment systems. In addition, the marine mammal enclosure cleaning and mammal pool discharges are not large enough to require an NPDES permit pursuant to 40 CFR section 122.24 and Appendix C of 40 CFR part 122 and are regulated under the state WDR portions of this Order. Therefore, the San Diego Water Board finds that it is not feasible to establish numeric effluent limitations for pollutants in these discharges. In lieu of numeric effluent limitations, the San Diego Water Board finds that the implementation of BMPs is sufficient to adequately protect receiving waters. This Order includes a provision requiring the implementation of best management practices to control and abate the discharge of pollutants from these discharges.

c. **Abalone Tank Discharges.** The sample of abalone discharges showed no reasonable potential to exceed water quality criteria. This Order includes a provision requiring the implementation of best management practices to control and abate any pollutants in the discharge.

d. **The Thermal Plan** establishes the following water quality objectives for new elevated temperature waste discharges to enclosed bays:

> *"Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving waters by more than 20° F."*
>
> Elevated temperature waste discharges for marine mammal enclosure cleaning, marine mammal pool discharges, and small boat rinsing must comply with the water quality objective. This water quality objective is implemented as a discharge prohibition and as part of the BMP Plan described in section VII.C.3.c of this Fact Sheet and a discharge prohibition.

e. **Ocean Plan Effluent Limitation Calculations.** The Discharger has not provided monitoring data for Total Residual Chlorine from the portable topside chlorinator units. However, the topside chlorinator units have the reasonable potential to discharge chlorine based on BPJ.

Table 1 of the Ocean Plan establishes a water quality objective for Total Residual Chlorine of 2 µg/L for a 6-month median, 8 µg/L for a daily maximum, and 60 µg/L for an instantaneous maximum. Footnote c to Table 1 of the Ocean Plan establishes water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours. These intermittent discharge water quality objectives are determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where y = the Instantaneous Maximum Effluent Limitation (in µg/L) to apply when chlorine is being discharged;

x = the duration of uninterrupted chlorine discharge in minutes.

This intermittent discharge Total Residual Chlorine objective is appropriate for the topside chlorinator discharges because 1) the Basin Plan does not specify chlorine objectives for San Diego Bay, 2) the water in the bay and ocean have similar salinities and beneficial uses, and 3) the chlorinators are intermittent discharges which only operate for 2 hours per day. A prohibition has been established to ensure that the chlorinators do not operate more than 2 hours per day.

Effluent limitations for water quality objectives listed in Table 1 of the Ocean Plan, with the exception of acute toxicity and radioactivity, are determined through the use of the following equation:

Equation 1: $Ce = Co + Dm (Co - Cs)$

where:

Ce = the effluent concentration limit, µg/L.

Co = the concentration (water quality objective) to be met at the completion of initial* dilution, µg/L.

Cs = background seawater concentration (Cs = 0 for Total Residual Chlorine.), µg/L.

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater. (There is no initial dilution for this discharge.)

Because there is no initial dilution for this discharge from the topside chlorinators, the effluent limitation will be the objective (i.e. Ce = Co).

Concentration-based effluent limitations were calculated based on two hours of chlorination per day. Mass-based effluent limitations were calculated based on the concentration-based effluent limitations and a maximum flow rate of 1,500 gpm for two hours a day.

The mass emission rate (MER), in pounds per day, was calculated using the following formula:

Mass Emission Rate (lb/day) = 8.34 x Q x C

In which Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lb/gallon of water). For the chlorinators, a flow rate of 1,500 gpm for two hours was used for Q and effluent limitation for two hours of chlorination was used for C in calculating the mass-based effluent limitation.

f. A summary of the applicable WQBELs for the Discharger are summarized below:

Table F-18. Summary Applicable WQBELs for Topside Chlorinator/Dechlorinator Units

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Total Chlorine Residual	µg/L	--	--	8.1[1]	--
	lbs/day	--	--	0.012[2]	--

[1] The concentration based effluent limitation for total chlorine residual is calculated based on two hours of chlorination.

[2] The mass-based effluent limitation for total chlorine residual is calculated with a flow rate of 1500 GPM and is for each submarine that is chlorinating.

5. Whole Effluent Toxicity (WET)

a. Background and Rationale

The Basin Plan defines toxicity as the adverse response of organisms to chemicals or physical agents.

The Basin Plan establishes a narrative water quality objective for toxicity:

"All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

Order No. R9-2002-0002 established acute toxicity effluent limitations for storm water discharges. Survival rates reported by the Discharger from 2006 through 2011 range from 0 to 100 percent, indicating the presence and reasonable potential for toxicity in the discharge of storm water from the Facility.

In discussions with USEPA Region 9, USEPA has informed San Diego Water Board staff that the application of chronic toxicity monitoring and effluent limitations for storm water runoff are more desirable than acute toxicity because chronic toxicity is more conservative and provides a better indicator of chronic effects to organisms in the receiving water, other than percent survival. Chronic effects, such as detrimental physiological responses (affecting fertilization, growth, reproduction, etc.) may be present, even when acute effects such as the death of an organism are not apparent. The use of chronic toxicity allows for a more accurate determination of the narrative water quality objective, which specifies *"detrimental physiological responses"*. Many detrimental physiological responses are not addressed when the test is limited to simply percent survival.

Based on the USEPA Region 9 guidance, chronic toxicity monitoring and effluent limitations are established in this Order for the discharge of industrial process water at the Facility. Because chronic toxicity is considered to be a more conservative indicator of toxicity, and the monitoring of all industrial process wastewater sample locations for both acute and chronic toxicity would be costly and redundant, the monitoring requirements and effluent limitations for acute toxicity have been removed for industrial process water based on the application of the more conservative chronic toxicity requirements. If the Discharger complies with effluent limitations for chronic toxicity,

they will achieve water quality greater than that necessary to achieve compliance with acute toxicity effluent limitations.

The State Water Board has not adopted a policy or plan for regulating toxicity in storm water discharges. NBPL currently has acute toxicity effluent limitations for industrial storm water discharges which they have not been able to achieve. An acute toxicity effluent limitation from Order R9-2002-0002 has been carried over to this Order for industrial storm water and been revised to incorporate USEPA's guidance on the TST method. This Order also requires further study on chronic toxicity in industrial storm water discharges through a study on an appropriate IWC for discharges to San Diego Bay. Because there is no established policy and the potential effects on receiving waters from chronic toxicity in industrial storm water discharges are not well understood, this Order maintains the acute toxicity effluent limitation for Industrial High Risk Areas storm water discharges. The San Diego Water Board may choose to establish end-of-pipe chronic toxicity effluent limitations for Industrial High Risk Areas storm water discharges in the future. In developing such a limitation, an IWC of 100 percent will be assumed unless mixing zones or dilution credits are authorized by the San Diego Water Board.

Navy Acute Toxicity Effluent Limitation Challenge

During the previous renewal of the Discharger's NPDES permits for NBPL and NBC in 2002, the Discharger challenged the acute toxicity limitation, asserting that the acute toxicity limitation is not based on scientific data, that it is overly stringent for protecting water quality, and that diversion of all storm water runoff to the sanitary sewer is the only effective BAT/BCT for meeting the effluent limitation. Although this Order is establishing chronic toxicity effluent limitations instead of acute toxicity effluent limitations, the Discharger's challenge to the acute toxicity effluent limitations is addressed below because some of the concerns could be applied to chronic toxicity.

The acute toxicity effluent limitation established in Order No. R9-2002-0002 was established to implement the Basin Plan water quality objective for toxicity in receiving waters. The effluent limitation was derived from, and is essentially the same as, the acute toxicity discharge standard contained in the Bays and Estuaries Policy.

The Discharger's NPDES permits contained provisions which allowed the Discharger to recommend, after conducting a required study, alternative scientifically valid survival rates for acute exposure to discharges of storm water from industrial areas at the Discharger's facilities. The Discharger conducted a study to develop a scientifically defensible, and appropriate, toxicity limitation for industrial storm water discharges from Naval facilities to San Diego Bay. The results of the study were summarized in a Final Report, *Storm Water Toxicity Evaluation Conducted at: Naval Station San Diego, Naval Submarine Base San Diego, Naval Amphibious Base Coronado, and Naval Air Station North Island*, dated May 2006.

The Discharger's final recommendations included in the report are summarized below:

- The use of appropriate USEPA WET test methods and data evaluation when declaring a test result as toxic.

- Acknowledge WET method variability and the minimum significant difference that laboratory testing can provide in declaring a toxic result.

- Consideration of realistic exposure conditions when using WET testing to infer toxicity in the receiving water.

In addition, the Discharger submitted comments regarding the current acute toxicity requirements. Comments of significant importance are summarized below:

- The Discharger requested that the existing storm water toxicity testing language be revised to require a statistical comparison of discharge toxicity results with control sample toxicity results using a student t-test, to determine whether a discharge is toxic or not.

- The Discharger requested that the existing storm water toxicity testing language be revised to require the use of percent minimum significant difference, using the 10^{th} and 75^{th} percentiles as lower and upper bounds, respectively, to account for inherent variability of toxicity testing procedures to determine whether a discharge is toxic or not.

- The Discharger requested that the existing storm water toxicity discharge specification language be revised according to two proposed alternatives that presumably consider realistic exposure conditions to infer toxicity in the receiving water.

San Diego Water Board staff stated in a memorandum to the Executive Officer dated August 22, 2006 that the Discharger's proposed toxicity alternatives should not be adopted in their entirety and, "*Toxicity in storm water discharges should not be ignored just because the causative agent is diluted in bay water. Testing times should not be shortened to ensure that the variability inherent to storm water discharges is not causing low level toxicity that may be missed in an acute test.*"

Toxicity Rationale

The San Diego Water Board has considered the following information in developing toxicity monitoring and effluent limitations:

- The May 2006 storm water toxicity study performed by the Discharger;
- Comments received from the Discharger;
- Discussions with USEPA Region 9;
- USEPA's June 2010 guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, An Additional Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data (*EPA 833-R-10-003*);*
- USEPA's June 2010 guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document, An Additional Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data* (EPA 833-R-10-004);
- The narrative water quality for objective for toxicity contained in the Water Quality Control Plan for the San Diego Basin (Basin Plan); and
- An interpretation of applicable state and federal regulations.

The implementation of toxicity monitoring requirements and effluent limitations for discharges to San Diego Bay are based on a new statistical approach developed by USEPA that assesses the whole effluent toxicity measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce called the Test of Significant Toxicity (TST). This new approach is a statistical method that uses hypothesis testing techniques based on research and peer-reviewed publications. The approach examines whether an effluent at the critical concentration and a control within a whole effluent toxicity test differ by an unacceptable amount (the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive).

Organism response to the effluent and control are unlikely to be exactly the same, even if no toxicity is present. They might differ by such a small amount that even if statistically significant, it would be considered negligible biologically. A more useful approach could be to rephrase the null hypothesis, "Is the mean response in the effluent less than a defined biological amount?" The Food and Drug Administration has successfully used that approach for many years to evaluate drugs, as have many researchers in other biological fields. In that approach, the null hypothesis is stated as the organism response in the effluent is less than or equal to a fixed fraction (*b*) of the control response (e.g., 0.75 of the control mean response):

Null hypothesis: Treatment mean ≤ *b* * Control mean

To reject the null hypothesis above means the effluent is considered non-toxic. To accept the null hypothesis means the effluent is toxic.

Before the TST null hypothesis expression could be recommended by USEPA, certain Regulatory Management Decisions (RMDs) were needed, including what effect level in the effluent is considered unacceptably toxic and the desired frequency of declaring a truly negligible effect within a test non-toxic.

In the TST approach, the *b* value in the null hypothesis represents the threshold for unacceptable toxicity. For chronic toxicity, the USEPA made the RMD that the *b* value is set at 0.75, which means that a 25 percent effect (or more) at the IWC is considered evidence of unacceptable chronic toxicity. For acute toxicity, the *b* value is set at 0.80.

USEPA's RMDs for the TST method are intended to identify unacceptable toxicity most of the time when it occurs, while also minimizing the probability that the IWC is declared toxic when in fact it is truly acceptable. Additional RMDs by USEPA to achieve this objective were made regarding acceptable maximum false positive (β using a TST approach) and false negative rates (α using a TST approach).

In the TST approach, the RMDs are defined as follows:

1. Declare a sample toxic between 75 – 95 percent of the time ($0.05 \leq \alpha \leq 0.25$) when there is unacceptable toxicity.

2. Declare an effluent non-toxic no more than 5 percent of the time ($\beta \leq 0.05$) when the effluent effect at the critical effluent concentration is 10 percent.

USEPA used valid toxicity data from approximately 2,000 WET tests to develop and evaluate the TST approach. The TST approach was tested using nine different whole effluent toxicity test methods comprising twelve biological endpoints and representing most of the different types of whole effluent toxicity test designs in use. More than one million computer simulations were used to select appropriate alpha error rates for each test method that also achieved USEPA's other RMDs for the TST approach.

Effluent limitations are established using the TST "pass" "fail" approach as well as a percent effect.

Chronic Pass: A test result that rejects the null hypothesis (Ho) below is reported as "Pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.75 × Control mean response

Chronic Fail: A test result that does not reject the null hypothesis (Ho) above is reported as "Fail" in accordance with the TST approach.

Percent Effect: The percent effect at the IWC is calculated for each test result using the following equation:

$$\% \text{ Effect at IWC} = \frac{\text{Mean Control Response - Mean IWC Response}}{\text{Mean Control Response}} * 100$$

A Maximum Daily Effluent Limitation (MDEL) and Median Monthly Effluent Limitation (MMEL) for chronic toxicity is established for industrial process wastewaters. The MDEL is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to 50%. The MMEL is exceeded when the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST, (i.e. two out of three) is a "fail".

Acute Pass: An acute toxicity test result that rejects the null hypothesis (Ho) below is reported as "pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.80 × Control mean response

Acute Fail: An acute toxicity test result that does not reject the null hypothesis (Ho) above is reported as "fail" in accordance with the TST approach.

A MDEL for acute toxicity is established for Industrial High Risk Areas storm water discharges and is exceeded when a toxicity test during routine monitoring results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to 40%.

A percent effect of 50% for chronic toxicity and 40% for acute toxicity has been incorporated into the MDEL. The decision to conduct a Toxicity Identification Evaluation (TIE) is based upon consideration of multiple factors such as the magnitude and persistence of toxicity. The magnitude of toxicity present in storm water is an important consideration because a moderate to high level of toxicity typically yield more successful results. Usually, TIEs can be successfully conducted on samples producing at least 50 percent effect (e.g., >50% mortality or reduction in reproduction), and this value is

recommended for general use in selecting samples for TIEs. However, effective TIEs can also be conducted with less toxic samples (e.g., >25% effect), but there is a greater chance of the TIE being inconclusive due to changes in toxicity with storage or variability in response (Norberg-King et al. 2005). A percent effect of 50% for chronic toxicity and 40% for acute toxicity has been incorporated into the MDEL to facilitate a successful TIE.

