CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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TENTATIVE ORDER R9-2016-0116
NPDES NO. CA0109134

WASTE DISCHARGE REQUIREMENTS FOR GENERAL DYNAMICS NATIONAL STEEL AND SHIPBUILDING COMPANY (NASSCO) DISCHARGE TO SAN DIEGO BAY

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger	General Dynamics National Steel and Shipbuilding Company (NASSCO)
Name of Facility	General Dynamics National Steel and Shipbuilding Company (NASSCO)
Facility Address	2798 East Harbor Drive
	San Diego, CA 92113
	San Diego County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
IX-1 (Ion Exchange Treatment System)	Hydrostatic Relief and Ways Flood Water	32º 41’ 30” N	-117º 8' 26" W	San Diego Bay
M-1 (Floating Dry Dock)	Ballast Water	32º 41’ 33” N	-117º 8' 37" W	San Diego Bay
M-2 (Graving Dock Flood Water)	Dewatering Flood Water	32º 41’ 27” N	-117º 8' 25" W	San Diego Bay
SW-1 (North Shipyard)	Northwest Storm Water Collection	32° 41' 25" N	-117° 8' 33" W	San Diego Bay
SW-2 (South Shipyard	Southwest Storm Water Collection	32° 41' 21" N	-117° 8' 20" W	San Diego Bay

Table 3. Administrative Information

This Order was adopted on:	**December 14, 2016**
This Order shall become effective on:	**February 1, 2017**
This Order shall expire on:	**January 31, 2022**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, San Diego Region 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 the Order adopted by the California Regional Water Quality Control Board, San Diego Region, on the date indicated above.

David W. Gibson, Executive Officer

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I. FACILITY INFORMATION

The General Dynamics National Steel And Shipbuilding Company (NASSCO or Discharger) provides a full range of ship construction, conversion, and repair capabilities to the U.S. Navy and commercial customers at the General Dynamics NASSCO shipyard facility (Facility). Information describing the Facility is summarized 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 Discharger's permit application.

II. FINDINGS

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

A. Legal Authorities. This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260).This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the U.S. at the discharge locations described in Table 2 subject to the WDRs in this Order.

B. 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 I are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections VI.A.2 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 permit violations.

D. 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 Water Code 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 Water Code section 13223 or this Order explicitly states otherwise.

E. Notification of Interested Parties. The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in section VIII of the Fact Sheet (Attachment F).

F. 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 section VIII of the Fact Sheet (Attachment F).

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R9-2009-0099 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (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. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. The Discharger must comply with discharge prohibitions contained in chapter 4 of 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 and policies described in Attachment F of this Order. All such prohibitions are incorporated by reference into this Order as if fully set forth herein. The San Diego Water Board's Basin Plan Waste Discharge Prohibitions are summarized in Attachment H as a condition of this Order.

B. The dumping, deposition, or discharge of the wastes directly into waters of the U.S. including but not limited to San Diego Bay and Chollas Creek, or adjacent to such waters in any manner which may permit its being transported into the waters is prohibited. The following are the types of wastes that are likely to be generated at the Facility:

1. Paint, including paint chips and overspray.
2. Blasting materials.
3. Water contaminated with waste, including abrasive blast materials, paint, oils, fuels, lubricants, solvents, or petroleum.
4. Hydroblast water.
5. Treated or untreated sewage.
6. Tank cleaning water, including water from tank cleaning to remove sludge or dirt.
7. Clarified water from oil and water separator.
8. Steam cleaning water.
9. Pipe and tank hydrostatic test water, unless regulated by an NPDES permit.
10. Hydraulic oil.
11. Fuel.
12. Trash.
13. Refuse and rubbish including but not limited to cans, bottles, paper, plastics, vegetable matter or dead animals.
14. Fiberglass dust.
15. Swept materials.
16. Ship repair and maintenance activity debris.
17. Waste zinc plates.
18. Demineralizer and reverse osmosis brine.
19. Oily bilge water.

C. The discharge of waste to waters of the U.S. including but not limited to San Diego Bay and Chollas Creek, is prohibited except as specifically authorized by this Order or another NPDES permit.

D. The discharge of industrial process water (other than shipboard cooling water), including hydroblast water, to waters of the U.S. including but not limited to San Diego Bay and Chollas Creek is prohibited except as specifically authorized by this order or another NPDES permit.

E. The discharge of materials of petroleum origin to waters of the U.S. including but not limited to San Diego Bay and Chollas Creek in sufficient quantities to be visible is prohibited.

F. Discharges to waters of the U.S. including but not limited to San Diego Bay and Chollas Creek, containing a hazardous substance equal to or in excess of a reportable quantity listed in title 40 Code of Federal Regulations (40 CFR) part 117, *Determination of Reportable Quantities for Hazardous Substances*, and/or 40 CFR part 302, *Designation, Reportable Quantities, and Notification*, are prohibited.

G. The discharge of wastes and pollutants from underwater operations, such as underwater paint and coating removal and underwater hull cleaning, is prohibited. This prohibition does not apply to the discharge of marine fouling organisms removed from unpainted and uncoated surfaces by underwater operations or to discharges that result from the cleaning of floating booms.

H. The discharge of polychlorinated biphenyls (PCBs) to to waters of the U.S. including but not limited to San Diego Bay and Chollas Creek is prohibited.

I. The discharge of flood waters from the graving dock (Discharge Point No. M-2) more than 10 times per year is prohibited.

J. The addition of chlorine or other additive pollutants to the fire protection system, potable water system, steam system, or dry dock ballast tanks is prohibited.

K. The discharge of the first one (1) inch of storm water runoff from all areas designated as Industrial High Risk areas, as described in section IV.A of this Order, is prohibited, unless pollutants in the discharge are reduced to levels that comply with the effluent limitations in section IV.B.1. Effluent limitations contained in section IV.B.1 are applicable to all discharges of storm water from Industrial High Risk Areas on the Facility.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Storm Water Risk Level Designation Definition

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, nonconventional pollutants, materials of petroleum origin, or other substances of water quality significance) are subject to precipitation, storm water run-on, and/or storm water runoff. Except non-industrial areas such as administrative areas or parking lots, the entire Facility is designated an Industrial High Risk Area.

B. Effluent Limitations

1. Discharge Point Nos SW-1 and SW-2 – Industrial Storm Water

For discharges of storm water from Industrial High Risk Areas, the Discharger shall maintain compliance with the following effluent limitations:

Table 4. Effluent Limitations for the Industrial Storm Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Chronic Toxicity	Pass/Fail & % Effect	--	--	[1]	--

[1] As specified in section VII.I. of this Order.

2. Discharge Point No. IX-1 – Ion Exchange Treatment System

For discharges from the Ion Exchange Treatment System, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. IX-1, with compliance measured at Monitoring Location No. IX-1, as described in the Monitoring and Reporting Program (MRP) (Attachment E):

Table 5. Effluent Limitations for the Ion Exchange Treatment System

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	75
Settleable Solids	mL/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225
pH	pH units	--	--	--	[1]
Temperature	ºF	--	--	--	[2]
Chronic Toxicity	Pass/Fail	[3]	--	[3]	--
Copper, Total Recoverable	µg/L	3.2	--	5.6	--

[1] Within limits of 7.0 – 9.0 at all times.
[2] At no time shall any discharge be greater than 20°F over the natural temperature of the receiving water.
[3] As specified in section VII.I of this Order.

3. Discharge Point No. M-1 –Ballast Water

The Discharger must comply with narrative Best Management Practices (BMPs) based effluent limitations pursuant to section VI.C.3 of this Order.