The IWC for these discharges are established at 100% effluent. Allowances for dilution and a different IWC may be made at the discretion of the San Diego Water Board. Because the San Diego Water Board has no documentation to support a different IWC, the IWC is defined as 100 percent effluent (undiluted). This definition of IWC is consistent with other San Diego Water Board's NPDES permitted discharges to San Diego Bay which do not allow dilution. This Order requires further study on the appropriate IWC for chronic toxicity observed in industrial storm water discharges to San Diego Bay.

The San Diego Water Board finds that the application of USEPA's TST method with the 50% effect for chronic toxicity and 40% effect for acute toxicity is scientifically defendable and appropriate for the determination of compliance with the Basin Plan's narrative objective for toxicity. As such, toxicity monitoring requirements, analysis, and effluent limitations are established in this Order based on USEPA's TST method and a 50% effect for chronic toxicity and 40% effect for acute toxicity. Taken together, these refinements of using chronic toxicity instead of acute toxicity for industrial process wastewater and using the TST approach with the appropriate percent effect clarifies the requirements for toxicity analyses, provide the Discharger with the positive incentive to generate high quality data, and affords greater protection of aquatic life.

b. Acute Toxicity

As discussed previously, acute toxicity limitations have not been carried over and have been replaced with chronic toxicity limitations for industrial process water. Acute toxicity effluent limitations have been maintained for industrial high risk storm water discharges and have been updated to use the USEPA's TST method with a percent effect of 40%. Where acute toxicity limitations had previously been applied in conjunction with chronic toxicity effluent limitations, the acute limitations for industrial process water have been removed to reduce duplicative monitoring to implement the narrative toxicity water quality objective. Chronic toxicity monitoring and effluent limitations provide a more conservative indicator and more protective effluent limitation for water quality, and do not constitute backsliding.

c. Chronic Toxicity

As previously discussed, chronic toxicity monitoring requirements and effluent limitations have been established for industrial process wastewater discharges demonstrated to have toxic pollutants in toxic concentrations, consistent with the State Water Board's draft Toxicity Policy and USEPA's TST approach.

This Order also requires the Discharger to implement BMPs to prevent or eliminate toxicity, investigate the causes of any toxicity, and identify and implement corrective actions to reduce or eliminate effluent toxicity.

D. Final Effluent Limitations

1. Discharges from the Facility shall not exceed the effluent limitations summarized below:

   a. Final Effluent Limitations for Topside Chlorinator/Dechlorinator Units – Discharge Point Nos. CS-001 through CS-003

Table F-19. Effluent Limitations for Topside Chlorinator/Dechlorinator Units

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Total Chlorine Residual	µg/L	--	--	8.1[1]	
	lbs/day	--	--	0.012[2]	

[1] The concentration based effluent limitation for total chlorine residual is calculated based on two hours of chlorination.

[2] The mass-based effluent limitation for total r chlorine residual is calculated with a flow rate of 1500 GPM and is for each submarine that is chlorinating.

2. The Discharger is required to develop and implement a BMP plan for the chlorinator/ dechlorinator units including, at a minimum, BMPs from the UNDS Program for Seawater Piping Biofouling Prevention and Seawater Cooling Overboard Discharge.

3. The previous Order required the Discharger to develop and implement a BMP plan for utility vault dewatering, and a SWPPP for storm water discharges throughout the Facility, as authorized by CWA section 304(e) and section 402(p). The requirements to update and implement BMP plans and a SWPPP are carried over from the previous Order.

4. Discharges of pollutants in storm water discharges, from areas designated under section IV.B. of this Order as Industrial High Risk Areas, to waters of the U.S. from Discharge Points specified in Attachment M of this Order shall maintain compliance with the MDEL for acute toxicity. The MDEL is based on the outcome of the TST approach and the resulting percent effect at the IWC in accordance with Compliance Determination, section VII. of this Order.

5. **Satisfaction of Anti-Backsliding Requirements**

   Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R9-2002-0002 and meet state and federal anti-backsliding requirements.

6. **Satisfaction of Antidegradation Policy**

   WDRs for the Discharger must conform with federal and state antidegradation policies provided at 40 CFR 131.12 and in State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of

water quality is necessary to accommodate important economic and social development or is consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting*.

The Discharger has requested coverage of discharges associated with portable topside chlorinator units through Discharge Points CS-001 through CS-003. These discharges have been occurring at the Facility over the term of the previous Order, and were thought to be covered under the UNDS program and exempt from NPDES permit coverage. However, it was determined that the portable topside chlorinator units were not covered under the UNDS program and are subject to NPDES permit requirements. As such, the discharge from portable topside chlorinator units is not a new discharge and coverage under this NPDES permit is not expected to contribute to the further degradation of the receiving water. The San Diego Water Board conducted an RPA indicating that these discharges have the reasonable potential to exceed water quality objectives. This Order establishes WQBELs and priority pollutant monitoring for discharges CS-001 through CS-003, which shall be protective of water quality objectives.

The Discharger was previously permitted to discharge small boat rinsing wastewater from Discharge Point BR-001. The Discharger has requested coverage of discharges associated with small boat rinsing at the installation NMAWC through Discharge Point BR-002. During the previous permit term, the average small boat rinsing flow from BR-001 was expected to be approximately 858 gpd. Under the proposed two outfalls, the expected small boat rinsing flow is expected to be 315 gpd. Receiving water quality and beneficial uses are similar at the two locations. Additionally, discharges from BR-002 have been occurring over the previous permit term. As such, the additional outfall is not expected to contribute additional pollutant loading to the receiving water than historically discharged, and is not expected to further degrade the receiving water. The San Diego Water Board conducted an RPA indicating that these discharges have the reasonable potential to exceed water quality objectives. This Order establishes requirements for the Discharger to develop and implement a BMP(s) to minimize impacts to the receiving water.

The Discharger was previously permitted to discharge marine mammal enclosure cleaning wastewater from a single discharge point at installation SSC Pacific PLC (Discharge Point ME-001). The Discharger has requested additional outfalls at SSC Pacific PLC (Discharge Point ME-002) and at the FLC installation (Discharge Point ME-003). The total increase in flow is expected to be approximately 192 gpd for cleaning the sea lion enclosures. This represents an increase in flow of approximately 1 percent of the total marine mammal enclosure cleaning discharge, and is not expected to have a significant impact on the receiving water. Receiving water quality and beneficial uses are similar at the three locations. Additionally, discharges from ME-002 and ME-003 occurred over the previous permit term. As such, the additional outfalls are not expected contribute additional pollutant loading to the receiving water than historically discharged, and is not expected to further degrade the receiving water. The San Diego Water Board conducted an RPA indicating that these discharges have the reasonable potential to exceed water quality objectives. This Order establishes requirements for the Discharger to develop and implement BMPs to minimize impacts to the receiving water.

The Discharger reported in the application the discontinued use of diesel engines in ship deperming operations at MSF by December 31, 2007. Power for the demagnetizing process will instead be provided by San Diego Gas and Electric via electric transformers.

In addition, steam condensate discharges were regulated by the previous Order; however, steam condensate is currently generated at only one Facility location (FASW), which does not discharge to San Diego Bay or other water(s) of the U.S. Therefore, discharges from steam condensate are not regulated by this Order.

The limitations and requirements of this Order are more stringent than established in Order No. R9-2002-0002. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

7. **Stringency of Requirements for Individual Pollutants**

This Order contains TBELs of BMPs in lieu of numeric effluent limitations for the specified discharges except for a numeric effluent limitation for total residual chlorine from the topside chlorinator/ dechlorinator units. The permit has requirements to continue a PPP for utility vault and manhole dewatering discharges; a requirement to develop and maintain a BMP Plan for discharges from chlorinator/ dechlorinator units, pier washing, marine mammal training pools and enclosures, unused returned unused bay water, small boat rinsing, and pier boom cleaning; a requirement to develop and maintain a SWMP for municipal storm water; and a requirement to continue to implement a SWPPP for toxic pollutants and hazardous substances in industrial storm water runoff. These restrictions are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

The WQBELs consist of numeric effluent limitations for total residual chlorine and are discussed in section IV.C of the Fact Sheet. WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs for total residual chlorine are based on the Basin Plan beneficial uses for San Diego Bay and water quality objectives contained in the Ocean Plan. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Storm Water Risk Level Designations

This Order addresses storm water discharges from various locations throughout the Facility, with varying degrees of industrial activity and potential to impact water quality. As such, a tiered approach has been applied in this Order to control storm water discharges, including MS4 requirements, industrial storm water requirements, and effluent limitations. To apply the appropriate controls for storm water, the Discharger is required to identify all storm water outfalls located at the Facility, and designate the outfalls as Industrial High Risk Areas, Industrial Low Risk Areas, Industrial No Exposure Areas, or Small MS4 Areas.

Because operations at the Facility are subject to change, areas designated as Small MS4 Areas may be used for industrial activities throughout the life of this permit or areas once used for industrial purposes may no longer be used for industrial uses. As such, annual site surveys are necessary to account for any operational changes that may occur at the Facility to ensure that appropriate regulatory mechanisms are being applied.

F. Small (Military Base) MS4 Discharge Specification

The San Diego Water Board finds that Phase II MS4 requirements are applicable to storm water discharges from non-industrial portions of the Facility. As such, applicable requirements of the Phase II MS4 program, consistent with the requirements 40 CFR section 122.44(k) and the 6 minimum control measures identified in 40 CFR section 122.34(b) have been applied to ensure discharges of storm water from Non-industrial Areas meet the minimum requirement of MEP. Specific requirements have been established where necessary to increase the tracking and enforceability of the Discharger's SWMP. This approach is consistent with the requirements of the current Naval Base San Diego Permit which includes regulation of Phase II MS4 storm water discharges (Order No. R9-2013-0064).

G. Industrial Storm Water Discharge Specifications

a. Pollutant Reduction to BAT/BCT. NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

b. Storm Water Pollution Prevention Plan (SWPPP) for Industrial Areas. Prior to the adoption of Order No. 2002-0002, the storm water discharges at the Facility were regulated by the State Water Board's *General Order for Discharges of Storm Water Associated with industrial Activities Excluding Construction Activities* (Order No. 97-03-DWQ, NPDES No. CAG000001). To carry out the purpose and intent of the CWA, Order No. 97-03-DWQ and subsequently Order No. R9-2002-0002 required the Discharger to develop and implement a SWPPP, as authorized by CWA section 304(e) and section 402(p), for toxic pollutants and hazardous substances, and for the control of storm water discharges. Consistent with Order No. 97-03-DWQ and Order No. R9-2002-0002, this Order requires the Discharger to continue to implement and regularly update an adequate SWPPP as specified in Attachment G. The SWPPP requirement is explained in more detail in section IV.B.2 of this Fact Sheet.

c. Numeric Action Levels (NALs). Consistent with the direction of the State Water Board, this Order establishes NALs based on USEPA's benchmarks with a tiered compliance strategy of establishing industrial storm water risk levels. This risk level strategy is explained in more detail in section IV.B. of this Order.

H. Non-Storm Water Discharge Specifications

Discharge Specifications for the discharge of exempted non-storm water discharges as specified in section IV.F of this Order are based on the requirements of 40 CFR section 122.26(d). These discharge specifications exempt the discharge of certain wastes from prohibition that are not currently expected to be a significant source of pollutants to the receiving waters.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water limitations in this Order are derived from the water quality objectives for bays and estuaries established by the Basin Plan (1994), the Bays and Estuaries Policy (1974), the CTR (2000), the State Implementation Policy (2005), the Ocean Plan (2012) and the Sediment Quality Plan (2008). San Diego Bay is listed as impaired for copper, toxicity, sediment toxicity, and benthic community in the area directly off shore of the Facility. This 303(d) impairment and elevated effluent concentrations demonstrates that there is reasonable potential to cause or contribute to an exceedance of the sediment quality objectives which have been included as receiving water limitations.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Industrial Storm Water Monitoring Location Study and Annual Report

In order to determine compliance with effluent limitations, action levels, and evaluate the effectiveness of BMPs specified in the SWPPP, this order establishes monitoring requirements for industrial storm water. The San Diego Water Board recognizes that establishing monitoring requirements at all discharge locations would be redundant and an inefficient use of resources. Monitoring is only necessary at representative discharge locations for industrial storm water. This directive requires the discharger to identify representative monitoring locations for these discharges, and verify these monitoring locations annually. Monitoring includes visual as well as sample collection.

B. Influent Monitoring – Not Applicable

C. Effluent Monitoring

Pursuant to the requirements of 40 CFR section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of BMPs and pollution prevention plans, to assess the impacts of the discharge on the receiving water, and determine compliance with the effluent limitations. Effluent monitoring is necessary to address the following primary questions:

- Does the effluent meet permit effluent limits thereby ensuring that water quality standards are achieved in the receiving water?
- What is the mass of the constituents that are discharged annually?
- Is the volume of the discharges changing over time?
- How much pier washing occurs?
- Is the discharge a major source of pollutants?
- How often are the marine mammal pools used?

- How often are the pier booms cleaned?
- Is the marine mammal enclosures cleaning discharge changing over time?
- Is the small boat rinsing discharge changing over time?

1. Portable Topside Chlorinator Units Monitoring (Monitoring Locations CS-001 through CS-003)

a. Quarterly effluent flow monitoring has been established to determine the volume of effluent from the chlorinator units being discharged from the Facility into the San Diego Bay adjacent to the submarine.

b. Quarterly monitoring for total residual chlorine has been established in order to determine compliance with effluent limitations.

c. Annual monitoring for chlorine biproducts, copper, and nickel has been established because BPJ indicates the presence of chlorine biproducts and the RPA indicated the presence of copper and nickel.

2. USS ARCO Floating Dry Dock Monitoring

Dry dock submergence notification requirements have been carried over from Order No. R9-2002-0002 (Addendum No. 2). The timing has been increased from 48 hours to 72 hours.

Dry dock submergence video recording requirements have been carried over from Order No. R9-2002-0002 (Addendum No. 2).Video recording of dry dock submergence is necessary to ensure adequate BMPs have occurred to prevent the discharge of pollutants into the receiving water.

3. Pier Washing Monitoring (Monitoring Locations PW-001 and PW-002)

An annual log of pier washing activities has been established to track this discharge.

4. Marine Mammal Pools Monitoring (Monitoring Locations MP-001, MP-002, and MP-003)

An annual log of marine mammal pool discharges has been established to track this activity.

5. Returned Unused Bay Water (Monitoring Location UBW-001)

a. Quarterly effluent flow monitoring has been established to determine the volume of effluent being discharged from the Facility into the San Diego Bay.

b. A log of any changes to the system shall be submitted annually. This system is expected to change when the abalone tanks are moved. The flow monitoring and the log will characterize this change.

6. Abalone Tanks (Monitoring Location ABL-001)

a. Quarterly effluent flow monitoring has been established to determine the volume of effluent being discharged from the Facility to San Diego Bay.

b. A log of any changes to the system shall be submitted annually. This system is expected to change when the abalone tanks are moved. The flow monitoring and the log will characterize this change.

7. Pier Boom Cleaning (Monitoring Location BW-001)

An annual log of pier boom cleaning activities has been established to track this discharge.

8. Marine Mammal Enclosure Cleaning Monitoring (Monitoring Locations ME-001 through ME-004)

An annual log of significant changes to the marine mammal enclosure discharges has been established to track this discharge.

9. Small Boat Rinsing (Monitoring Location BR-001)

An annual log of significant changes to the small boat rinsing activities has been established to track this discharge.

10. Utility Vaults and Manhole Dewatering Monitoring (Monitoring Locations UV-001 through UV-018)

a. Annual effluent flow monitoring has been established to determine the volume of effluent being discharged from the Facility into the San Diego Bay.

b. Annual effluent monitoring of total petroleum hydrocarbons, oil and grease, pH, and total suspended solids has been incorporated from State Water Board General Order No. 2006-008-DWQ to characterize the discharge of utility vault and manhole dewatering from the Facility into the San Diego Bay.

c. Consistent with Order No. R9-2002-0002, this Order requires the Discharger to submit a log of the utility vault and manhole dewatering discharges annually.

D. Whole Effluent Toxicity (WET) Testing Requirements

The WET testing is designed to address the following primary questions:

- Does the effluent meet permit effluent limits for toxicity thereby ensuring 1. that water quality standards are achieved in the receiving water?
- If not:
  - Are unmeasured pollutants causing risk to aquatic life?
  - Are pollutants in combinations causing risk to aquatic life?
- Does the storm water runoff meet objectives for toxicity in the receiving water?
- Are conditions in receiving water getting better or worse with regard to toxicity?
- What is the relative storm water runoff contribution to the receiving water toxicity?
- What are the causes of the toxicity and the sources of the constituents responsible?

As discussed above in section IV.C.5 of this Fact Sheet, chronic and acute toxicity effluent limitations established in this Order are based on USEPA's TST and percent effect. The chronic toxicity effluent limitations are replacing acute toxicity effluent limitations for industrial process water discharges established in Order No. R9-2002-0002. Acute toxicity effluent limitations and monitoring are maintained for industrial storm water. Chronic and acute toxicity monitoring is required to evaluate compliance with effluent limitations.

Past sampling of storm water at the Facility shows the presence and reasonable potential for toxicity in the discharge of industrial storm water from the Facility. This Order requires the Discharger to conduct additional toxicity testing for exceedances of the toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) Workplan in accordance with USEPA guidance which shall include: further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharge will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. This provision also includes requirements to initiate the TRE/TIE process if the results of toxicity testing exceed the effluent limitation for chronic toxicity.

E. Receiving Water Monitoring

Receiving water and sediment monitoring shall be designed and conducted to address the following primary questions:

- Does the discharge cause or contribute to violations of the Receiving Water Limitations in section V. of this Order?
- Does the receiving water meet water quality standards?
- Are the conditions in receiving waters getting better or worse?
- Is natural light significantly reduced as the result of the discharge of waste?
- Does the discharge of waste cause a discoloration of the receiving waters?
- Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than allowed by the water quality objective?
- Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally?
- Does the discharge of waste cause the salinity to become elevated in the 6. receiving water?
- Do nutrients cause objectionable aquatic growth or degrade indigenous biota?
- Is the dissolved sulfide concentration of waters in marine sediments significantly increased above that present under natural conditions?
- Is the concentration of substances set forth in Attachment 1 of the State Water Board's Sediment Quality Plan in marine sediments at levels which would degrade the benthic community?
- Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?
- Are benthic communities degraded as a result of the discharge?
- Are the marine mammal enclosures and pools causing bacteria water quality objectives to be exceeded?

1. Water and Sediment Monitoring Plan

The Discharger is required to submit a Water and Sediment Monitoring Plan within 12 months of the effective date of this Order. The Water and Sediment Monitoring Plan has all the elements required by the State Water Board's Sediment Quality Plan, which became effective on August 25, 2009, to be implemented for both water and sediment for consistency. A conceptual model, existing data, and ongoing monitoring must be considered in the development of the Water and Sediment Monitoring Plan.

2. Surface Water

a. Monitoring of the receiving water is necessary to determine if the discharges from the Facility are impacting the water quality objectives for San Diego Bay, applicable beneficial uses, and aquatic life.

b. Monitoring locations will be determined in the Water and Sediment Monitoring Plan.

c. Annual monitoring of copper, mercury, nickel, and zinc in the Pacific Ocean and the San Diego Bay has been established to determine compliance with receiving water limitations and to help determine reasonable potential, as specified in section 1.3 of the SIP, for future permitting efforts. These constituents are required based on the RPA for the chlorinators, storm water benchmark exceedances, and BPJ.

d. Semiannual temperature monitoring has been established in order to determine compliance with Prohibition III.B for the temperature effluent limitation for discharges of small boat rinsing and marine mammal enclosure cleaning.

e. Semiannual chronic toxicity monitoring has been added to assess the impacts of storm water discharges on the receiving water. The Discharger is required to monitor chronic toxicity twice per year concurrently with the end of pipe high risk industrial storm water discharge monitoring required in Table E-8 of this MRP. The receiving water chronic toxicity sample is to be collected in the receiving water adjacent to the storm drain outfall sampled in Table E-8 during the storm event. The results of the chronic toxicity testing in the receiving water shall be included in the Annual Storm Water Report.

f. Annual monitoring of the CTR priority pollutants has been added to help determine reasonable potential, as specified in section 1.3 of the SIP, for future permitting efforts and to provide data to help determine long-term trends in receiving water quality.

g. Semiannual monitoring of fecal coliform, total coliform, and enterococcus has been established to determine compliance with receiving water limitations and to provide data for the protection of beneficial uses.

3. Sediment Monitoring

a. This Order establishes monitoring and analysis requirements consistent with the Sediment Quality Plan.

b. Monitoring locations will be determined in the Water and Sediment Monitoring Plan.

c. Sediment chemistry, toxicity, and benthic community monitoring are required in accordance with, and at a minimum, the requirements under the Sediment Quality Control Plan.

4. Monitoring Coalitions

To achieve maximum efficiency and economy of resources, the San Diego Water Board encourages and may require San Diego Bay dischargers to establish or join a San Diego Bay water body monitoring coalition. Monitoring coalitions enable the sharing of technical resources, trained personnel, and associated costs and create an integrated water and sediment monitoring program within each water body. Focusing resources on water body issues and developing a broader understanding of pollutants effects in these water bodies

enables the development of more rapid and efficient response strategies and facilitates better management of water and sediment quality.

5. Water and Sediment Monitoring Report

The Discharger or water body monitoring coalition is required to submit a Water and Sediment Monitoring Report at least twice during a permit cycle in accordance with the schedule contained in the Water and Sediment Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. Receiving water sampling will be done annually and sediment sampling will be done at least twice during the term of this Order, so two reports during a permit cycle will allow more samples to be collected and reported in one report.

F. Other Monitoring Requirements

1. The discharge of industrial contact storm water to the San Diego Bay may contain pollutants from the surrounding area which could contribute to the exceedance of the water quality criteria/objectives of the receiving waters. Industrial storm water monitoring requirements have been established to determine the effects of storm water discharges on the receiving water and monitor the effectiveness of the SWPPP to meet applicable NALs and receiving water limits. Order No. R9-2002-0002 required monitoring of industrial storm water for copper, zinc, and acute toxicity at two storms per year. Copper and zinc concentrations regularly exceeded the benchmarks. In addition, acute toxicity often exceeded the effluent limitation.

   Industrial storm water monitoring has been retained for copper, zinc, and acute toxicity for high risk industrial areas and copper and zinc for low risk industrial areas. Monitoring for TSS and pH have been added in conformance with the statewide Industrial Storm Water General Permit. Oil and grease have been added as another common industrial pollutant. Other than copper and zinc, there is limited information on pollutants in storm water from the Facility. Because of this limited information, the Discharger is required to monitor industrial high risk areas for all of the NAL pollutants in Table G-1 of Attachment G to this Order. Monitoring of these additional pollutants can be discontinued after four consecutive sample events where the parameter is not detected or is below the Annual NAL values in Table G-1 of Attachment G to this Order.

   Industrial storm water monitoring frequency has been increased to two storms per semiannual period in conformance with the statewide Industrial Storm Water General Permit.

   Chronic toxicity monitoring has been established in addition to acute toxicity for discharges from “Industrial High Risk Areas” to determine reasonable potential. The industrial storm water monitoring program is designed to address the following primary questions:
   - Does the runoff meet permit effluent limitations for toxicity thereby ensuring water quality standards are achieved in the receiving water?
   - Does the runoff meet the NALs?
   - Is the SWPPP being properly implemented?
   - Is the Facility achieving standards of BAT and BCT?

2. The Discharger is required to submit a sampling plan for MS4 storm water discharges within 24 months of the effective date of this Order. A minimum subset of three representative monitoring locations for storm water and dry-weather discharges within the Small MS4

Areas of the Facility. These monitoring locations shall be sampled for pollutants identified by the Discharger. Sampling and analysis is required twice per year for storm water and twice per year for dry-weather. The Small MS4 monitoring program shall be designed to address the following primary questions:

- Is the SWMP being properly implemented?
- Is the Facility achieving the standard of reducing pollutants in MS4 discharges to the MEP?

3. Monitoring requirements for spill and illicit discharges are in this Order to help determine the effectiveness of the BMP Plan and ensure that appropriate BMPs are properly implemented. This log is designed to answer the following primary monitoring questions:
   - Are there more frequent and/or bigger spills at this Facility than at other similar facilities?
   - Are spills and illicit discharges properly addressed and are measures being taken or planned to reduce, eliminate, and prevent them in the future?

4. Monitoring requirements for the floating dry dock USS ARCO in this Order are designed to answer the following primary monitoring question:
   - Is the dry dock properly cleaned prior to flooding?
   - Are pollutants being prevented from contact with Bay waters prior to and during flooding?

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR section 122.42.

Section 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in this Order. 40 CFR section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Monitoring and Reporting Program (MRP) Requirements

Language in this section requires the Discharger to properly implement and submit self-monitoring reports (SMRs) to the San Diego Water Board and Discharger Monitoring Reports (DMRs) for USEPA to the State Water Board. Telephone and fax numbers are also provided. The San Diego Water Board office may be relocated. Dischargers will be notified of new contact information.

C. Special Provisions

1. Reopener Provisions

This Order includes a list of circumstances when this Order may be reopened.

2. Special Studies and Additional Monitoring Requirements

Requirements for a TRE/TIE have been incorporated in the MRP.

3. Best Management Practices and Pollution Prevention

a. Best Management Practices and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan). As discussed in sections IV.B.2.b and IV.C.4.a of this Fact Sheet, the San Diego Water Board finds that numerical effluent limitations are not feasible for discharges from utility vault and manhole dewatering discharges. Federal Regulations at 40 CFR sections 122.44(k)(3) and (4) authorize the San Diego Water Board to require BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible and when the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

The development of pollution prevention practices (PPP) provides the flexibility necessary to establish controls which can appropriately address the various utility vault and manhole dewatering discharges. The pollution prevention practices have two major objectives:

i. To identify situations which allow water to collect in the vault or underground structure and lead to a discharge; and

ii. To describe and ensure the implementation of practices that will reduce pollutants in the discharge from normal operations of utility companies.

Similar to BMPs, pollution prevention practices are designed to prevent or control the discharge of pollutants. They may include a schedule of activities, prohibition of practices, maintenance procedures, or other management practices. The Best Management Practices and Pollution Prevention Practices Plan for Utility and Manhole Dewatering Discharges (Utility Vault Plan) is a written document that describes the operator's activities to comply with the requirements of this Order. The Utility Vault Plan is intended to evaluate potential pollutant sources at the site and select and implement appropriate measures designed to prevent or control the discharge of pollutants. Order No. R9-2002-0002 incorporated the pertinent requirements of Order No. 2001-11-DWQ, including the requirement to develop and implement a Utility Vault Plan that included BMPs to achieve BAT and BCT. According to the *Case Study for Utility Vault and Manhole Dewatering Discharges at Naval Base Point Loma, Naval Base San Diego, and Naval Base Coronado* submitted by the Discharger in May 2007, the Discharger has maintained and implemented the *Pollution Prevention Plan for Utility Vault Dewatering Discharges* as required by Order No. R9-2002-0002, which describes the types of discharges, prohibited discharges, pollution prevention practices and BMPs, and monitoring and inspections of utility vault and manhole discharges. Additionally, the case study states that the Discharger has implemented procedures to eliminate manhole dewatering discharges to surface waters and either pumps the water into an adjacent

utility manhole or transfers the water to the sanitary sewer system. However, the Discharger acknowledges the potential for rare emergency situations that would require dewatering of a utility vault or manhole onto the ground surface.

Order No. 2006-0008-DWQ, replacing Order No. 2001-011-DWQ, includes additional specifications for pollution prevention practices for Utility Vault and Manhole Dewatering Discharges for dischargers of utility and manhole dewatering discharges. This Order incorporates the additional specifications from Order No. 2006-0008-DWQ. The Discharger is required to maintain and implement their Utility Vault Plan in accordance with the requirements of Provision VI.C.3.a of this Order. For assistance in developing the Utility Vault Plan, the Discharger may refer to the *California Stormwater BMP Handbook – Industrial/Commercial (January 2003 Edition),* published by the California Stormwater Quality Association, which includes references the Discharger may find useful.

b. BMP Plan for Pier Washing, Marine Mammal Enclosure Cleaning, Pier Boom Cleaning, ARCO Dry Dock Pre-flood Cleaning, and Small Boat Rinsing Discharges. Due to the nature of activities associated with discharges of pier washing, marine mammal enclosure cleaning, pier boom cleaning, ARCO dry dock pre-flood cleaning, and small boat rinsing, collecting and treating the associated wastewaters prior to discharge is impractical. Therefore, the San Diego Water Board finds that establishing numeric effluent limitations for pollutants in the specified discharges is not feasible. In accordance with 40 CFR sections 122.44(k)(3) and (4), the San Diego Water Board finds that the implementation of BMPs in lieu of numeric effluent limitations are appropriate. This Order requires the Discharger to develop and implement a BMP Plan that includes, at a minimum, the requirements contained in Attachment I to prevent, or minimize the potential for, the release of pollutants to waters of the State and waters of the U.S.

c. CWC section 13263.3(d)(2) Pollution Prevention Plans. Section 13263.3 of the California Water Code states that pollution prevention should be the first step in the hierarchy for reducing pollution and managing wastes. Further, section 13263.3 (d)(1)(D) states that the San Diego Water Board may require a Discharger to complete and implement a pollution prevention plan the San Diego Water Board determines that pollution prevention is necessary to achieve a water quality objective. Based on storm water monitoring results discussed in section II.E.1 of this Fact Sheet, the Discharger has reasonable potential to exceed the water quality objectives for acute toxicity in industrial storm water. Based on storm water monitoring results discussed in section II.D.7 of this Fact Sheet, the Discharger has regularly exceed the benchmarks for copper and zinc in industrial storm water. Pollution prevention is necessary to achieve water quality objectives for these constituents. The Discharger shall develop and implement a Pollution Prevention Plan for acute toxicity, copper, and zinc in industrial storm water, which at a minimum, meets the requirements outlined in CWC section 13263.3(d)(2), for each applicable discharge.