4. Discharge Point No. M-2 - Graving Dock Flood Water

For discharges of Graving Dock Flood Water, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. M-2, with compliance measured at Monitoring Location No. M-2, as described in the attached MRP (Attachment E):

Table 6. Effluent Limitations for Graving Dock Flood Water

Parameter	Units	Effluent Limitations			
		Average Monthly[4]	Average Weekly	Maximum Daily	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	75
Settleable Solids	mL/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225
pH	pH units	--	--	--	[1]
Temperature	ºF	--	--	--	[2]
Chronic Toxicity	Pass/Fail	--	--	[3]	--
Copper, Total Recoverable	µg/L	--	--	10.0	--
Zinc, Total Recoverable	µg/L	--	--	95	--

Parameter	Units	Effluent Limitations			
		Average Monthly[4]	Average Weekly	Maximum Daily	Instantaneous Maximum

[1] Within limits of 7.0 – 9.0 at all times.
[2] At no time shall any discharge be greater than 20°F over the natural temperature of the receiving water.
[3] As specified in section VII.I of this Order.
[4] The Average Monthly Effluent Limitations only apply if there is a discharge more than one day in a 30 day period.

C. Industrial Storm Water Discharge Specifications

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 Industrial High Risk Areas as follows:

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

b. Attain compliance with applicable effluent limitations and requirements set forth in section IV.B of this Order and water quality standards set forth in section V 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 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 and prevent the discharge of storm water to the receiving water. 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. The SWPPP elements shall be incorporated into the overall BMP Program.

d. The relevant portions of the SWPPP may be incorporated into another plan, such as a BMP Program, in order to comply with the requirements of this Order.

e. The SWPPP shall be reviewed annually and revised as necessary.

3. Numeric Action Levels (NALs) for Industrial High Risk

a. **NAL Exceedance Determination Method**

i. **Annual NAL Exceedance**. The Discharger shall determine the average concentration for each parameter using the results of all 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. If composite sampling or flow-weighted measurements are used in accordance with standard practices, the average concentrations shall be calculated in accordance with the *U.S. EPA Industrial Stormwater Monitoring and Sampling*

Guide.[1] 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:

$$FWAC = \frac{\sum_{n=1}^{n=9} Q_n C_n}{\sum_{n=1}^{n=9} Q_n}$$

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 half 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. 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.

b. **NAL Exceedance Response Actions (ERAs)**

i. **Baseline Status – No Exceedance**

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.

[1] U.S. 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>.

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 Best Management Practices (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.C.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 Status. 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 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 to this Order 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 to this Order.

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) 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.

c) Return to Baseline Status

(1) The Discharger's Level 2 status will return to Baseline status once an Industrial Activity BMPs Demonstration has been submitted in accordance with section X.B.1 of Attachment G to this Order, measures and BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) have been implemented, and the results from four subsequent consecutive Qualifying Storm Events (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 of the year subsequent to the reporting year during which the NAL exceedance(s) occurred. Upon return to Level 2 status, the Discharger shall update the Level 2 ERA Technical Report.

(2) The Discharger is ineligible to return to Baseline status if they submit any of the following:

(a) An Industrial Activity BMP Demonstration that the Discharger is not expected to eliminate future NAL exceedance(s) in accordance with section X.B.1.d of Attachment G to this Order;
(b) A Non-industrial Pollutant Source Demonstration in accordance with section X.B.2 of Attachment G to this Order; or
(c) A Natural Background Pollutant Source Demonstration in accordance with section X.B.3 of Attachment G to this Order.

d) Level 2 ERA Implementation Extension

(1) If additional time is needed to submit the Level 2 ERA Technical Report, the Discharger shall be automatically granted a single time extension for up to six months upon submitting the following items as applicable:

(a) Reason(s) for the time extension;
(b) 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
(c) A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.

(2) Requests for extensions that total more than six months must be approved of in writing by the San Diego Water Board. The San Diego Water Board may do any of the following:

(a) Reject or revise the time allowed to complete Level 2 ERA Implementation Extensions,

(b) Identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or
(c) Require the Discharger to implement additional temporary BMPs.

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

The Discharger shall maintain and operate the Facility's storm water diversion system to eliminate storm water discharges associated with industrial activity from the Facility. The Discharger shall maintain the current design ability to capture approximately 3.5 inches of rainfall from a 24-hour storm event.

D. Floating Dry Dock, Graving Dock, and Building Ways Discharge Specifications

1. The Discharger shall prevent or minimize the discharge of pollutants from any surface of its floating dry dock, graving dock, and building ways during submergence or flooding by implementing a BMP Program which shall incorporate the relavent SWPPP elements. The BMP Program shall include, at a minimum, specific management practices and standard operating procedures, good housekeeping practices, and provisions for inspections, records, and training.

2. As the Discharger performs construction, maintenance, and repair work, the Discharger shall remove spent abrasives, paint residues, particulate matter, and other debris and waste from surfaces that are reasonably accessible to the degree achievable by scraping, broom cleaning, and/or power and pressure washing as needed to achieve BAT and BCT. Prior to submergence or flooding, any other areas that were previously inaccessible shall be cleaned by scraping, broom cleaning, and/or power and pressure washing as soon as practical as needed to achieve BAT and BCT. The Discharger may then submerge the floating dry dock or flood the graving dock or building ways. This provision shall not apply in cases wherein a vessel must be introduced into the dry dock, graving dock, or building ways 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 available information shall be provided orally or by e-mail within 24 hours after the time the Discharger becomes aware of the circumstances even if the vessel docks within these 24 hours.

   b. A written report submission shall also be provided within five working days of the emergency docking. The report shall contain a description of the emergency circumstances including the identification of the floating dry dock, graving dock, or building way involved; identification of key waste constituents discharged as a result of the incident; the name and owner of the vessel; and the exact date and time the vessel was moved into the floating dry dock, graving dock, or building way. The San Diego Water Board may waive the written report under this provision on a case by case basis if an oral or e-mail report has been received within 24 hours.

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

E. Land Discharge Specifications – Not Applicable

F. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

The receiving water limitations set forth below for the waters of San Diego Bay and the mouth of Chollas Creek are based on applicable water quality standards contained in water quality control plans and policies and federal regulations and are a required part of this Order. The discharge of waste shall not cause or contribute to violations of these receiving water limitations.

A. Water Quality Objectives and Criteria

The discharge of waste shall not cause violations of water quality standards, federal pollutant criteria or other provisions applicable to San Diego Bay or the mouth of Chollas Creek contained in the water quality control plans, policies, and federal regulations set forth below:

1. The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans.
2. State Water Resources Control Board (State Water Board) water quality control plans and policies including:
    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 Policy for the Enclosed Bays and Estuaries of California* (Bays and Estuaries Policy).
    c. *Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California* (State Implementation Plan or SIP).
    d. *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan).
3. Priority pollutant criteria promulgated by the U.S. EPA through the:
    a. *National Toxics Rule* (NTR)[2] (promulgated on December 22, 1992 and amended on May 4, 1995).
    b. *California Toxics Rule* (CTR)[3,4]

B. Physical Characteristics

1. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. [Basin Plan]
2. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a 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].
3. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [Basin Plan]
4. 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]

[2] 40 Code of Federal Regulations (CFR) section 131.36
[3] 65 Federal Register 31682-31719 (May 18, 2000), adding section 131.38 to 40 CFR
[4] If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

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

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

7. 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, as measured by a standard Secchi disk. Wherever the water is less than 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]

8. 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]

C. Chemical Characteristics

1. 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]

2. The dissolved oxygen concentration shall not at any time 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]

3. 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]

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

5. 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]

D. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [California Ocean Plan, Water Quality Control Plan Ocean Waters of California (Ocean Plan) – Best Professional Judgement (BPJ)]

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

3. 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]

E. Bacterial Characteristics

1. 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]

2. 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]

3. 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]

F. Radioactivity

1. 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]

2. 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).

G. Toxicity

1. 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]

2. Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities. [Sediment Quality Plan]

3. Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health. [Sediment Quality Plan]

H. Corrective Actions for Receiving Water Limitation Violations

Upon determination by the Discharger or written notification by the San Diego Water Board that 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. As soon as practicable, 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 and other requirements of this Order have been properly implemented.