The Pollution Prevention Plan shall, at a minimum, meet the requirements outlined in CWC section 13263.3(d)(2) and in this Order, for each applicable discharge. The minimum requirements for the pollution prevention plans include the following:

i. An analysis of one or more of the pollutants, as directed by the State Water Board, San Diego Water Board, or a POTW, that the Facility discharges into waters of the State or introduces into POTWs, a description of the sources of the pollutants, and

a comprehensive review of the processes used by the discharger that result in the generation and discharge of the pollutants.

ii. An analysis of the potential for pollution prevention to reduce the generation of the pollutants, including the application of innovative and alternative technologies and any adverse environmental impacts resulting from the use of those methods.

iii. A detailed description of the tasks and time schedules required to investigate and implement various elements of pollution prevention techniques.

iv. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action.

v. A description of the Discharger's existing pollution prevention methods.

vi. A statement that the Discharger's existing and planned pollution prevention strategies do not constitute cross media pollution transfers unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board, the San Diego Water Board, or the POTW, and information that supports that statement.

vii. Proof of compliance with the Hazardous Waste Source Reduction and Management Review Act of 1989 (Article 11.9 (commencing with Section 25244.12) of Chapter 6.5 of Division 20 of the Health and Safety Code) if the Discharger is also subject to that act.

viii. An analysis, to the extent feasible, of the relative costs and benefits of the possible pollution prevention activities.

ix. A specification of, and rationale for, the technically feasible and economically practicable pollution prevention measures selected by the Discharger for implementation.

4. Construction, Operation, and Maintenance Specifications

The construction, operation, and maintenance specifications have been retained from Order No. R9-2002-0002.

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable.

6. Other Special Provisions – Not Applicable

VIII. PUBLIC PARTICIPATION

The San Diego Water Board has considered the issuance of WDRs to serve as an NPDES permit for the U.S. Department of the Navy, Naval Base Point Loma. As a step in the WDR adoption process, the San Diego Water Board developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided an opportunity to submit written comments and recommendations. Notification was provided through the following: Published in the San Diego Union-Tribune on April 21, 2014, posted on the San Diego Water Board website on April 21, 2014, and sent by mail on April 21, 2014.

The public had access to the agenda and any changes in dates and locations through the San Diego Water Board website at http://www.waterboards.ca.gov/rwqcb9/.

B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs. Comments were due either in person or by mail to the Executive Office at the San Diego Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the San Diego Water Board, written comments were due at the San Diego Water Board offices by 5:00 p.m. on May 21, 2014.

C. Public Hearing

The San Diego Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **June 26, 2014**
Time: **9:00 a.m.**
Location: **California Regional Water Quality Control Board, San Diego Region**
Board Meeting Room
2375 North Side Drive, Suite 100
San Diego, CA 92108

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and CCR title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m. 30 days after the adoption date of this Order at the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Copies of the law and regulations applicable to filing petitions may be found on the internet at: ·

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

E. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the San Diego Water Board address below at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. To request a file review please contact the San Diego Water Board receptionist at (619) 516-1990, or email rb9_records@waterboards.ca.gov, or fax (619) 516-1994 or mail requests to:

California Regional Water Quality Control Board
San Diego Region
Attention: File Review Request
2375 Northside Drive, Suite 100
San Diego, CA 92108

The office is closed on weekends and on all state Holidays.

Before making a request to view public records in the San Diego Water Board office interested persons may wish to determine if the information is already available on the San Diego Water Board's website at http://www.waterboards.ca.gov/sandiego or the State Water Board's website at http://www.waterboards.ca.gov. New and updated information is constantly being added to these websites. For example the San Diego Water Board's website alphabetical index and the State Water Board's Website alphabetical index provide links to many volumes of key documents on the State and Regional Water Board's water quality programs.

The following is a partial list of the documents available:

- Board Meeting Agendas
- Board Meeting Minutes
- Adopted Orders
- Tentative Orders
- Basin Plan
- Ocean Plan

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order should contact the San Diego Water Board, reference this facility, and provide a name, address, and phone number. If possible, email address is preferred.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Kristin Schwall at (619) 521-3368 or kschwall@waterboards.ca.gov or to Ben Neill at (619) 521-3376 or bneill@waterboards.ca.gov.

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS FOR INDUSTRIAL AREAS

I. IMPLEMENTATION SCHEDULE

The Discharger shall continue to implement the existing storm water pollution prevention plan (SWPPP) for all storm water outfalls from the Facility regulated by Order No. R9-2002-0002 until the Discharger has fully completed the implementation of the Storm Water Management Program Requirements specified in section IV.E.2 of the Order. Following full compliance with section IV.E.2 of the Order, the Discharger may phase out coverage of areas designated as "Small MS4 Area", as defined in section IV.B.1 of the Order, that are adequately addressed under the Storm Water Management Program (SWMP). All storm water outfalls from the Facility are subject to either the SWPPP or the SWMP.

The Discharger shall implement any necessary revisions to its SWPPP to comply with the requirements of this Order within 1 year of the effective date of this Order.

II. SWPPP OBJECTIVES

A. The Discharger's SWPPP shall be prepared and maintained to achieve the following objectives:

1. To reduce or prevent the discharge of pollutants from industrial activities to the technology-based standards of best available technology economically achievable (BAT) for toxic and non-conventional pollutants, and best conventional pollutant control technology (BCT) for conventional pollutants;

2. To achieve compliance with the Receiving Water Limitations in section V of this Order;

3. To identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of the Facility's industrial storm water discharges and authorized non-storm water discharges;

4. To identify, describe, and implement site-specific Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;

5. To identify and implement timely revisions and/or updates to the SWPPP.

B. To achieve the SWPPP objectives, the Discharger shall prepare a written Facility-specific SWPPP in accordance with all applicable SWPPP requirements of this attachment. The SWPPP shall include all required maps, descriptions, schedules, checklists, and relevant copies or specific references to other documents that satisfy the requirements of this attachment. The typical development and implementation steps necessary to achieve the described objectives are summarized in Item A-2, located at the end of this attachment.

III. PLANNING AND ORGANIZATION

A. SWPPP Checklist

The SWPPP shall include a SWPPP Checklist (Example checklist is included as Item A-1 below) located at the end of this section. For each requirement listed, the Discharger shall identify the page number where the requirement is located in the SWPPP (or the title, page number, and location of any reference documents), the implementation date or last revision date, and any SWPPP requirements that may not be applicable to the Facility.

B. Pollution Prevention Team

1. The SWPPP shall identify specific individuals and their positions within the Facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the Facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Order.

2. The SWPPP shall clearly identify the responsibilities, duties, and activities of each team member.

3. The SWPPP shall identify, as appropriate, alternative individuals to perform the required SWPPP and monitoring program activities when team members are temporarily unavailable (due to vacation, illness, out of town meetings, etc.).

C. Review Other Requirements and Existing Facility Plans

1. The SWPPP shall be developed, implemented, and revised as necessary to be consistent with any applicable municipal, State, or Federal requirement that pertains to the requirements of this Order.

2. The SWPPP may incorporate or reference the elements of the Discharger's existing plans, procedures, or regulatory compliance documents that contain storm water pollution control practices or otherwise relate to the requirements of this Order. For example, facilities subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials, or facilities subject to regional air quality emission controls may already have evaluated industrial activities that emit dust or particulate pollutants.

IV. SITE MAP

The SWPPP shall include a site map. The site map shall be provided on an 8 ½ x 11 inch or larger sheet and include notes, legends, north arrow, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, the Discharger may provide the required information on multiple site maps. The following information shall be included on the site map:

A. Boundaries and Drainage Areas. Outlines of the Facility boundary, storm water drainage areas within the Facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area; on-site surface water bodies; areas of soil erosion; and location(s) of near-by water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the Facility's storm water discharges and authorized non-storm water discharges.

B. Storm Water Collection and Conveyance System. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

C. Impervious Areas. The outline of all impervious areas of the Facility, including paved areas, buildings, covered storage areas, or other roofed structures.

D. Materials, Spills, and Leaks Locations. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks, identified in accordance with section VI.A.4 below, have occurred.

E. Areas of Industrial Activity. Identify all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and reusing areas, and other areas of industrial activity which are potential pollutant sources.

F. Storm Water Risk Level Boundaries. Identify the boundaries of the Industrial High Risk areas, Industrial Low Risk areas, Industrial No-Exposure areas, and Small MS4 areas, as defined in section IV.B.1 of the Order.

V. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, the locations where the material is stored, received, shipped, and handled, as well as the typical quantities and frequencies, shall be described. The materials list shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

A. For each area identified in section IV.E of this Attachment, the SWPPP shall include a narrative description of the Facility's industrial activities, potential pollutant sources, and potential pollutants that could be exposed to storm water or authorized non-storm water discharges. At a minimum, the following industrial activities shall be described as applicable:

1. **Industrial Processes**. Describe each industrial process including the manufacturing, cleaning, maintenance, recycling, disposal, or other activities related to the process. Include the type, characteristics, and approximate quantity of significant materials used in or resulting from the process. Areas protected by containment structures and the

corresponding containment capacity shall be identified and described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area including the type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Areas protected by a containment structure and the corresponding containment capacity shall be identified and described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the Facility's boundaries. Include their discharge locations and the type, characteristics, and quality of dust and particulate pollutants that may be deposited within the Facility's boundaries. Identify the primary areas of the Facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Identify and describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges. Include toxic chemicals (listed in 40 CFR Part 302) that have been discharged to storm water as reported in USEPA Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR Parts 110, 117, and 302).

   The description shall include the location, characteristics, and approximate quantity of the materials spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges; and the preventative measures taken to ensure spills or leaks of the material do no reoccur.

5. **Non-Storm Water Discharges.** The Discharger shall inspect the Facility to identify all non-storm water discharges, sources, and drainage areas. All drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-storm water discharges shall be described. The description shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area and shall identify whether the discharge is an authorized or unauthorized non-storm water discharge in accordance with section IV.F of the Order. Examples of unauthorized non-storm water discharges include but are not limited to rinse and wash water (whether detergents are used or not), contact and non-contact cooling water, and boiler blow-down.

6. **Soil Erosion.** Describe the Facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in accordance with section VI of this Attachment. To determine the likelihood that significant materials will be exposed to storm water or authorized non-storm water discharges, the assessment shall include consideration of the quantity, characteristics, and locations of each significant material handled, produced, stored, recycled, or disposed; the

direct and indirect pathways that significant materials may be exposed to storm water or authorized non-storm water discharges; history of spills or leaks; non-storm water discharges; prior sampling; visual observation, and inspection records; discharges from adjoining areas; and the effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. At a minimum, the Discharger shall consider:

1. The quantity, physical characteristics (liquid, powder, solid, etc.), and locations of each significant material handled, produced, stored, recycled, or disposed.

2. The degree pollutants associated with those materials are exposed to and mobilized by contact with storm water.

3. The direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

4. Sampling, visual monitoring, and inspection records.

5. Effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

B. Based upon the assessment above, the SWPPP shall identify any areas of industrial activity and corresponding pollutant sources where significant materials are likely to be exposed to storm water or authorized non-storm water discharges and where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

VIII. STORM WATER BEST MANAGEMENT PRACTICES

A. The SWPPP shall include a narrative description of BMPs implemented at the Facility. The BMPs, when developed and implemented, shall be effective in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

The BMPs narrative description shall include:

1. The type of pollutants the BMPs are designed to reduce or prevent.

2. The frequency, time(s) of day, or conditions when the BMPs are scheduled for implementation.

3. The locations within each area of industrial activity or pollutant source where the BMPs shall be implemented.

4. Identification of the person and/or position responsible for implementing the BMPs.

5. The procedures, including maintenance procedures, and/or instructions to implement the BMPs.

6. The equipment and tools necessary to implement the BMPs.

B. The Discharger shall consider non-structural BMPs for implementation at the Facility. Non-structural BMPs generally consist of processes, prohibitions, procedures, training, schedule of activities, etc., that prevent pollutants associated with industrial activity from contact with storm water discharges and authorized non-storm water discharges. Below is a list of non-structural BMPs that shall be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

2. **Preventative Maintenance.** Preventative maintenance includes regular inspection and maintenance of storm water structural controls (i.e., catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure to significant materials to storm water and authorized non-storm water discharges.

5. **Employee Training Program.** This includes the development of a program to train personnel responsible for implementing the various compliance activities of this Order including BMP implementation, inspections and evaluations, monitoring activities, and storm water compliance management. The training program shall include:

   a. A description of the training program and any training manuals or training materials.

   b. A discussion of the appropriate training frequency.

   c. A discussion of the appropriate personnel to receive training.

   d. A training schedule.

   e. Documentation of all completed training classes and the personnel who received training.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste or recyclable materials.

7. **Record Keeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary to the appropriate Facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices.

9. **Inspections.** Periodic visual inspections of the Facility are necessary to ensure that the SWPPP addresses any significant changes to the Facility's operations or BMP implementation procedures.

   a. A minimum of four quarterly visual inspections of all areas of industrial activity and associated potential pollutant sources shall be completed each reporting year. The annual comprehensive site compliance evaluation described in section IX of this Attachment may substitute for one of the quarterly inspections.

   b. Tracking and follow-up procedures shall be described to ensure appropriate corrective actions and/or SWPPP revisions are implemented.

   c. A summary of the corrective actions and SWPPP revisions resulting from quarterly inspections shall be reported in the annual report.

   d. Dischargers shall certify in the annual report that each quarterly visual inspection was completed.

   e. All corrective actions and SWPPP revisions shall be implemented in accordance with sections XII.D and XII.E of this Attachment.

10. **Quality Assurance.** This includes the management procedures to ensure that the appropriate staff adequately implements all elements of the SWPPP and Monitoring Program.

C. Structural BMPs. Where non-structural BMPs identified in section VIII.B above are not effective, structural BMPs shall be considered. Structural BMPs typically consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that shall be considered:

1. **Overhead Coverage**. This includes structures that protect materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

2. **Retention Ponds**. This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the Facility.

3. **Control Devices**. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures**. This includes containment structures around storage tanks and other areas that collect any leaks or spills.

5. **Treatment**. This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., which reduce the pollutants in storm water discharges and authorized non-storm water discharges.

D. The SWPPP shall include a summary identifying each area of industrial activity and associated pollutant sources, pollutants, and BMPs in a table similar to Item A-3 at the end of this Attachment.

IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Discharger shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1 – June 30). Evaluations shall be conducted no less than 8 months from each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system. A visual inspection of equipment needed to implement the SWPPP.

C. A review and evaluation of all BMPs, both structural and non-structural, for each area of industrial activity and associated potential pollutant sources to determine whether the BMPs are properly designed, implemented, and effective in reducing and preventing pollutants in storm water discharges and authorized non-storm water discharges.

D. An evaluation report that includes:

1. Identification of personnel performing the evaluation,

2. Date(s) of the evaluation,

3. Summary and implementation dates of all significant corrective actions and SWPPP revisions for the reporting year

4. Schedule for implementing any incomplete corrective actions and SWPPP revisions,

5. Any incidents of non-compliance and the corrective actions taken, and

6. A certification that the Discharger has completed the quarterly inspections specified in section VIII.B.9, above and that the Discharger is complying with this Order.

7. The evaluation report shall be submitted as part of the annual report, retained for at least 5 years, and signed and certified in accordance with Standard Provision V.B of Attachment D of this Order.

X. NUMERIC ACTION LEVELS (NALS) AND NUMERIC EFFLUENT LIMITATIONS (NELS)

A. Numeric Action Levels (NALs) for all storm water discharges are appropriate numeric thresholds that allow a discharger to take corrective action when the Instantaneous Maximum or Annual Average NAL are exceeded. Exceedances of NAL values are not a violation of the Order. Dischargers that exceed one of the NAL values shall take the appropriate corrective action as set forth in section IV.E.3. of the Order.

NALs are specified as follows:

Table G-1. NALs for Storm Water

PARAMETER	TEST METHOD[1]	REPORTING UNITS	ANNUAL NAL VALUE	INSTANTANEOUS MAXIMUM NAL
pH	Field test with calibrated portable instrument, or lab sample in accordance with 40 CFR § 136.	pH units	N/A	6.0-9.0
Suspended Solids (TSS), Total	SM2540-D	mg/L	100	400
Oil & Grease (TOG), Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26 [2]	-
Copper, Total (H)	EPA 200.8	mg/L	0.0332 [2]	-
Cyanide, Total	SM 4500-CN C, D, or E	mg/L	0.022	-
Lead, Total (H)	EPA 200.8	mg/L	0.262 [2]	-
Chemical Oxygen Demand	SM 5220C	mg/L	120	-
Aluminum, Total (pH 6.5-9.0)	EPA 200.8	mg/L	0.75	-
Iron, Total	EPA200.8	mg/L	1.0	-
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	-
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	-
Ammonia	SM 4500-NH3 B+ C or E	mg/L	2.14	-
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	-
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053 [2]	-
Nickel, Total (H)	EPA 200.8	mg/l	1.02 [2]	-
Mercury, Total	EPA 245.1	mg/L	0.0014	-
Selenium, Total	EPA 200.8	mg/L	0.005	-
Silver, Total (H)	EPA 200.8	mg/L	0.0183 [2]	-
Biochemical Oxygen Demand	SM 5210B	mg/L	30	-

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition
EPA – EPA test methods

[1] Test methods with lower detection limits may be necessary when discharging to impaired water bodies. Alternate test methods may be approved by the San Diego Water Board.

[2] The NAL is based on the highest hardness because the water near the mouth of the creeks is very saline.

B. On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report that includes one or more of the following demonstrations:

1. **Industrial Activity BMPs Demonstration.** This shall include the following requirements as applicable:

   a. A description of the industrial pollutant sources and corresponding industrial pollutants that are or may be related to the NAL exceedance(s);

   b. An evaluation of all pollutant source(s) associated with industrial activity that are or may be related to the NAL exceedance(s);

   c. Where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this Order and are expected to eliminate future NAL exceedance(s), the Discharger shall provide a description and analysis of all implemented BMPs;.

   d. In cases where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this Order but are not expected to eliminate future NAL exceedance(s), the Discharger shall provide the following, in addition to a description and analysis of all implemented BMPs:

      i. An evaluation of any additional BMPs that would reduce or prevent NAL exceedances;

      ii. An estimated costs of the additional BMPs evaluated; and,

      iii. An analysis describing the basis for the selection of BMPs implemented in lieu of the additional BMPs evaluated but not implemented.

   e. The description and analysis of BMPs required in section d.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,

   f. If an alternative design storm standard for treatment control BMPs in lieu of the design storm standard for treatment control BMPs in section IV.E.4 of the Order will achieve compliance with the effluent limitations of the Order, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.

2. **Non-Industrial Pollutant Source Demonstration.** This shall include:

   a. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

b. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance; and,

c. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance that are or may be discharged;

d. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;

e. A summary of all existing BMPs for that parameter; and,

f. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.

3. Natural Background Pollutant Source Demonstration. The Natural Background Pollutant Source Demonstration Technical Report shall at a minimum, include the following:

a. A statement that the Discharger has determined that the NAL exceedance of the NAL is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);

b. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;

c. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Demonstration;

d. A map showing the reference site location in relation to facility along with available land cover information;

e. Reference site and test site elevation;

f. Available geology and soil information for reference and test sites;

g. Photographs showing site vegetation;

h. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and

i. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

XI. Monitoring Requirements

Monitoring shall be conducted as specified in the MRP. The SWPPP shall include a description of the following items:

A. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

B. Sampling locations and sample collection procedures. This shall include procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained.

C. Identification of the analytical methods and related method detection limits (if applicable) used to detect pollutants in storm water discharges, including a justification that the method detection limits are adequate.

XII. SWPPP General Requirements

A. The SWPPP shall be retained at the Facility and made available upon request of a representative of the San Diego Water Board.

B. Upon notification by the San Diego Water Board or USEPA that the SWPPP does not meet one or more of the minimum requirements of this Attachment, the Discharger shall revise the SWPPP and implement additional BMPs that are effective in reducing and eliminating pollutants in storm water discharges and authorized non-storm water discharges. As requested, the Discharger shall provide an implementation schedule and/or completion certification to the San Diego Water Board or USEPA.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities, which;

1. May significantly increase the quantities of pollutants in storm water discharges; or

2. Cause a new area of industrial activity at the Facility to be exposed to storm water; or

3. Begin an industrial activity that would introduce a new pollutant source at the Facility.

D. The Discharger shall revise the SWPPP and implement the appropriate BMPs in a timely manner and in no case more than 90 days after a Discharger determines that the SWPPP is in violation of any Order requirement.

E. When any part of the SWPPP is infeasible to implement by the deadlines specified above due to proposed significant structural changes, the Discharger shall:

1. Submit a report to the San Diego Water Board that:

a. Identifies the portion of the SWPPP that is infeasible to implement by the deadline;

b. Provides justification for a time extension, and a schedule for completing and implementing that portion of the SWPPP; and

c. Describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

2. Comply with any request by the San Diego Water Board to modify the report required in Subsection VII.E.1 above, or provide certification that the SWPPP revisions have been implemented.

F. The SWPPP shall be provided, upon request, to the San Diego Water Board, USEPA, local agency, or Compliance Inspection Designees. The San Diego Water Board under section 308(b) of the Clean Water Act considers the SWPPP a report that shall be available to the public.

XIII. Authorized Non-Storm Water Discharges Special Requirements

A. The SWPPP shall address authorized non-storm water discharges and incorporate the requirements of section IV.F of this Order.

ITEM A-1

STORM WATER POLLUTION PREVENTION PLAN
EXAMPLE CHECKLIST

Facility Name _____

WDID# _____

FACILITY CONTACT		CONSULTANT CONTACT	
Name	_____	Name	_____
Title	_____	Title	_____
Company	_____	Company	_____
Street	_____	Street	_____
Address		Address	
City, State	_____	City, State	_____
ZIP	_____	ZIP	_____

Storm Water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification			
Pollution Prevention Team			
Existing Facility Plans			
Facility Site Map(s)			
Facility Boundaries			
Drainage areas			
Direction of flow			
On-site water bodies			
Areas of soil erosion			
Nearby water bodies			
Municipal storm drain inlets			
Points of discharges			
Structural control measures			
Impervious areas (paved areas, buildings, covered areas, roofed areas			
Location of directly exposed materials			
Location of significant spills and leaks			
Storage areas / Storage tanks			
Shipping and receiving areas			
Fueling areas			
Vehicle and equipment storage and maintenance			
Material handling / Material processing			
Waste treatment / Waste Disposal			

Storm Water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Dust generation / Particulate generation			
Cleaning areas / Rinsing areas			
Other areas of industrial activities			
For the NBPL, High Risk area			
List of Significant Materials			
For each material listed:			
Storage location			
Receiving and shipping location			
Handling location			
Quantity			
Frequency			
Description of Potential Pollution Sources			
Industrial Processes			
Material handling and storage areas			
Dust and particulate generating activities			
Significant spills and leaks			
Non-storm water discharges			
Soil Erosion			
Assessment of Potential Pollutant Sources			
Areas likely to be sources of pollutants			
Pollutants likely to be present			
Storm Water Best Management Practices			
Non-Structural BMPs			
Good Housekeeping			
Preventative Maintenance			
Spill Response			
Material Handling and Storage			
Employee Training			
Waste Handling / Waste Recycling			
Recordkeeping and Internal Reporting			
Erosion Control and Site Stabilization			
Inspections			
Quality Assurance			
Structural BMPs			
Overhead Coverage			
Retention Ponds			
Control Devices			
Secondary Containment Structures			
Treatment			
Industrial Activity BMPs/Pollutant Summary			

Storm Water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Annual Comprehensive Site Compliance Evaluation			
Review of visual observations, inspections, and sampling analysis			
Visual inspection of potential pollution sources			
Review and evaluation of BMPs			
Evaluation Report			

ITEM A-2

FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

*****Form Pollution Prevention Team
*****Review other plans

ASSESSMENT PHASE

*****Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*****List significant spills and leaks
*****Identify non-storm water discharges
*****Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

*****Non-structural BMPs
*Structural BMPs
*Select activity and site-specific BMPs

IMPLEMENTATION PHASE

*****Train employees
*****Implement BMPs
*****Collect and review records

EVALUATION/MONITORING

*****Conduct annual site evaluation
*****Review monitoring information
*****Evaluate BMPs
*****Review and revise SWPPP

ITEM A-3
EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to prevent tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques
		Spills caused by topping off fuel tanks	fuel oil	
		Hosing or washing down fuel area	fuel oil	
		Leaking storage tanks	fuel oil	
		Rainfall running off fuel area, and rainfall running onto and off fueling area	fuel oil	

ATTACHMENT H – BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION PLAN FOR UTILITY VAULT AND MANHOLE DEWATERING DISCHARGES (UTILITY VAULT PLAN)

I. IMPLEMENTATION

The Discharger shall develop and implement a Best Management Practices and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan) which achieves the objectives and the specific requirements listed below. The existing Utility Vault Plan shall continue to be implemented. The revised Utility Vault Plan shall be implemented as soon as possible but no later than 1 year from the effective date of this Order.

II. OBJECTIVE

Through implementation of the Utility Vault Plan, the Discharger shall prevent or minimize the generation and the potential for the release of pollutants from the Facility to the waters of the United States through normal operations and ancillary activities.

III. The Utility Vault Plan shall include, to the extent possible, at least the following items:

A. Provisions for scheduled discharges, unscheduled discharges, reservoir discharges (if any), and emergency operation discharges.

B. Pollution Prevention Team. The Utility Vault Plan shall identify a specific individual or individuals as members of a Pollution Prevention Team that are responsible for developing the Utility Vault Plan and assisting in its implementation, maintenance, and revision. The Utility Vault Plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the Utility Vault Plan.

C. Description of Potential Pollutant Sources. The Utility Vault Plan shall provide a description of potential sources that may add significant amounts of pollutants to discharges. The Utility Vault Plan shall identify all activities and significant materials that may potentially be significant pollutant sources. The Utility Vault Plan shall include at a minimum:

1. **Drainage Map.** Provide a map showing the essential features of the distribution system for the service area boundary and showing the corresponding surface waters to which water may be discharged.

2. **Inventory of Exposed Materials.** Include an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a description of significant materials that have been handled, treated, stored, or disposed of in a manner to allow exposure to storm water from the previous 3 years and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff from the previous 3 years and the present; the location and description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

3. **Spills and Leaks**. Include a list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas exposed to precipitation or that otherwise enter the discharge stream from the previous 3 years through the present. The list shall be updated as appropriate.

4. **Risk Identification and Summary of Potential Pollutant Sources.** Include a narrative description of the potential pollutant sources, such as from significant dust or particulate generating processes. The description shall specifically list any significant potential source of pollutants at the site and, for each potential source; any pollutant or pollutant parameter (e.g., oil and grease) of concern shall be identified.

D. Measures and Controls. The Discharger shall develop a description of BMPs appropriate for the site(s), and implement such controls. The appropriateness and priorities of BMPs in a Utility Vault Plan must reflect identified potential sources of pollutants at the site. Also, the Discharger should discuss the advantages and limitations of the Utility Vault Plan. If relevant, include a structural diagram. The description of wastewater management controls shall address the following minimum components, including a schedule for implementing such controls:

1. **Good Housekeeping.** Maintain areas that may contribute pollutants to discharges so that they are kept clean and orderly. Store and contain liquid materials in such a manner that if the container is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface water, or groundwater.

2. **Preventative Maintenance.** Inspect and maintain wastewater management devices as well as inspect and test site equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensure appropriate maintenance of such equipment and systems.

3. **Spill Prevention and Response Procedures.** Identify areas where potential spills, can contribute to pollutants discharges, and their associated drainage points. Specify material handling procedures, storage requirements, and use of equipment. Make accessible to the appropriate personnel the procedures for cleaning up spills identified in the Utility Vault Plan. Note that if the spilled material is hazardous, then the cleanup materials used are also hazardous and should be disposed of properly. For large spills, the assistance of a private spill cleanup company or Hazmat may be necessary.

4. **Inspections.** Identify qualified personnel, by name or by job title, to inspect designated equipment and areas of the site, and ensure that appropriate actions are taken in response to the inspections. Maintain records of inspections. Inventory and inspect each discharge point during dry weather.

5. **Employee Training.** Train employees to implement activities identified in the Utility Vault Plan. Address topics such as spill response, good housekeeping, and material management practices. Identify how often training will take place.

6. **Record Keeping and Internal Reporting Procedures.** Federal Regulations require that any oil spill to a water body be reported to the National Response Center at (800) 424-8802 (24 hours). The Discharger shall report spills to the appropriate local agency, such as the fire department, to assist in cleanup. Provide a description of incidents (such as spills or

other discharges), along with other information describing the quality and quantity of discharges. Document patterns in time of occurrence, mode of dumping, responsible parties, date and time of incident, weather conditions, duration and cause of spill/leak/discharge, response procedures, resulting environmental problems, and persons notified. Document inspections and maintenance activities and maintain records of such activities. Include the date and time the inspection was performed, the name of the inspector, and the items inspected. If problems are noted, include the corrective action required and the date the action was taken.

7. **Sediment and Erosion Control.** Identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

8. **Management Runoff.** Include a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage runoff in a manner that reduces pollutants in discharges from the site. The Utility Vault Plan shall provide measures that the Discharger determines to be reasonable and appropriate measures.

E. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations upon each discharge event. Such evaluations shall provide:

1. The Discharger shall visually inspect for evidence of, or the potential for, pollutants entering the receiving water. Evaluate measures to reduce pollutant loadings to determine whether they are adequate and properly implemented in accordance with the terms of this Order or whether additional control measures are needed. Ensure that structural wastewater management measures, sediment and erosion control measures, and other structural BMPs identified in the Utility Vault Plan are operating correctly. Perform a visual inspection of equipment needed to implement the Utility Vault Plan, such as spill response equipment.