3. Conduct an assessment of the Facility's plans required by this Order to determine whether additional or improved measures or BMPs are necessary to prevent or reduce pollutants in discharges to comply with receiving water limitations in section V of this Order.

4. Prepare a certification statement, based upon the Facility evaluation and assessment required above, that certifies either:
    a. Additional or improved measures or BMPs have been identified, included in the appropriate plan, and implemented to comply with receiving water limitations, as specified in section V of this Order; or
    b. No additional or improved BMPs or measures are required for implementation to reduce or prevent pollutants in discharges to comply with receiving water limitations, as specified in section V of this Order; or
    c. There are no sources of pollutants at the Facility that are causing or contributing to exceedances of receiving water limitations, as specified in section V of this Order.
5. If a certification statement provides that no additional BMPs or measures are required for implementation to reduce or prevent pollutants in discharges to comply with receiving water limitations specified in section V of this Order, the certification statement must show, with supporting information, why the exceedances occurred and why the exceedances will not occur again under similar circumstance(s).
6. Implement additional or improved measures or BMPs as soon as is practicable.
7. Within 60 days of the exceedance(s)/violation(s) of receiving water limitations specified in section V of this Order, prepare and submit a report that:
    a. Describes the Facility evaluation performed pursuant to section V.H.2 above.
    b. Describes the assessment of the Facility's plans required pursuant to section V.H.3 above.
    c. Identifies the additional or improved measures or BMPs that are currently being implemented to assure compliance with receiving water limitations in section V of this Order.
    d. Identifies additional or improved measures or BMPs that will be implemented to assure compliance with receiving water limitations in section V of this Order. This report shall include an implementation schedule that reflects the shortest practicable time required to perform each task, given the type of BMPs or measures planned. The implementation schedule shall not exceed 90 days from the date of determination of the exceedance(s)/violations(s) of receiving water limitations in section V of this Order.
    e. Includes the certification statement required above in section V.H.4 of this Order.
8. The San Diego Water Board may require the Discharger to modify and resubmit the report if the report is not in conformance with the criteria described in section V.H.7 of this Order. The Discharger shall submit any required modifications to the report within 30 days of written notification from the San Diego Water Board.
9. Within 30 days following submittal of the report required by section V.H.7 above or modified report required by section V.H.8 above, the Discharger shall revise the SWPPP and other plans required by this Order and the MRP to incorporate a) the additional or improved BMPs and measures that have been and will be implemented, b) an implementation schedule, and c) 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 above report.

11. If the Discharger has complied with the procedures set forth above and is implementing the actions required, the Discharger will not be required to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the San Diego Water Board to develop and implement additional BMPs or measures.

VI. PROVISIONS

A. Standard Provisions

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

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

   a. The Discharger shall properly handle, manage, transport, treat, or dispose of waste in accordance with all applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not cause or threaten to cause a condition of pollution, contamination or nuisance as those terms are defined in Water Code 13050 in waters of the State.

   b. This Order expires on **January 31, 2022,** after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of U.S. EPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at CCR title 23, section 2235.4 regarding the continuation of expired permits and waste discharge requirements are met.

   c. A copy of this Order shall be posted at a prominent location and shall be available to site personnel, San Diego Water Board, State Water Board, and U.S. EPA 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. Notifications required to be provided under this Order to the San Diego Water Board shall be made to:

   E-mail – sandiego@waterboards.ca.gov

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

C. Special Provisions

1. Reopener Provisions

   a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

b. This Order may be reopened 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 new, U.S. EPA approved, State water quality objective.

c. 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 (Water Code section 13381(a)).

   ii. Obtaining this Order by misrepresentation or Failure to disclose fully all relevant facts (Water Code section 13381(b)).

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge (Water Code section 13381(c)).

   iv. Endangerment to human health or the environment resulting from the permitted activity (40 CFR 122.64(a)(3)).

d. This Order may be reopened 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 (Attachment E).

   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 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 chronic toxicity.

e. 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**

See section IV.G of the MRP (Attachment E) for the Toxicity Reduction Evaluation (TRE) Requirements.

3. **Best Management Practices (BMPs)**

The Discharger shall continue to implement a BMP Program that prevents or reduces the discharge of pollutants into the receiving waters at levels that would cause or contribute to exceedances of the receiving water limitations in section V of this Order or otherwise adversely affect the beneficial uses of the receiving water. The BMP Program shall incorporate the Facility's SWPPP and shall be updated annually as needed and shall address, at a minimum, floating dry dock pre-flood cleaning, building ways pre-flood cleaning, graving dock pre-flood cleaning, dry dock ballast water, and spills including fire protection water, potable water, steam condensate. The BMP Program shall be developed and implemented in accordance with Attachment G to prevent, or minimize the potential for, the release of pollutants to waters of the U.S. and State. BMPs for floating dry dock ballast water shall include, at a minimum, applicable BMPs from the U.S. EPA Vessel General Permit (VGP).

4. **Construction, Operation and Maintenance Specifications – Not Applicable**

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 (Attachment E) 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. Average Annual Effluent Limitation (AAEL)

If the average (or when applicable, the median determined by subsection VII.B above for multiple sample data) of daily discharges over a 12-month period exceeds the AAEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under Water Code section 13385. Because the AAEL is a rolling average calculated once each month, 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. Each discharge day of the year is determined to be either in compliance or out of compliance for the AAEL only once, during the month in which the day falls. For anyone calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month and no penalty assessed. The AAEL will be effective when the final effluent limitations are effective. For the first month and until there is 12 months of effluent data, the samples collected since the effluent limitation became effective shall be averaged and compared to the 12-month AAEL. The Discharger may submit for San Diego Water Board review and approval an alternative statistical method for calculating annual average effluent limits to demonstrate that the mass and concentration of the pollutant in the discharge does not exceed the mass and concentration of the pollutant in the intake water.

D. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 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 Water Code 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 only 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 and no penalty assessed.

E. Median Monthly Effluent Limit (MMEL)

If the median result of three independent toxicity tests, conducted within the same calendar month, and analyzed using the Test of Significant Toxicity (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 Water Code 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 three samples are taken, no compliance determination can be made for that calendar month.

F. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median result 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 one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

G. 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 two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation).

H. 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 two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

I. Chronic Toxicity for Discharges to San Diego Bay

The discharge is subject to determination of “Pass” or “Fail” from a chronic toxicity test using the TST statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge Instream Waste Concentration (IWC) response ≤0.75 × Mean control response.

A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response – Mean discharge IWC response) ÷ Mean control response)) × 100. This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations—in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e. a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e. if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent Effect” is ≥50%.

The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in “Fail”. The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar

month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in “Fail”.

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach (“Pass” or “Fail”, “Percent Effect”). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *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)* or *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)*. The San Diego Board’s review of reported toxicity test results will include review of concentration response patterns as appropriate (see Fact Sheet (Attachment F) discussion at IV.C.5). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 7, 2014, and from the U.S. EPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observed Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, U.S. EPA, the State Water Board’s Quality Assurance Officer, or the State Water Board’s Environmental Laboratory Accreditation Program (ELAP), as needed. The San Diego Water Board may consider results of any Toxicity Reduction Evaluation / Toxicity Identification Evaluation (TRE/TIE) studies in an enforcement action.

ATTACHMENT A – ABBREVIATIONS AND DEFINITIONS

Part 1 – Abbreviations

Abbreviation	Definition
ASBS	Areas of Special Biological Significance
AST	Above Ground Storage Tanks
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^oC)
BPJ	Best Professional Judgment
BPT	Best Practicable Treatment Control Technology
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
Water Code	California Water Code
DMR	Discharger Monitoring Report
DNQ	Detected, but Not Quantified
ECA	Effluent Concentration Allowance
ERA	Exceedance Response Action
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
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
NAL	Numeric Action Level
ND	Not Detected
NOEC	No Observed Effect Concentration
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

Abbreviation	Definition
PPP	Pollution Prevention Plan
QAPP	Quality Assurance Project Plan
QSE	Qualifying Storm Event
QA/QC	Quality Assurance/ Quality Control
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 Policy, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*
SQO	Sediment Quality Objective
State Water Board	State Water Resources Control Board
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWDS	Storm Water Diversion System
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
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
U.S.	U.S.
U.S. EPA	United Stated Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Wasteload Allocation
WQBEL	Water Quality-Based Effluent Limitation
µg	Microgram
µg/L	Micrograms per Liter

Part 2 – Definitions 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.

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 U.S. 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.

California Toxics Rule
The EPA promulgated numeric water quality criteria for priority toxic pollutants and other provisions for water quality standards applied to waters in the state of California found at 40 CFR 131.

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
This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

Chronic Toxicity (TUc)

a. Expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix III, Table III-1.

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. (Water Code section 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. Sample results reported as DNQ are estimated concentrations.

Dilution Credit

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, 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 (CWA).
5. A discharge containing source, special nuclear, or byproduct materials regulated by the Atomic Energy Act

Drainage Area
The area of land that drains water, sediment, pollutants, and dissolved materials to a common discharge location.

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 U.S. EPA 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.

First Flush
Storm water runoff that occurs between the time a storm event begins and when a minimum of 1 inch of precipitation has been collected in a rain gauge or equivalent measurement device at a location on the site which is representative of precipitation at the site. A storm event is a period of rainfall that is preceded by at least seven days without rainfall.

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.

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
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.

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 Limit (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 in 40 CFR 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. [Water Code section 13050(m)]

Numeric Action Level (NAL)
Numeric Action Levels (NALs), found 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.

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 (see the equation in Step 6 of Appendix A of the Toxicity Policy).

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

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)

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The San Diego Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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." [Water Code section 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 Water Code 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 Water Resources Control Board (State Water Board) 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 Water Code section 13263.3(d)(2).

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

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

Reporting Level (RL)
The 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, including an additional factor if applicable as discussed herein. 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 Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code 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 chemical 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 110.10 and 117.21) or section 102 of CERCLA (see 40 CFR 302.4).

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in San Diego Water Board Basin Plan.

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.
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. For the facilities identified in the Fact Sheet (Attachment F) of this Order, 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 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 U.S. 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 40CFR131.6, 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 U.S.
Waters of the U.S. 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 U.S. 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 U.S. 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 CWA, the final authority regarding CWA 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. Location Map

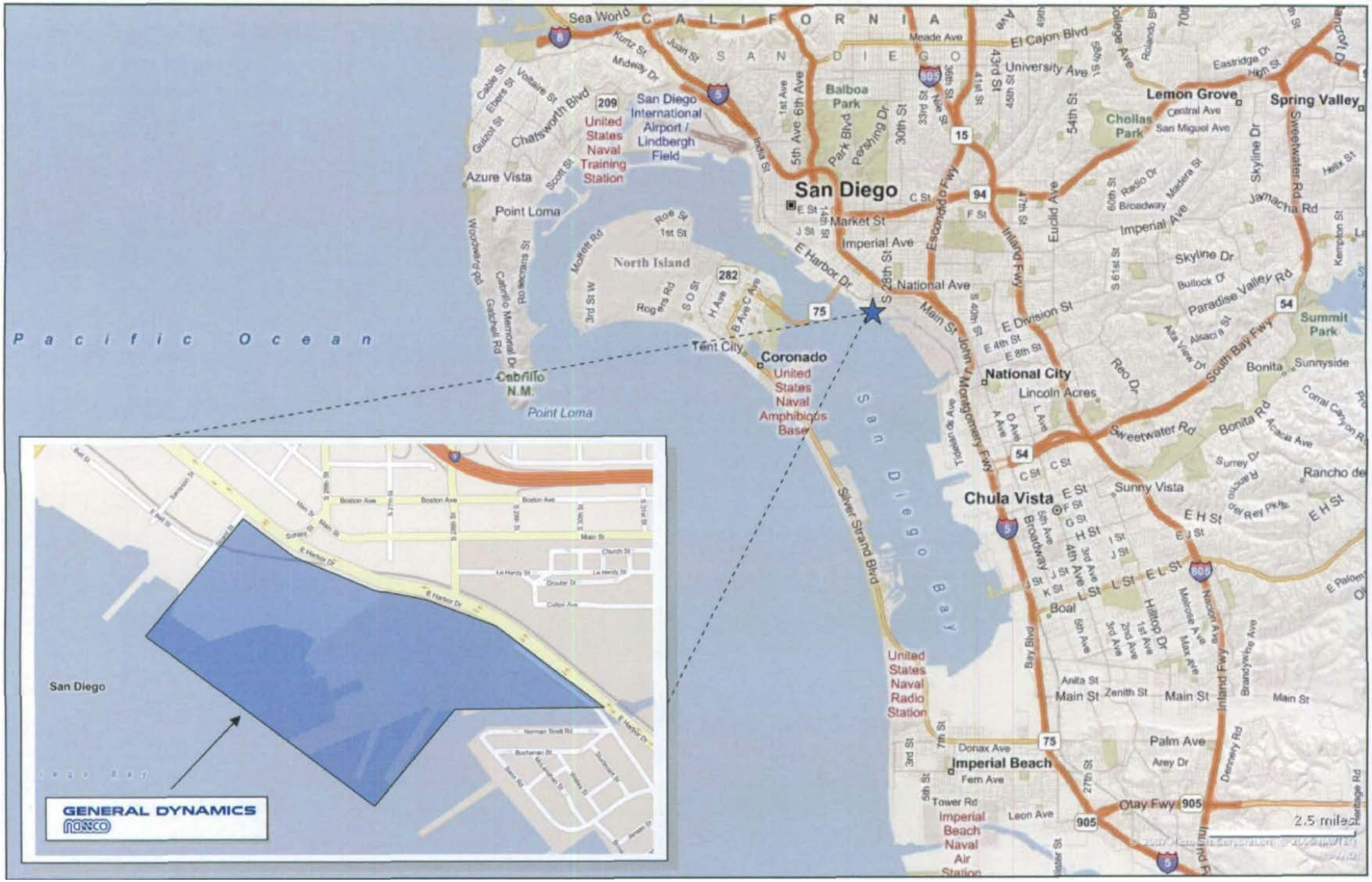
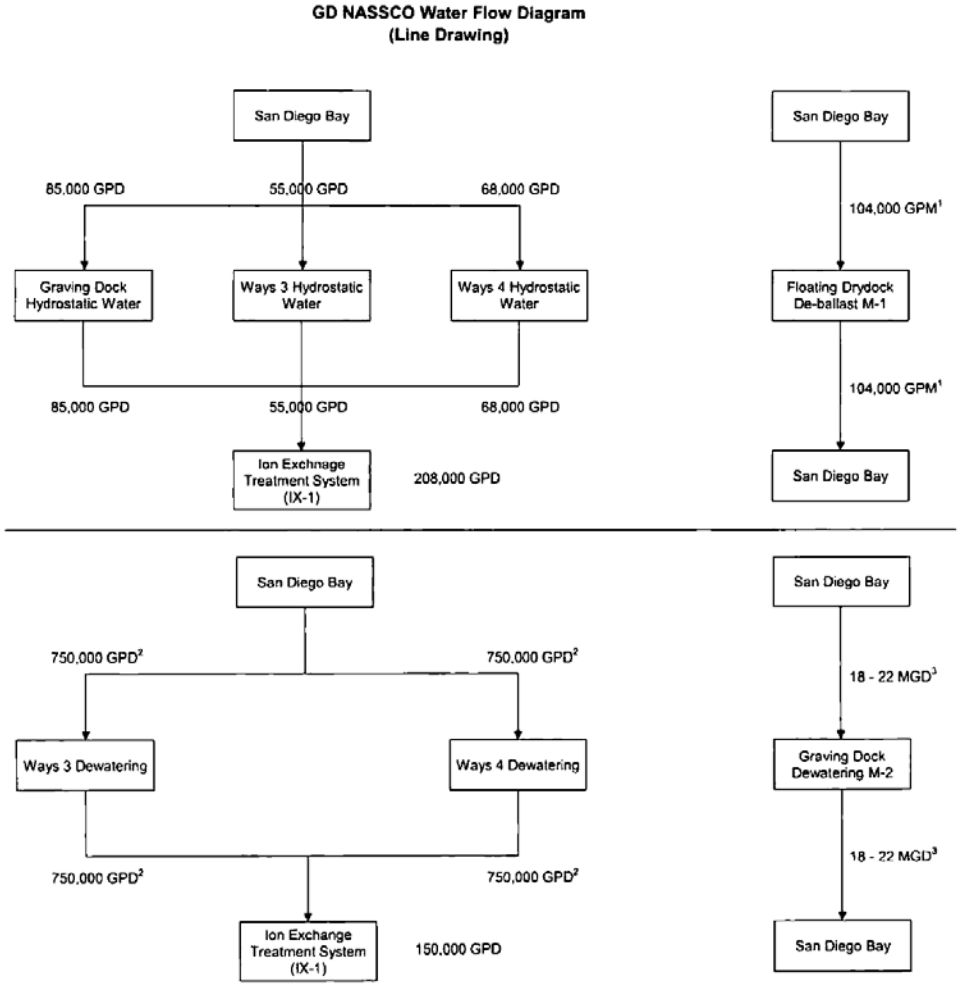