2. Based on the results of the evaluation, the Discharger shall revise, as appropriate, the description of potential pollutant sources identified in the Utility Vault Plan in accordance with section III.C above and the BMPs identified in the Utility Vault Plan in accordance with section III.D above within 2 weeks of such evaluation and shall provide timely implementation of any changes to the Utility Vault Plan.

3. Write and retain for 3 years, a report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the Utility Vault Plan, and actions taken in accordance with section III.D.2, above. Identify any incidents of noncompliance or certify that the site(s) is in compliance with the Utility Vault Plan and this Order. The report shall be signed in accordance with the signatory requirements of Standard Provision V.B. of Attachment D of this Order.

F. Additional requirements include:

1. The Utility Vault Plan shall be designed to comply with BAT/BCT and to ensure compliance with water quality standards.

2. The Discharger shall amend the Utility Vault Plan whenever there is a change in construction, operation, or maintenance, when such amendment is necessary to ensure compliance with BAT/BCT and receiving water limitations. The Utility Vault Plan shall also be amended if it is in violation of any conditions of this Order or has not achieved the general objective of controlling pollutants in discharges to surface waters. The Discharger shall submit the amended the Utility Vault Plan to the San Diego Water Board.

3. The Utility Vault Plan and any amendments thereto shall be certified in accordance with the signatory requirements of Standard Provision V.B. of Attachment D of this Order.

IV. If an exceedance(s) of a receiving water limitation defined in section V. of this Order, expressed either narrative or numerically, has been identified by the Discharger or the San Diego Water Board as a result of a discharge from utility vault or manhole dewatering, either of the following actions shall be undertaken to ensure compliance with this Order:

A. The Discharger shall submit to the San Diego Water Board with the next quarterly report documentation that 1) the Discharger has addressed the cause of the exceedance, 2) the Discharger is now fully in compliance with the provision contained in section VI.C.3.a of this Order, and 3) implementation of the Utility Vault Plan will prevent future exceedance(s) of the receiving water limitations; or

B. The Discharger shall develop and implement a revised Utility Vault Plan with new or revised BMPs to prevent future exceedance(s). The Discharger shall implement such BMPs and document the progress of implementation and the effectiveness thereof in the annual report.

ATTACHMENT I – BEST MANAGEMENT PRACTICES PLAN FOR PIER BOOM CLEANING, PIER WASHING, UNUSED SAN DIEGO BAY WATER FROM BUILDING 111, ABALONE TANK DISCHARGES, SMALL BOAT RINSING, MARINE MAMMAL ENCLOSURE CLEANING, MARINE MAMMAL POOL DISCHARGES, AND DRY DOCK PRE-FLOOD CLEANING

I. Implementation

The Discharger shall develop and implement a Best Management Practices (BMP) Plan which achieves the objectives and the specific requirements listed below for the activities of pier boom cleaning, pier washing, unused San Diego Bay water from building 111, abalone tank discharges, small boat rinsing, marine mammal enclosure cleaning, and marine mammal pool discharges, and dry dock pre-flood cleaning. Existing BMP Plans for these activities shall continue to be implemented. The revised BMP Plan for these activities shall be implemented as soon as possible but no later than 1 year from the effective date of this Order.

II. Purpose

Through implementation of the BMP Plan, the Discharger shall prevent or minimize the generation and the potential for the release of pollutants from the Facility to the waters of the United States through normal operations and ancillary activities. The BMP Plan shall address at a minimum ballast water, pier boom cleaning, pier washing, unused San Diego Bay water from building 111, abalone tank discharges, small boat rinsing, marine mammal enclosure cleaning, marine mammal pool discharges, and dry dock pre-flood cleaning.

III. Objectives

The Discharger shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants:

A. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the Facility shall be minimized by the Discharger to the extent feasible by managing each waste stream in the most appropriate manner.

B. The Discharger shall ensure proper operation and maintenance of the Facility. Standard Operating Procedures (SOPs) may be included in the BMP Plan or referenced.

C. The Discharger shall evaluate each component or system for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to waters of the United States due to equipment failure, improper operation, and natural phenomena such as rain or snowfall, or other emergency situation. The evaluation shall include all normal operations and ancillary activities at a minimum related to ballast water, pier boom cleaning, pier washing, unused San Diego Bay water from building 111, abalone tank discharges, small boat rinsing, marine mammal enclosure cleaning, dry dock pre-flood cleaning, and marine mammal pool discharges and any other activities which have the potential to discharge pollutants. The Discharger shall have a plan to address any emergency situation which would result in a significant release of pollutants to waters of the United States including those identified in this evaluation.

IV. Requirements

A. The BMP Plan shall be consistent with the objectives in section III above and the general guidance contained in the publication entitled *Guidance Manual for Developing Best Management Practices (BMPs)* (USEPA, 1993) or any subsequent revisions to the guidance document.

B. The BMP Plan shall 1) be documented in narrative form, 2) include any necessary plot plans, drawings or maps, and 3) be developed in accordance with good engineering practices.

C. The BMP Plan shall be organized and written with the following elements:

1. Purpose and objectives of the BMP Plan

2. Name and location of the activity with specific BMPs.

3. Specific management practices and standard operating procedures to achieve the above objectives, including, but not limited to, the following:

a. Modification of equipment, facilities, technology, processes, and procedures,

b. Reformulation or redesign of products,

c. Substitution of materials,

d. Improvement in management, inventory control, materials handling or general operational phases of the facility, and

e. Materials compatibility.

4. Good housekeeping.

5. Preventative maintenance.

6. Risk identification and assessment.

7. Reporting of BMP incidents and spills.

8. Inspections and records.

9. Employee training.

D. The BMP Plan shall establish specific BMPs to meet the objectives identified in section III of this Attachment, addressing each component or system capable of generating or causing a release of significant amounts of pollutants, and identifying specific preventative or remedial measures to be implemented.

E. The BMP Plan shall establish specific BMPs or other measures which ensure that the following specific requirements are met:

1. Ensure that the discharge of pollutants including, but not limited to, copper, benzo (b) fluoranthene, benzo (k) fluoranthene, and chrysene from pier boom, fender, and mooring cleaning is reduced to levels that do not exceed water quality objectives. (RPA)

2. Ensure that discharge of pollutants including, but not limited to, copper and zinc in dry dock flood water is reduced to levels that do not exceed water quality objectives. (RPA and Benchmarks)

F. The BMP Plan shall include a statement this BMP Plan fulfills the requirements of this Order and shall be signed and certified in accordance with the signatory requirements of Standard Provision V.B. of Attachment D.

V. Documentation

The Discharger shall maintain a copy of the BMP Plan at the Facility and shall make it available to the San Diego Water Board upon request. All offices of the Discharger which are required to maintain a copy of the NPDES permit shall also maintain a copy of the BMP Plan.

VI. BMP Plan Modification

The Discharger shall amend the BMP Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to the receiving waters. The Discharger shall also amend the BMP Plan, as appropriate, when operations covered by the BMP Plan change. Any such changes to the BMP Plan shall be consistent with the objectives and specific requirements listed above. All changes in the BMP Plan shall be reported to the San Diego Water Board in writing.

VII. Modification for Ineffectiveness

At any time, if the BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or the specific requirements above, the Order and/or the BMP Plan shall be subject to modification to incorporate revised BMP requirements.

ATTACHMENT J – DISCHARGE PROHIBITIONS CONTAINED IN THE BASIN PLAN

I. Basin Plan Discharge Prohibitions

A. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

B. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.

C. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.

D. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues an NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

E. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

F. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

G. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit it being transported into the waters, is prohibited unless authorized by the San Diego Water Board.

H. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities.] [Section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

I. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.

J. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.

K. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.

L. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.

M. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

N. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the State or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

O. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

P. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

Q. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at MLLW is prohibited.

R. The discharge of treated sewage from vessels, which do not have a properly functioning USCG certified Type 1 or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

ATTACHMENT K – SEDIMENT MONITORING AND ANALYSIS

I. SEDIMENT MONITORING DETAILED REQUIREMENTS

A. Field Procedures

1. All samples shall be collected using a grab sampler.

2. Benthic samples shall be screened through a 1.0 mm-mesh screen.

3. Surface sediment from within the upper 5 cm shall be collected for chemistry and toxicity analyses.

4. The entire contents of the grab sample, with a minimum penetration depth of 5 cm, shall be collected for benthic community analysis.

5. Bulk sediment chemical analysis will include at a minimum the pollutants identified in Table K-1.

B. Laboratory Testing

All samples will be tested in accordance with U.S. Environmental Protection Agency (USEPA) or American Society for Testing and Materials (ASTM) methodologies where such methods exist. Where no USEPA or ASTM methods exist, the State Water Board or Regional Water Quality Control Boards (San Diego Water Boards) (collectively Water Boards) shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the California Department of Health Services in accordance with Water Code Section 13176.

C. Sediment Toxicity

A 10-Day amphipod survival test shall be performed using a species tolerant of the sample salinity and grain size characteristics (*e.g., Hyalella azteca* or *Eohaustorius estuaries*). The results shall be recorded as “Percent of control survival”.

D. Sediment Chemistry

All samples shall be tested for the analytes specified in Table K-1. In water bodies where other toxic pollutants are believed to pose risk to benthic communities, those toxic pollutants shall be identified and included by the Discharger. Inclusion of the additional analytes cannot be used in the exposure assessment, however the data can be used to conduct more effective stressor identification studies as described in the Sediment Quality Policy.

Table K-1. List of Chemical Analytes Needed to Characterize Sediment Contamination Exposure and Effect.

Chemical Name	Chemical Group
Total Organic Carbon	General
Percent Fines	General
Cadmium	Metal
Copper	Metal
Lead	Metal
Mercury	Metal
Zinc	Metal
Acenaphthene	PAH
Anthracene	PAH
Biphenyl	PAH
Naphthalene	PAH
2,6-dimethylnaphthalene	PAH
Fuorene	PAH
1-methylnaphthalene	PAH
2-methylnaphthalene	PAH
1-methylphenanthrene	PAH
Phenanthrene	PAH
Benzo(a)anthracene	PAH
Benzo(a)pyrene	PAH
Benzo(e)pyrene	PAH
Chrysene	PAH
Dibenz(a,h)anthracene	PAH
Fluoranthene	PAH
Perylene	PAH
Pyrene	PAH
Alpha Chlordane	Pesticide
Gamma Chlordane	Pesticide
Trans Nonachlor	Pesticide
Dieldrin	Pesticide

Chemical Name	Chemical Group
o,p'-DDE	Pesticide
o,p'-DDD	Pesticide
o,p'-DDT	Pesticide
p,p'-DDD	Pesticide
p,p'-DDE	Pesticide
p,p'-DDT	Pesticide
2,4'-Dichlorobiphenyl	PCB congener
2,2',5-Trichlorobiphenyl	PCB congener
2,4,4'-Trichlorobiphenyl	PCB congener
2,2',3,5'-Tetrachlorobiphenyl	PCB congener
2,2',5,5'-Tetrachlorobiphenyl	PCB congener
2,3',4,4'-Tetrachlorobiphenyl	PCB congener
2,2',4,5,5'-Pentachlorobiphenyl	PCB congener
2,3,3',4,4'-Pentachlorobiphenyl	PCB congener
2,3',4,4',5-Pentachlorobiphenyl	PCB congener
2,2',3,3',4,4'-Hexachlorobiphenyl	PCB congener
2,2',3,4,4',5'-Hexachlorobiphenyl	PCB congener
2,2',4,4',5,5'-Hexachlorobiphenyl	PCB congener
2,2',3,3',4,4',5-Heptachlorobiphenyl	PCB congener
2,2',3,4,4',5,5'-Heptachlorobiphenyl	PCB congener
2,2',3,4',5,5',6-Heptachlorobiphenyl	PCB congener
2,2',3,3',4,4',5,6-Octachlorobiphenyl	PCB congener
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	PCB congener
Decachlorobiphenyl	PCB congener

E. Benthic Community Condition

The Discharger shall identify all benthic invertebrates at the sample locations and reference stations to the lowest possible taxon and counted.

The Discharger shall identify the abundance of sensitive indicator taxa, tolerant indicator taxa, and total abundance. The Discharger shall then compare the results from the sampling locations to the reference locations.

ATTACHMENT L – ELEMENTS FOR SMALL MUNICIPAL (MILITARY BASE) SEPARATE STORM SEWER SYSTEM (MS4) – STORM WATER MANAGEMENT PROGRAM (SWMP)

I. SIX MINIMUM CONTROL MEASURES. The SWMP shall describe BMPs, and associated measurable goals, that fulfill the requirements of the following six Minimum Control Measures:

A. Public Education and Outreach on Storm Water Impacts. The SWMP shall contain a written plan to distribute educational materials to the target audiences identified below, or conduct equivalent outreach activities about the effects of storm water discharges on water bodies and the steps that the target audiences can take to reduce pollutants in storm water runoff

The SWMP shall contain a list of target audience groups consisting of civilian, contactor, retailers military personnel (including dependents) that are present on the Facility and may be conducting activities that could have potential adverse effect(s) to water quality.

B. Public Involvement/Participation Program. The SWMP shall contain a written Public Involvement/Participation Program to:

1. Regularly encourage public participation in the development and implementation of the SWMP*;*

2. Establish a platform for the public and target audiences to provide input into the development and implementation of the SWMP;

3. Solicit public reporting of suspected illicit discharges via telephone and writing; and

4. Implement procedures for the receipt and consideration of verbal or written public inquires, concerns, and information submitted by the public.

C. Illicit Discharge Detection and Elimination. The SWMP shall contain a written Illicit Discharge Detection and Elimination Program containing the following elements:

1. A written program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2)) into the storm water drainage systems;

2. A storm sewer system map, showing the location of all storm water drainage systems, outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls;

3. A prohibition against non-storm water discharges into the storm water drainage system except as allowed under Non-Storm Water Specifications IV.F of this Order;

4. A plan to detect and address non-storm water discharges, including illegal dumping, to the MS4 system that are not authorized by a separate NPDES permit;

5. A plan to inform the target audiences of the hazards that are generally associated with illegal discharges and improper disposal of waste; and

6. A plan to address the categories of non-storm water discharges or flows as specified in Non-Storm Water Specification IV.F of this Order (i.e., authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the storm water collection system.

D. Construction Site Storm Water Runoff Control. The SWMP shall contain a written *Construction Site Storm Water Runoff Control* program to reduce pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must, at a minimum, include the development and implementation of:

1. Mechanisms to require erosion and sediment controls, as well as enforcement mechanisms, to ensure compliance;

2. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;

3. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

4. Procedures for site plan review which incorporate consideration of potential water quality impacts;

5. Procedures for receipt and consideration of information submitted by the public. The Discharger shall demonstrate acknowledgement and consideration of the information submitted, whether submitted verbally or in writing; and

6. Procedures for site inspection and enforcement of control measures.

7. Procedures for verifying that the site has existing coverage under California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities (hereinafter General Construction Permit).