Figure B-2. Facility Map

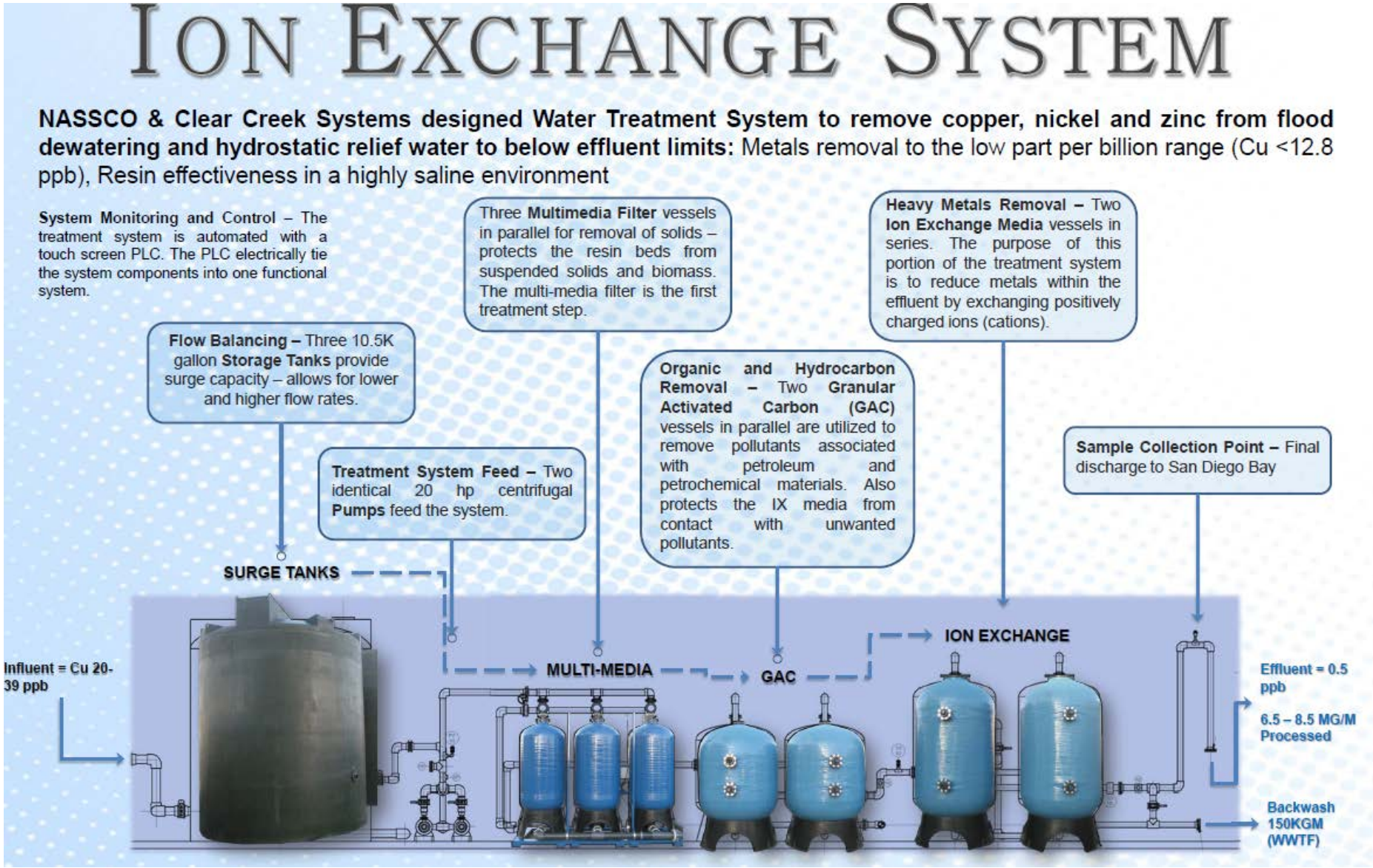
ATTACHMENT C – FLOW SCHEMATICS

Figure C-1. General Flow Schematics



[1] Floating Drydock de-ballasting occurs when the dock is adjusted and deballast at a rate of 104,000 GPM, actual daily volume will vary
[2] Building Ways dewatering is 750,000 gallon per launch event and pumped at a rate of 5,810 GPM
[3] Graving Dock dewatering is ~18 - 22 million gallons per flooding event and pumped at a rate of 18,000 GPM

Figure C-2. Ion Exchange System Flow Schematic



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 (Water Code) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (title 40 Code of Federal Regulations (40 CFR) section 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 section 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 section 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 section 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 section 122.41(e)).

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR section 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 section 122.5(c)).

F. Inspection and Entry

The Discharger shall allow the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), State Water Resources Control Board (State Water Board), United Stated Environmental Protection Agency (U.S. EPA), 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 section 122.41(i); Water Code section 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 section 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 section 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 section 122.41(i)(3)).
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 section 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 section 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 section 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 section 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 section 122.41(m)(4)(i)):
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 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 section 122.41(m)(4)(i)(B)).
   c. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR section 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 section 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 prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the San Diego Water Board. As of December 21, 2020, a notice must also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 122.41(m)(3)(i)).

   b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the San Diego Water Board. As of December 21, 2020, a notice must also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 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 section 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 section 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 section 122.41(n)(3)):

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

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

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR section 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 section 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 section 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 section 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 the 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 section 122.41(l)(3); section 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 section 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, subchapters N or O. 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 or O. 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.
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 or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv)).

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 40 CFR 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 section 122.41(j)(2)).

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i)).
2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii)).
3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii)).
4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv)).
5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)).
6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi)).

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

1. The name and address of any permit applicant or Discharger (40 CFR section 122.7(b)(1)).
2. Permit applications and attachments, permits and effluent data. (40 CFR section 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 U.S. EPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or U.S. EPA 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 U.S. EPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); Water Code, section 13267, 13383)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR section 122.41(k)).
2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information

for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR section 122.22(a)(1)).

3. All reports required by this Order and other information requested by the San Diego Water Board, State Water Board, or U.S. EPA 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 section 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 section 122.22(b)(2)).