E. Post-Construction Storm Water Management in New Development and Redevelopment. The SWMP shall contain a written Post-Construction Storm Water Management Program to:

1. Address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development, that discharge into the storm water drainage system by ensuring that controls are in place that would prevent or minimize water quality impacts, and that are designed to maintain pre-project runoff condition

2. Develop and implement water quality strategies, which include a combination of structural and/or non-structural BMPs appropriate for the Facility;

3. Develop or use a mechanism to address post-construction runoff from new development and redevelopment projects.

4. Ensure adequate long-term operation and maintenance of water quality BMPs.

5. Maintain and regularly update an inventory of BMPs installed pursuant to the SWMP. The inventory shall include, at a minimum:

a. Exact location of BMP(s);

b. Contact information for the individual or entity responsible for long term BMP operation and maintenance;

c. A description of the BMP and the year it was installed;

d. Maintenance required;

e. Actual inspection/maintenance activities that occurred during the reporting year; and

f. An assessment by the Discharger if proper operation and maintenance occurred during the year, and if not, what actions the Discharger has taken, or will take, to address the deficiencies.

F. Pollution Prevention/Good Housekeeping. The SWMP shall contain a written *Pollution Prevention/Good Housekeeping Program* that is sufficient to minimize pollutant runoff from on-site operations. The Discharger may incorporate by reference, other plans implemented at the Facility (i.e., SWPPP and BMP Plan) that address similar goals. The Discharger shall :

1. Develop *and* implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from Facility operations: and

2. Using training materials that are available from USEPA, the State, or other organizations, include target audience training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

II. MEASUREABLE GOALS. The SWMP must identify the measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

III. SWMP ANNUAL REVIEW. The SWMP shall be reviewed annually and revised as necessary. A summary of each annual review, the identified inadequacies, and any planned efforts to address the identified inadequacies shall be maintained as an attachment to the SWMP for a minimum of 5 years.

ATTACHMENT M – STORM WATER RISK LEVEL DESIGNATION TABLE

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-001	Main Base-1	Municipal	Non-Industrial	32° 40' 44" N	117° 14' 16" W	San Diego Bay
NBPL-002	Main Base-2	Municipal	Non-Industrial	32° 40' 48" N	117° 14' 17" W	San Diego Bay
NBPL-003	Main Base-3	Municipal	Non-Industrial	32° 40' 53" N	117° 14' 17" W	San Diego Bay
NBPL-004	Main Base-5	Municipal	Non-Industrial	32° 41' 0" N	117° 14' 11" W	San Diego Bay
NBPL-005	Main Base-6	Municipal	Non-Industrial	32° 41' 0" N	117° 14' 11" W	San Diego Bay
NBPL-006	Main Base-7	Municipal	Non-Industrial	32° 41' 3" N	117° 14' 8" W	San Diego Bay
NBPL-007	Main Base-8	Municipal	Non-Industrial	32° 41' 4" N	117° 14' 6" W	San Diego Bay
NBPL-008	Main Base-9	Municipal	Non-Industrial	32° 41' 8" N	117° 14' 9" W	San Diego Bay
NBPL-009	Main Base-10	Municipal	Non-Industrial	32° 41' 12" N	117° 14' 11" W	San Diego Bay
NBPL-011	Main Base-11	Industrial	Low Risk	32° 41' 13" N	117° 14' 15" W	San Diego Bay
NBPL-012	Main Base-11A	Industrial	Low Risk	32° 41' 13" N	117° 14' 14" W	San Diego Bay
NBPL-013	Main Base-11B	Municipal	Non-Industrial	32° 41' 11" N	117° 14' 17" W	San Diego Bay
NBPL-014	MainBase12	Municipal	Non-Industrial	32° 41' 17" N	117° 14' 17" W	San Diego Bay
NBPL-015	Main Base-13	Municipal	Non-Industrial	32° 41' 21" N	117° 14' 20" W	San Diego Bay
NBPL-016	Main Base-14	Municipal	Non-Industrial	32° 41' 27" N	117° 14' 23" W	San Diego Bay
NBPL-017	Main Base-15	Municipal	Non-Industrial	32° 41' 29" N	117° 14' 23" W	San Diego Bay
NBPL-018	Main Base-18	Municipal	Non-Industrial	32° 41' 39" N	117° 14' 23" W	San Diego Bay
NBPL-019	Main Base-19	Municipal	Non-Industrial	32° 41' 44" N	117° 14' 27" W	San Diego Bay
NBPL-020	Main Base-20	Municipal	Non-Industrial	32° 41' 46" N	117° 14' 25" W	San Diego Bay
NBPL-021	Main Base-22A	Municipal	Non-Industrial	32° 41' 14" N	117° 14' 15" W	San Diego Bay
NBPL-022	Main Base-22B	Municipal	Non-Industrial	32° 41' 14" N	117° 14' 15" W	San Diego Bay
NBPL-023	Main Base-22C	Municipal	Non-Industrial	32° 41' 14" N	117° 14' 15" W	San Diego Bay
NBPL-024	Main Base-22D	Municipal	Non-Industrial	32° 41' 14" N	117° 14' 16" W	San Diego Bay
NBPL-025	Main Base-22F	Municipal	Non-Industrial	32° 41' 16" N	117° 14' 16" W	San Diego Bay
NBPL-026	Main Base-22G	Municipal	Non-Industrial	32° 41' 16" N	117° 14' 17" W	San Diego Bay
NBPL-027	Main Base-22H	Municipal	Non-Industrial	32° 41' 16" N	117° 14' 17" W	San Diego Bay
NBPL-028	Main Base-22I	Municipal	Non-Industrial	32° 41' 17" N	117° 14' 17" W	San Diego Bay
NBPL-029	Main Base-22K	Municipal	Non-Industrial	32° 41' 17" N	117° 14' 18" W	San Diego Bay
NBPL-030	Main Base-23A	Municipal	Non-Industrial	32° 41' 18" N	117° 14' 18" W	San Diego Bay
NBPL-031	Main Base-23B	Industrial	Low Risk	32° 41' 19" N	117° 14' 18" W	San Diego Bay

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-032	Main Base-23D	Municipal	Non-Industrial	32° 41' 19" N	117° 14' 18" W	San Diego Bay
NBPL-033	Main Base-23E	Municipal	Non-Industrial	32° 41' 20" N	117° 14' 19" W	San Diego Bay
NBPL-034	Main Base-23J	Municipal	Non-Industrial	32° 41' 21" N	117° 14' 20" W	San Diego Bay
NBPL-035	Main Base-24	Industrial	Low Risk	32° 41' 23" N	117° 14' 18" W	San Diego Bay
NBPL-036	Main Base-25	Industrial	Low Risk	32° 41' 21" N	117° 14' 11" W	San Diego Bay
NBPL-037	Main Base-26	Industrial	High Risk	32° 41' 16" N	117° 14' 6" W	San Diego Bay
NBPL-038	Main Base-27	Industrial	High Risk	32° 41' 13" N	117° 14' 9" W	San Diego Bay
NBPL-039	Main Base-28	Industrial	High Risk	32° 41' 17" N	117° 14' 5" W	San Diego Bay
NBPL-040	Main Base-29	Municipal	Non-Industrial	32° 41' 3" N	117° 14' 7" W	San Diego Bay
NBPL-041	Main Base-30	Municipal	Non-Industrial	32° 41' 5" N	117° 14' 6" W	San Diego Bay
NBPL-042	Main Base-31	Industrial	Low Risk	32° 41' 50" N	117° 14' 39" W	San Diego Bay
NBPL-043	Main Base-31 (Sample Location)	Industrial	No Exposure	32° 41' 48" N	117° 14' 39" W	San Diego Bay
NBPL-044	Main Base-32A	Municipal	Non-Industrial	32° 41' 24" N	117° 14' 21" W	San Diego Bay
NBPL-045	Main Base-32C	Municipal	Non-Industrial	32° 41' 23" N	117° 14' 20" W	San Diego Bay
NBPL-046	Main Base-33	Municipal	Non-Industrial	32° 40' 53" N	117° 14' 17" W	San Diego Bay
NBPL-047	Main Base-52	Industrial	Low Risk	32° 42' 27" N	117° 15' 18" W	Pacific Ocean
NBPL-048	Main Base-53	Municipal	Non-Industrial	32° 41' 21" N	117° 14' 20" W	San Diego Bay
NBPL-049	Main Base-54	Municipal	Non-Industrial	32° 41' 20" N	117° 14' 19" W	San Diego Bay
NBPL-050	Main Base-55	Municipal	Non-Industrial	32° 41' 19" N	117° 14' 18" W	San Diego Bay
NBPL-051	Main Base-56	Municipal	Non-Industrial	32° 41' 19" N	117° 14' 18" W	San Diego Bay
NBPL-052	Main Base-57	Municipal	Non-Industrial	32° 41' 22" N	117° 14' 19" W	San Diego Bay
NBPL-053	Main Base-58	Municipal	Non-Industrial	32° 41' 12" N	117° 14' 11" W	San Diego Bay
NBPL-054	Main Base-59	Municipal	Non-Industrial	32° 40' 59" N	117° 14' 13" W	San Diego Bay
NBPL-055	Main Base-60	Municipal	Non-Industrial	32° 41' 3" N	117° 14' 8" W	San Diego Bay
NBPL-056	Main Base-62	Municipal	Non-Industrial	32° 41' 10" N	117° 14' 2" W	San Diego Bay
NBPL-057	Main Base-63	Municipal	Non-Industrial	32° 41' 10" N	117° 14' 1" W	San Diego Bay
NBPL-058	Main Base-64	Municipal	Non-Industrial	32° 41' 11" N	117° 14' 0" W	San Diego Bay
NBPL-059	Main Base-65	Municipal	Non-Industrial	32° 41' 11" N	117° 14' 0" W	San Diego Bay
NBPL-060	MSF-1	Municipal	Non-Industrial	32° 41' 36" N	117° 14' 22" W	San Diego Bay
NBPL-061	MSF-3	Municipal	Non-Industrial	32° 41' 37" N	117° 14' 19" W	San Diego Bay
NBPL-062	MSF-4	Municipal	Non-Industrial	32° 41' 37" N	117° 14' 23" W	San Diego Bay

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-063	MSF-5	Municipal	Non-Industrial	32° 41' 38" N	117° 14' 23" W	San Diego Bay
NBPL-064	MSF-6	Municipal	Non-Industrial	32° 41' 43" N	117° 14' 24" W	San Diego Bay
NBPL-065	MSF-7	Municipal	Non-Industrial	32° 41' 38" N	117° 14' 23" W	San Diego Bay
NBPL-066	MSF-8	Municipal	Non-Industrial	32° 41' 33" N	117° 14' 22" W	San Diego Bay
NBPL-067	MSF-SF1	Municipal	Non-Industrial	32° 41' 46" N	117° 14' 24" W	San Diego Bay
NBPL-068	MSF-SF2	Municipal	Non-Industrial	32° 41' 42" N	117° 14' 24" W	San Diego Bay
NBPL-069	MSF-SF3	Municipal	Non-Industrial	32° 41' 35" N	117° 14' 22" W	San Diego Bay
NBPL-070	MSF-SF4	Municipal	Non-Industrial	32° 41' 34" N	117° 14' 22" W	San Diego Bay
NBPL-071	MSF-SF5	Municipal	Non-Industrial	32° 41' 33" N	117° 14' 22" W	San Diego Bay
NBPL-072	FLC-1	Industrial	No Exposure	32° 42' 4" N	117° 14' 17" W	San Diego Bay
NBPL-073	FLC-2	Industrial	No Exposure	32° 42' 1" N	117° 14' 18" W	San Diego Bay
NBPL-074	FLC-4	Municipal	Non-Industrial	32° 41' 54" N	117° 14' 21" W	San Diego Bay
NBPL-075	FLC-6	Municipal	Non-Industrial	32° 41' 55" N	117° 14' 22" W	San Diego Bay
NBPL-076	FLC-7	Industrial	No Exposure	32° 42' 12" N	117° 14' 20" W	San Diego Bay
NBPL-077	FLC-8	Industrial	No Exposure	32° 42' 23" N	117° 14' 21" W	San Diego Bay
NBPL-078	FLC-10	Industrial	No Exposure	32° 42' 2" N	117° 14' 12" W	San Diego Bay
NBPL-079	FLC-12	Municipal	Non-Industrial	32° 41' 59" N	117° 14' 20" W	San Diego Bay
NBPL-080	FLC-14	Municipal	Non-Industrial	32° 41' 57" N	117° 14' 22" W	San Diego Bay
NBPL-081	FLC-15	Municipal	Non-Industrial	32° 41' 53" N	117° 14' 21" W	San Diego Bay
NBPL-082	FLC-OLF 1	Municipal	Non-Industrial	32° 41' 53" N	117° 14' 18" W	San Diego Bay
NBPL-083	SSC PLC-1	Municipal	Non-Industrial	32° 42' 23" N	117° 14' 12" W	San Diego Bay
NBPL-084	SSC PLC-2	Industrial	Low Risk	32° 42' 19" N	117° 14' 11" W	San Diego Bay
NBPL-085	SSC PLC-3	Municipal	Non-Industrial	32° 42' 16" N	117° 14' 11" W	San Diego Bay
NBPL-086	SSC PLC-5	Industrial	Low Risk	32° 42' 15" N	117° 14' 11" W	San Diego Bay
NBPL-087	SSC PLC-6	Municipal	Non-Industrial	32° 42' 16" N	117° 14' 11" W	San Diego Bay
NBPL-088	SSC PLC-7	Municipal	Non-Industrial	32° 42' 16" N	117° 14' 11" W	San Diego Bay
NBPL-089	SSC PLC-8	Municipal	Non-Industrial	32° 42' 14" N	117° 14' 11" W	San Diego Bay
NBPL-090	SSC PLC-9	Municipal	Non-Industrial	32° 42' 14" N	117° 14' 11" W	San Diego Bay
NBPL-091	SSC PLC-10	Industrial	Low Risk	32° 42' 12" N	117° 14' 11" W	San Diego Bay
NBPL-092	SSC PLC-11	Industrial	No Exposure	32° 42' 10" N	117° 14' 13" W	San Diego Bay
NBPL-093	SSC PLC-12A	Municipal	Non-Industrial	32° 42' 9" N	117° 14' 13" W	San Diego Bay
NBPL-094	SSC PLC-12B	Municipal	Non-Industrial	32° 42' 9" N	117° 14' 13" W	San Diego Bay

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-095	SSC PLC-23	Municipal	Non-Industrial	32° 40' 42" N	117° 14' 36" W	San Diego Bay
NBPL-096	SSC PLC-24	Municipal	Non-Industrial	32° 40' 45" N	117° 14' 39" W	Pacific Ocean
NBPL-097	SSC PLC-25	Municipal	Non-Industrial	32° 40' 38" N	117° 14' 41" W	Pacific Ocean
NBPL-098	SSC PLC-26	Municipal	Non-Industrial	32° 39' 59" N	117° 14' 40" W	Pacific Ocean
NBPL-099	SSC PLC-27	Municipal	Non-Industrial	32° 40' 0" N	117° 14' 40" W	Pacific Ocean
NBPL-100	SSC PLC-28	Municipal	Non-Industrial	32° 40' 0" N	117° 14' 40" W	Pacific Ocean
NBPL-102	SSC PLC-30	Municipal	Non-Industrial	32° 40' 3" N	117° 14' 41" W	Pacific Ocean
NBPL-103	SSC PLC-31	Municipal	Non-Industrial	32° 40' 3" N	117° 14' 41" W	Pacific Ocean
NBPL-104	SSC PLC-32	Municipal	Non-Industrial	32° 40' 57" N	117° 14' 52" W	Pacific Ocean
NBPL-105	SSC PLC-33	Municipal	Non-Industrial	32° 41' 14" N	117° 14' 59" W	Pacific Ocean
NBPL-106	SSC PLC-34	Municipal	Non-Industrial	32° 41' 15" N	117° 14' 59" W	Pacific Ocean
NBPL-107	SSC PLC-35	Municipal	Non-Industrial	32° 41' 24" N	117° 15' 1" W	Pacific Ocean
NBPL-108	SSC PLC-36	Municipal	Non-Industrial	32° 41' 28" N	117° 15' 4" W	Pacific Ocean
NBPL-109	SSC PLC-37	Municipal	Non-Industrial	32° 41' 32" N	117° 15' 5" W	Pacific Ocean
NBPL-110	SSC PLC-38	Municipal	Non-Industrial	32° 41' 36" N	117° 15' 8" W	Pacific Ocean
NBPL-111	SSC PLC-39	Municipal	Non-Industrial	32° 41' 46" N	117° 15' 12" W	Pacific Ocean
NBPL-112	SSC PLC-40	Municipal	Non-Industrial	32° 41' 48" N	117° 15' 14" W	Pacific Ocean
NBPL-113	SSC PLC-40A	Municipal	Non-Industrial	32° 41' 48" N	117° 15' 14" W	Pacific Ocean
NBPL-114	SSC PLC-41	Municipal	Non-Industrial	32° 41' 49" N	117° 15' 13" W	Pacific Ocean
NBPL-115	SSC PLC-42	Municipal	Non-Industrial	32° 41' 54" N	117° 15' 15" W	Pacific Ocean
NBPL-116	SSC PLC-43	Municipal	Non-Industrial	32° 41' 56" N	117° 15' 17" W	Pacific Ocean
NBPL-117	SSC PLC-43A	Municipal	Non-Industrial	32° 41' 57" N	117° 15' 19" W	Pacific Ocean
NBPL-118	SSC PLC-43B	Municipal	Non-Industrial	32° 41' 57" N	117° 15' 19" W	Pacific Ocean
NBPL-119	SSC PLC-44	Municipal	Non-Industrial	32° 41' 58" N	117° 15' 17" W	Pacific Ocean
NBPL-120	SSC PLC-45	Municipal	Non-Industrial	32° 42' 0" N	117° 15' 17" W	Pacific Ocean
NBPL-121	SSC PLC-46	Municipal	Non-Industrial	32° 42' 0" N	117° 15' 17" W	Pacific Ocean
NBPL-122	SSC PLC-47	Municipal	Non-Industrial	32° 42' 1" N	117° 15' 18" W	Pacific Ocean
NBPL-123	SSC PLC-48	Municipal	Non-Industrial	32° 42' 11" N	117° 15' 18" W	Pacific Ocean
NBPL-125	SSC PLC-50	Municipal	Non-Industrial	32° 42' 17" N	117° 15' 18" W	Pacific Ocean
NBPL-126	SSC PLC-51	Municipal	Non-Industrial	32° 42' 20" N	117° 15' 20" W	Pacific Ocean
NBPL-127	SSC PLC-54	Industrial	No Exposure	32° 42' 8" N	117° 14' 14" W	San Diego Bay
NBPL-128	SSC PLC-58	Municipal	Non-Industrial	32° 41' 30" N	117° 15' 6" W	Pacific Ocean

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-129	SSC PLC-59	Municipal	Non-Industrial	32° 42' 9" N	117° 15' 15" W	Pacific Ocean
NBPL-130	SSC PLC-60	Municipal	Non-Industrial	32° 41' 7" N	117° 14' 59" W	Pacific Ocean
NBPL-131	SSC PLC-60A	Municipal	Non-Industrial	32° 41' 9" N	117° 14' 59" W	Pacific Ocean
NBPL-132	SSC PLC-60B	Municipal	Non-Industrial	32° 41' 5" N	117° 14' 57" W	Pacific Ocean
NBPL-133	SSC PLC-70	Municipal	Non-Industrial	32° 39' 57" N	117° 14' 29" W	Pacific Ocean
NBPL-134	SSC PLC-73	Industrial	Low Risk	32° 42' 7" N	117° 14' 16" W	San Diego Bay
NBPL-135	SSC PLC-74	Municipal	Non-Industrial	32° 42' 13" N	117° 14' 11" W	San Diego Bay
NBPL-136	SSC PLC-75	Municipal	Non-Industrial	32° 42' 14" N	117° 14' 11" W	San Diego Bay
NBPL-137	SSC PLC-76	Municipal	Non-Industrial	32° 42' 6" N	117° 15' 16" W	Pacific Ocean
NBPL-139	SSC PLC-78	Municipal	Non-Industrial	32° 41' 48" N	117° 15' 14" W	Pacific Ocean
NBPL-140	SSC PLC-79	Municipal	Non-Industrial	32° 41' 46" N	117° 15' 12" W	Pacific Ocean
NBPL-141	SSC PLC-80	Municipal	Non-Industrial	32° 39' 56" N	117° 14' 29" W	Pacific Ocean
NBPL-142	SSC PLC-OLF 1	Municipal	Non-Industrial	32° 42' 18" N	117° 14' 10" W	San Diego Bay
NBPL-143	SSC PLC-OLF 2	Municipal	Non-Industrial	32° 42' 15" N	117° 14' 8" W	San Diego Bay
NBPL-144	SSC PLC OLF-3	Industrial	Low Risk	32° 42' 13" N	117° 14' 8" W	San Diego Bay
NBPL-145	SSC PLC-OLF 4	Municipal	Non-Industrial	32° 42' 9" N	117° 14' 11" W	San Diego Bay
NBPL-146	SSC PLC OLF-5	Municipal	Non-Industrial	32° 40' 0" N	117° 14' 18" W	Pacific Ocean
NBPL-147	SSCPLCOLF6	Municipal	Non-Industrial	32° 42' 4" N	117° 15' 16" W	Pacific Ocean
NBPL-148	SSCPLCOLF8	Municipal	Non-Industrial	32° 40' 52" N	117° 14' 34" W	San Diego Bay
NBPL-149	FCTCPAC-1	Non-Industrial	Non-Industrial	32° 42' 46" N	117° 14' 53" W	City of San Diego (San Diego Bay)
NBPL-150	FCTCPAC-2	Non-Industrial	Non-Industrial	32° 42' 42" N	117° 14' 54" W	City of San Diego (San Diego Bay)
NBPL-151	FCTCPAC-3	Non-Industrial	Non-Industrial	32° 42' 39" N	117° 15' 14" W	Pacific Ocean
NBPL-152	FCTCPAC-4	Non-Industrial	Non-Industrial	32° 42' 32" N	117° 15' 15" W	Pacific Ocean
NBPL-153	FCTCPAC-5	Non-Industrial	Non-Industrial	32° 42' 28" N	117° 15' 17" W	Pacific Ocean
NBPL-154	FCTCPAC-6	Non-Industrial	Non-Industrial	32° 42' 45" N	117° 15' 18" W	Pacific Ocean
NBPL-155	FCTCPAC-7	Non-Industrial	Non-Industrial	32° 42' 31" N	117° 14' 57" W	City of San Diego (San Diego Bay)
NBPL-156	SSC OTC-1	Industrial	No Exposure	32° 44' 51" N	117° 11' 41" W	City of San Diego (San Diego Bay)

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-157	SSC OTC-2	Industrial	No Exposure	32° 44' 54" N	117° 11' 44" W	City of San Diego (San Diego Bay)
NBPL-158	SSC OTC-3	Industrial	No Exposure	32° 45' 1" N	117° 11' 50" W	City of San Diego (San Diego Bay)
NBPL-159	SSC OTC-4	Industrial	No Exposure	32° 45' 8" N	117° 11' 55" W	City of San Diego (San Diego Bay)
NBPL-160	SSC OTC-5	Industrial	Low Risk	32° 44' 46" N	117° 12' 0" W	City of San Diego (San Diego Bay)
NBPL-162	Taylor Street-1	Municipal	Non-Industrial	32° 45' 23" N	117° 12' 2" W	City of San Diego (San Diego Bay)
NBPL-163	Taylor Street-2	Municipal	Non-Industrial	32° 45' 22" N	117° 12' 3" W	City of San Diego (San Diego Bay)
NBPL-164	Taylor Street-3	Municipal	Non-Industrial	32° 45' 27" N	117° 12' 5" W	City of San Diego (San Diego Bay)
NBPL-165	NMAWC-1	Municipal	Non-Industrial	32° 43' 27" N	117° 13' 1" W	San Diego Bay
NBPL-166	NMAWC-2	Municipal	Non-Industrial	32° 43' 34" N	117° 12' 57" W	San Diego Bay
NBPL-167	NMAWC-21	Municipal	Non-Industrial	32° 43' 41" N	117° 12' 55" W	San Diego Bay
NBPL-168	NMAWC-22	Municipal	Non-Industrial	32° 43' 38" N	117° 12' 56" W	San Diego Bay
NBPL-169	NMAWC-24	Municipal	Non-Industrial	32° 43' 23" N	117° 13' 1" W	San Diego Bay
NBPL-170	NMAWC-25	Municipal	Non-Industrial	32° 43' 22" N	117° 13' 1" W	San Diego Bay
NBPL-171	NMAWC-26	Municipal	Non-Industrial	32° 43' 21" N	117° 13' 1" W	San Diego Bay
NBPL-172	NMAWC-27	Municipal	Non-Industrial	32° 43' 19" N	117° 13' 2" W	San Diego Bay
NBPL-173	NMAWC-28	Municipal	Non-Industrial	32° 43' 20" N	117° 13' 2" W	San Diego Bay
NBPL-174	NMAWC-29	Municipal	Non-Industrial	32° 43' 19" N	117° 13' 3" W	San Diego Bay
NBPL-175	NMAWC-30	Municipal	Non-Industrial	32° 43' 18" N	117° 13' 3" W	San Diego Bay
NBPL-176	NMAWC-31	Municipal	Non-Industrial	32° 43' 21" N	117° 13' 10" W	San Diego Bay
NBPL-177	NMAWC-32	Municipal	Non-Industrial	32° 43' 21" N	117° 13' 10" W	San Diego Bay
NBPL-178	NMAWC-33	Municipal	Non-Industrial	32° 43' 22" N	117° 13' 14" W	San Diego Bay
NBPL-179	NMAWC-34	Municipal	Non-Industrial	32° 43' 23" N	117° 13' 13" W	San Diego Bay
NBPL-180	NMAWC-35	Municipal	Non-Industrial	32° 43' 25" N	117° 13' 15" W	San Diego Bay
NBPL-181	NMAWC-36	Municipal	Non-Industrial	32° 43' 25" N	117° 13' 14" W	San Diego Bay
NBPL-182	NMAWC-37	Municipal	Non-Industrial	32° 43' 30" N	117° 12' 59" W	San Diego Bay

Listing of NBPL Storm Water Discharge Locations						
Discharge Point	**Navy ID Number**	**Type**	**Outfall Risk Level**	**Latitude**	**Longitude**	**Receiving Water**
NBPL-183	NMAWC-38	Municipal	Non-Industrial	32° 43' 30" N	117° 12' 59" W	San Diego Bay
NBPL-184	NMAWC-39	Municipal	Non-Industrial	32° 43' 30" N	117° 12' 59" W	San Diego Bay
NBPL-185	NMAWC-40	Municipal	Non-Industrial	32° 43' 30" N	117° 12' 59" W	San Diego Bay
NBPL-186	NMAWC-41	Municipal	Non-Industrial	32° 43' 29" N	117° 12' 59" W	San Diego Bay
NBPL-187	NMAWC-42	Municipal	Non-Industrial	32° 43' 29" N	117° 12' 59" W	San Diego Bay
NBPL-188	NMAWC-43	Municipal	Non-Industrial	32° 43' 29" N	117° 12' 59" W	San Diego Bay
NBPL-189	NMAWC-44	Municipal	Non-Industrial	32° 43' 42" N	117° 13' 31" W	San Diego Bay
NBPL-190	NMAWC-45	Municipal	Non-Industrial	32° 43' 41" N	117° 13' 29" W	San Diego Bay
NBPL-191	NMAWC-OLF 1	Municipal	Non-Industrial	32° 43' 40" N	117° 13' 29" W	San Diego Bay
NBPL-192	NMAWC-OLF 2	Municipal	Non-Industrial	32° 43' 41" N	117° 13' 26" W	San Diego Bay
NBPL-193	NMAWC-OLF 3	Municipal	Non-Industrial	32° 43' 34" N	117° 13' 15" W	San Diego Bay
NBPL-194	FITCPAC-1	Municipal	Non-Industrial	32° 43' 46" N	117° 12' 24" W	San Diego Bay
NBPL-195	FITCPAC-2	Municipal	Non-Industrial	32° 43' 45" N	117° 12' 23" W	San Diego Bay
NBPL-196	FITCPAC-3	Municipal	Non-Industrial	32° 43' 47" N	117° 12' 19" W	San Diego Bay
NBPL-197	FITCPAC-4	Municipal	Non-Industrial	32° 43' 47" N	117° 12' 17" W	San Diego Bay
NBPL-198	FLC-5	Municipal	Non-Industrial	32° 41' 54" N	117° 14' 24" W	San Diego Bay
NBPL-199	SSC PLC-53	Municipal	Non-Industrial	32° 42' 09" N	117° 14' 14" W	San Diego Bay
NBPL-200	SSC PLC-4	Municipal	Non-Industrial	32° 42' 16" N	117° 14' 11" W	San Diego Bay

ATTACHMENT N – ANALYTICAL METHODS FOR CTR/NTR PRIORITY POLLUTANTS AND OTHER TOXIC POLLUTANTS

The following table lists the suggested analytical methods and minimum levels (ML) for toxic pollutants that shall be used, unless otherwise specified.

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any of the analytical methods cited in the following table for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA if authorized by the San Diego Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in the table below. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

Table N-1. List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic					20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)[3]	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631[4]												
9.	Nickel						50	5	20	1	5			1000
10.	Selenium	200.8 or						5	10	2	5	1		1000

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the State Implementation Policy. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., USEPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).

[4] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
		SM 3114B or C												
11.	Silver						10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[5]	0100.2 [6]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toulene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										

[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.
[6] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, USEPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
85.	1,2-Diphenylhydrazine (note)[7]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

[7] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.