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

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR section 122.22(e)).

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 section 122.41(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 the results of monitoring, sludge use, or disposal practices. As of December

21, 2016 all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40vi CFR section 122.41(l)(4)(i)).

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapters N or O, the results of such 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 section 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 section 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 section 122.41(l)(5)).

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance which 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 report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written report 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. All reports shall be submitted electronically as described in Provision VI.B.2 of this Order. (40 CFR section 122.41(l)(6)(i)).

   For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e. combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g. manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

   As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the San Diego Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 CFR. part 3, 40 CFR section 122.22, and 40 CFR part 127. The San Diego Water Board also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR section 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 section 122.41(l)(6)(ii)):

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

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR section 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 section 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 section 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 section 122.41(l)(1)(i)).
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 section 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 section 122.41(l)(1)(iii)).

G. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR section 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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 CFR part 127. The San Diego Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section (40 CFR section 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 U.S. EPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8)).

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its

website and in the Federal Register, by State and by NPDES data group [see 40 CFR section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 CFR section 122.41(l)(9)).

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, 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 section 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 section 122.42(a)(1)):
   a. 100 micrograms per liter (µg/L) (40 CFR section 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 section 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 section 122.42(a)(1)(iii)).
   d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 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 section 122.42(a)(2)):
   a. 500 micrograms per liter (µg/L) (40 CFR section 122.42(a)(2)(i)).
   b. 1 milligram per liter (mg/L) for antimony (40 CFR section 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 section 122.42(a)(2)(iii)).
   d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(2)(iv)).

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Pursuant to this authority, this Monitoring and Reporting Program (MRP) establishes conditions for the General Dynamics National Steel and Shipbuilding Company (NASSCO or Discharger) to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified influent, internal operations, effluent, and receiving water monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with information necessary to evaluate discharge characteristics and compliance status.

The purpose of the MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions, the San Diego Water Board considered four basic types of information for each question:

(1) Information Need – Why does the San Diego Water Board need to know the answer?

(2) Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?

(3) Expected Product – How should the answer be expressed and reported?

(4) Possible Management Actions – What actions will be potentially influenced by the answer?

The framework for this monitoring program has three components that comprise a range of spatial and temporal scales: 1. core monitoring, 2. regional monitoring, and 3. special studies.

1. Core monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent limits and/or impacts to receiving water quality. Core monitoring is typically conducted in the immediate vicinity of the discharge by examining local scale spatial effects.
2. Regional monitoring provides information necessary to make assessments over large areas and serves to evaluate cumulative effects of all anthropogenic inputs. Regional monitoring data also assists in the interpretation of core monitoring studies. In the event that a regional monitoring effort takes place during the permit cycle in which the MRP does not specifically address regional monitoring, the San Diego Water Board may allow relief from aspects of core monitoring components in order to encourage participation in a coalition pursuant to section V.B and V.C of this MRP.
3. Special studies are directed monitoring efforts designed in response to specific management or research questions identified through either core or regional monitoring programs. Often they are used to help understand core or regional monitoring results, where a specific environmental process is not well understood, or to address unique issues of local importance.

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 U.S. Environmental Protection Agency (U.S. EPA) 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 U.S. EPA approval.

C. The monitoring and reports, signed and certified as required by Attachment D, Standard Provisions V.B, of this Order, shall be submitted to electronically in accordance with section VIII.B.1 of 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 U.S. EPA at any time.

E. All analyses shall be performed in a laboratory certified to perform such analyses by the State Water Resources Control Board's (State Water Board) Division of Drinking (DDW) or by a laboratory approved by the San Diego Water Board. The laboratory must be accredited under the DDW Environmental Laboratory Accreditation Program (ELAP) 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.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

F. 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.

G. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses.

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

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

J. This Order may be modified by the San Diego Water Board and the U.S. EPA to enable the Discharger to participate in comprehensive regional monitoring activities. Minor changes may be made without further public notice.

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:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
IX-1	IX-1	A location where a representative sample of treated wastewater (hydrostatic relief water and building ways water) from the ion exchange treatment can be obtained: 32º 41' 30" N: -117º 8' 26" W
M-2	M-2	A location where a representative sample of the graving dock flood water can be obtained. For newly constructed vessels, the sample shall be collected when the graving dock is full of water and ready to launch the vessel immediately before the gate is opened. For repair of vessels with a preexisting copper-based antifouling hull coating, samples shall be collected prior to the vessel's entry and exit from the graving dock as follows: For entering vessels, the sample shall be collected when the graving dock is full of water, before the gate is opened, and before the vessel enters the graving dock. For exiting vessels, the sample shall be collected immediately before the flood water is deep enough to reach the vessel hull. 32º 41' 27" N: -117º 8' 25" W
SW-1	SW-1	A location where a representative sample of storm water from the northwest storm water collection system can be obtained 32° 41' 25" N -117° 8' 33" W
SW-2	SW-2	A location where a representative sample of storm water from the northwest storm water collection system can be obtained 32° 41' 21" N -117° 8' 20" W

III. CORE MONITORING REQUIREMENTS

A. Influent Monitoring Requirements – Not Applicable

B. Industrial Process Water Effluent Monitoring Requirements

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate compliance with applicable effluent limitations, standards, and other requirements of this Order.

Monitoring Questions. Effluent monitoring is necessary to address the following questions:

(1) Does the effluent comply with permit effluent limitations, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?

(2) What is the mass of constituents that are discharged daily, monthly, or annually?

(3) Is the effluent concentration or mass changing over time?

(4) Is the Facility being properly operated and maintained to ensure compliance with the conditions of the Order?

1. Monitoring Location IX-1 – Ion Exchange Treatment System

The Discharger shall monitor the discharge from the ion exchange treatment system at Monitoring Location No. IX-1 as follows:

Table E-2. Effluent Monitoring for Ion Exchange Treatment System

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gpd	Grab	Monthly	Meter
pH	standard units	Grab	Monthly	[1]
Temperature	°F	Grab	Monthly	[1]
Copper, Total Recoverable	µg/L	Grab	Monthly	[1,2]
Cadmium, Total Recoverable	µg/L	Grab	Quarterly	[1]
Nickel, Total Recoverable	µg/L	Grab	Quarterly	[1]
Zinc, Total Recoverable	µg/L	Grab	Quarterly	[1]
Settleable Solids	mL/L	Grab	Monthly	[1]
Turbidity	NTU	Grab	Monthly	[1]
Total Suspended Solids	mg/L	Grab	Monthly	[1]
Oil and Grease	mg/L	Grab	Monthly	[1]
Total Petroleum Hydrocarbons (TPH)	mg/L	Grab	Semiannually	[1]
Chronic Toxicity	Pass/Fail	Grab	Semiannually	[1,3]
Antimony, Total Recoverable	µg/L	Grab	Semiannually	[1]
Arsenic	µg/L	Grab	Semiannually	[1]
Beryllium	µg/L	Grab	Semiannually	[1]
Chromium III	µg/L	Grab	Semiannually	[1]
Chromium VI	µg/L	Grab	Semiannually	[1]
Silver, Total Recoverable	µg/L	Grab	Semiannually	[1]
Lead, Total Recoverable	µg/L	Grab	Semiannually	[1]
Mercury, Total Recoverable	µg/L	Grab	Semiannually	[1]
Selenium, Total Recoverable	µg/L	Grab	Semiannually	[1]
Thallium	µg/L	Grab	Semiannually	[1]
Cyanide, Total (as CN) [3]	µg/L	Grab	Semiannually	[1]
Asbestos	µg/L	Grab	Semiannually	[1]
2,3,7,8-TCDD (Dioxin)	µg/L	Grab	Semiannually	[1]
Acrolein	µg/L	Grab	Semiannually	[1]
Acrylonitrile	µg/L	Grab	Semiannually	[1]
Benzene	µg/L	Grab	Semiannually	[1]
Bromoform	µg/L	Grab	Semiannually	[1]
Carbon Tetrachloride	µg/L	Grab	Semiannually	[1]
Chlorobenzene	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chlorodibromomethane	µg/L	Grab	Semiannually	[1]
Chloroethane	µg/L	Grab	Semiannually	[1]
2-Chloroethylvinyl Ether	µg/L	Grab	Semiannually	[1]
Chloroform	µg/L	Grab	Semiannually	[1]
Dichlorobromomethane	µg/L	Grab	Semiannually	[1]
1,1-Dichloroethane	µg/L	Grab	Semiannually	[1]
1,2-Dichloroethane	µg/L	Grab	Semiannually	[1]
1,1-Dichloroethylene	µg/L	Grab	Semiannually	[1]
1,2-Dichloropropane	µg/L	Grab	Semiannually	[1]
1,3-Dichloropropylene	µg/L	Grab	Semiannually	[1]
Ethylbenzene	µg/L	Grab	Semiannually	[1]
Methyl Bromide	µg/L	Grab	Semiannually	[1]
Methyl Chloride	µg/L	Grab	Semiannually	[1]
Dichloromethane (Methylene Chloride)	µg/L	Grab	Semiannually	[1]
Methylene Chloride	µg/L	Grab	Semiannually	[1]
1,1,2,2-Tetrachloroethane	µg/L	Grab	Semiannually	[1]
Tetrachloroethylene	µg/L	Grab	Semiannually	[1]
Toluene	µg/L	Grab	Semiannually	[1]
1,2-Trans-Dichloroethelyene	µg/L	Grab	Semiannually	[1]
1,1,1-Trichloroethane	µg/L	Grab	Semiannually	[1]
1,1,2-Trichloroethane	µg/L	Grab	Semiannually	[1]
Trichloroethylene (Trichloroethene)	µg/L	Grab	Semiannually	[1]
Vinyl Chloride	µg/L	Grab	Semiannually	[1]
2-Chlorophenol	µg/L	Grab	Semiannually	[1]
2,4-Dichlorophenol	µg/L	Grab	Semiannually	[1]
2,4-Dimethylphenol	µg/L	Grab	Semiannually	[1]
2-Methyl-4,6-Dinitophenol	µg/L	Grab	Semiannually	[1]
2,4-Dinitrophenol	µg/L	Grab	Semiannually	[1]
2-Nitophenol	µg/L	Grab	Semiannually	[1]
3-Methyl-4-Chlorophenol	µg/L	Grab	Semiannually	[1]
Pentachlorophenol	µg/L	Grab	Semiannually	[1]
Phenol	µg/L	Grab	Semiannually	[1]
2,4,6-Trichlorophenol	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Acenaphthene	µg/L	Grab	Semiannually	[1]
Acenaphthylene	µg/L	Grab	Semiannually	[1]
Anthracene	µg/L	Grab	Semiannually	[1]
Benzidine	µg/L	Grab	Semiannually	[1]
Benzo(a)Anthracene	µg/L	Grab	Semiannually	[1]
Benzo(a)Pyrene	µg/L	Grab	Semiannually	[1]
Benzo(b)Fluoranthene	µg/L	Grab	Semiannually	[1]
Benzo(ghi)Perylene	µg/L	Grab	Semiannually	[1]
Benzo(k)Fluoranthene	µg/L	Grab	Semiannually	[1]
Bis(2-Chloroethoxy)Methane	µg/L	Grab	Semiannually	[1]
Bis(d-Chloroethyl)Ether	µg/L	Grab	Semiannually	[1]
Bis(2-Chloroisopropyl)Ether	µg/L	Grab	Semiannually	[1]
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Semiannually	[1]
4-Bromophenyl Phenyl Ether	µg/L	Grab	Semiannually	[1]
Butylbenzyl Phthalate	µg/L	Grab	Semiannually	[1]
2-Chloronaphthalene	µg/L	Grab	Semiannually	[1]
4-Chlorophenyl Phenyl Ether	µg/L	Grab	Semiannually	[1]
Chrysene	µg/L	Grab	Semiannually	[1]
Dibenzo(a,h)Anthracene	µg/L	Grab	Semiannually	[1]
1,2 Dichlorobenzene	µg/L	Grab	Semiannually	[1]
1,3 Dichlorobenzene	µg/L	Grab	Semiannually	[1]
1,4 Dichlorobenzene	µg/L	Grab	Semiannually	[1]
3,3'-Dichlorobenzidine	µg/L	Grab	Semiannually	[1]
Diethyl Phthalate	µg/L	Grab	Semiannually	[1]
Dimethyl Phthalate	µg/L	Grab	Semiannually	[1]
Di-n-Butyl Phthalate	µg/L	Grab	Semiannually	[1]
2,4-Dinitrotoluene	µg/L	Grab	Semiannually	[1]
2,6-Dinitrotoluene	µg/L	Grab	Semiannually	[1]
Di-n-Octyl Phthalate	µg/L	Grab	Semiannually	[1]
1,2-Diphenylhydrazine	µg/L	Grab	Semiannually	[1]
Fluoranthene	µg/L	Grab	Semiannually	[1]
Fluorene	µg/L	Grab	Semiannually	[1]
Hexachlorobenzene	µg/L	Grab	Semiannually	[1]
Hexachlorobutadien	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Hexachlorocyclopentadiene	µg/L	Grab	Semiannually	[1]
Hexachloroethane	µg/L	Grab	Semiannually	[1]
Ideno(1,2,3-cd) Pyrene	µg/L	Grab	Semiannually	[1]
Isophorone	µg/L	Grab	Semiannually	[1]
Naphthalene	µg/L	Grab	Semiannually	[1]
Nitrobenzene	µg/L	Grab	Semiannually	[1]
N-Nitrosodimethylamine	µg/L	Grab	Semiannually	[1]
N-Nitrosodi-n-Propylamine	µg/L	Grab	Semiannually	[1]
N-Nitrosodiphenylamine	µg/L	Grab	Semiannually	[1]
Phenanthrene	µg/L	Grab	Semiannually	[1]
Pyrene	µg/L	Grab	Semiannually	[1]
1,2,4-Trichlorobenzene	µg/L	Grab	Semiannually	[1]
Aldrin	µg/L	Grab	Semiannually	[1]
Alpha-BHC	µg/L	Grab	Semiannually	[1]
Beta-BHC	µg/L	Grab	Semiannually	[1]
Gamma-BHC	µg/L	Grab	Semiannually	[1]
Delta-BHC	µg/L	Grab	Semiannually	[1]
Chlordane	µg/L	Grab	Semiannually	[1]
4,4'-DDT	µg/L	Grab	Semiannually	[1]
4,4'-DDE	µg/L	Grab	Semiannually	[1]
4,4'-DDD	µg/L	Grab	Semiannually	[1]
Dieldrin	µg/L	Grab	Semiannually	[1]
Alpha-Endosulfan	µg/L	Grab	Semiannually	[1]
Beta-Endosulfan	µg/L	Grab	Semiannually	[1]
Endosulfan Sulfate	µg/L	Grab	Semiannually	[1]
Endrin	µg/L	Grab	Semiannually	[1]
Endrin Aldehyde	µg/L	Grab	Semiannually	[1]
Heptachlor	µg/L	Grab	Semiannually	[1]
Heptachlor Epoxide	µg/L	Grab	Semiannually	[1]
Polychlorinated Biphenyls (PCBs)	µg/L	Grab	Semiannually	[1]
Toxaphene	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[1] As specified in 40 CFR part 136.

[2] Influent and 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 that is analyzed by methods 6010B or 200.7 are known.

[3] As specified in Section IV of this MRP.

2. Monitoring Locations M-2 – Graving Dock Flood Water

The Discharger shall monitor the graving dock dewatering flood water at Monitoring Location No. M-2 as follows:

Table E-3. Effluent Monitoring for Graving Dock Flood Water

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gpd	Grab	Daily[4]	Meter or Estimate
pH	standard units	Grab	Monthly[4]	[1]
Temperature	°F	Grab	Monthly[4]	[1]
Copper, Total Recoverable	µg/L	Grab	Monthly[4]	[1,2]
Nickel, Total Recoverable	µg/L	Grab	Quarterly[4]	[1]
Zinc, Total Recoverable	µg/L	Grab	Monthly[4]	[1]
Settleable Solids	mL/L	Grab	Monthly[4]	[1]
Turbidity	NTU	Grab	Monthly[4]	[1]
Total Suspended Solids	mg/L	Grab	Monthly[4]	[1]
Oil and Grease	mg/L	Grab	Monthly[4]	[1]
Total Petroleum Hydrocarbons (TPH)	mg/L	Grab	Semiannually	[1]
Chronic Toxicity	Pass/Fail	Grab	Semiannually	[1,3]
Antimony, Total Recoverable	µg/L	Grab	Semiannually	[1]
Arsenic	µg/L	Grab	Semiannually	[1]
Beryllium	µg/L	Grab	Semiannually	[1]
Cadmium, Total Recoverable	µg/L	Grab	Semiannually	[1]
Chromium III	µg/L	Grab	Semiannually	[1]
Chromium VI	µg/L	Grab	Semiannually	[1]
Silver, Total Recoverable	µg/L	Grab	Semiannually	[1]
Lead, Total Recoverable	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Mercury, Total Recoverable	µg/L	Grab	Semiannually	[1]
Selenium, Total Recoverable	µg/L	Grab	Semiannually	[1]
Thallium	µg/L	Grab	Semiannually	[1]
Cyanide, Total (as CN) 3	µg/L	Grab	Semiannually	[1]
Asbestos	µg/L	Grab	Semiannually	[1]
2,3,7,8-TCDD (Dioxin)	µg/L	Grab	Semiannually	[1]
Acrolein	µg/L	Grab	Semiannually	[1]
Acrylonitrile	µg/L	Grab	Semiannually	[1]
Benzene	µg/L	Grab	Semiannually	[1]
Bromoform	µg/L	Grab	Semiannually	[1]
Carbon Tetrachloride	µg/L	Grab	Semiannually	[1]
Chlorobenzene	µg/L	Grab	Semiannually	[1]
Chlorodibromomethane	µg/L	Grab	Semiannually	[1]
Chloroethane	µg/L	Grab	Semiannually	[1]
2-Chloroethylvinyl Ether	µg/L	Grab	Semiannually	[1]
Chloroform	µg/L	Grab	Semiannually	[1]
Dichlorobromomethane	µg/L	Grab	Semiannually	[1]
1,1-Dichloroethane	µg/L	Grab	Semiannually	[1]
1,2-Dichloroethane	µg/L	Grab	Semiannually	[1]
1,1-Dichloroethylene	µg/L	Grab	Semiannually	[1]
1,2-Dichloropropane	µg/L	Grab	Semiannually	[1]
1,3-Dichloropropylene	µg/L	Grab	Semiannually	[1]
Ethylbenzene	µg/L	Grab	Semiannually	[1]
Methyl Bromide	µg/L	Grab	Semiannually	[1]
Methyl Chloride	µg/L	Grab	Semiannually	[1]
Dichloromethane (Methylene Chloride)	µg/L	Grab	Semiannually	[1]
Methylene Chloride	µg/L	Grab	Semiannually	[1]
1,1,2,2-Tetrachloroethane	µg/L	Grab	Semiannually	[1]
Tetrachloroethylene	µg/L	Grab	Semiannually	[1]
Toluene	µg/L	Grab	Semiannually	[1]
1,2-Trans-Dichloroethelyene	µg/L	Grab	Semiannually	[1]
1,1,1-Trichloroethane	µg/L	Grab	Semiannually	[1]
1,1,2-Trichloroethane	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Trichloroethylene (Trichloroethene)	µg/L	Grab	Semiannually	[1]
Vinyl Chloride	µg/L	Grab	Semiannually	[1]
2-Chlorophenol	µg/L	Grab	Semiannually	[1]
2,4-Dichlorophenol	µg/L	Grab	Semiannually	[1]
2,4-Dimethylphenol	µg/L	Grab	Semiannually	[1]
2-Methyl-4,6-Dinitophenol	µg/L	Grab	Semiannually	[1]
2,4-Dinitrophenol	µg/L	Grab	Semiannually	[1]
2-Nitophenol	µg/L	Grab	Semiannually	[1]
3-Methyl-4-Chlorophenol	µg/L	Grab	Semiannually	[1]
Pentachlorophenol	µg/L	Grab	Semiannually	[1]
Phenol	µg/L	Grab	Semiannually	[1]
2,4,6-Trichlorophenol	µg/L	Grab	Semiannually	[1]
Acenaphthene	µg/L	Grab	Semiannually	[1]
Acenaphthylene	µg/L	Grab	Semiannually	[1]
Anthracene	µg/L	Grab	Semiannually	[1]
Benzidine	µg/L	Grab	Semiannually	[1]
Benzo(a)Anthracene	µg/L	Grab	Semiannually	[1]
Benzo(a)Pyrene	µg/L	Grab	Semiannually	[1]
Benzo(b)Fluoranthene	µg/L	Grab	Semiannually	[1]
Benzo(ghi)Perylene	µg/L	Grab	Semiannually	[1]
Benzo(k)Fluoranthene	µg/L	Grab	Semiannually	[1]
Bis(2-Chloroethoxy)Methane	µg/L	Grab	Semiannually	[1]
Bis(d-Chloroethyl)Ether	µg/L	Grab	Semiannually	[1]
Bis(2-Chloroisopropyl)Ether	µg/L	Grab	Semiannually	[1]
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Semiannually	[1]
4-Bromophenyl Phenyl Ether	µg/L	Grab	Semiannually	[1]
Butylbenzyl Phthalate	µg/L	Grab	Semiannually	[1]
2-Chloronaphthalene	µg/L	Grab	Semiannually	[1]
4-Chlorophenyl Phenyl Ether	µg/L	Grab	Semiannually	[1]
Chrysene	µg/L	Grab	Semiannually	[1]
Dibenzo(a,h)Anthracene	µg/L	Grab	Semiannually	[1]
1,2 Dichlorobenzene	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
1,3 Dichlorobenzene	µg/L	Grab	Semiannually	[1]
1,4 Dichlorobenzene	µg/L	Grab	Semiannually	[1]
3,3'-Dichlorobenzidine	µg/L	Grab	Semiannually	[1]
Diethyl Phthalate	µg/L	Grab	Semiannually	[1]
Dimethyl Phthalate	µg/L	Grab	Semiannually	[1]
Di-n-Butyl Phthalate	µg/L	Grab	Semiannually	[1]
2,4-Dinitrotoluene	µg/L	Grab	Semiannually	[1]
2,6-Dinitrotoluene	µg/L	Grab	Semiannually	[1]
Di-n-Octyl Phthalate	µg/L	Grab	Semiannually	[1]
1,2-Diphenylhydrazine	µg/L	Grab	Semiannually	[1]
Fluoranthene	µg/L	Grab	Semiannually	[1]
Fluorene	µg/L	Grab	Semiannually	[1]
Hexachlorobenzene	µg/L	Grab	Semiannually	[1]
Hexachlorobutadien	µg/L	Grab	Semiannually	[1]
Hexachlorocyclopentadiene	µg/L	Grab	Semiannually	[1]
Hexachloroethane	µg/L	Grab	Semiannually	[1]
Ideno(1,2,3-cd) Pyrene	µg/L	Grab	Semiannually	[1]
Isophorone	µg/L	Grab	Semiannually	[1]
Naphthalene	µg/L	Grab	Semiannually	[1]
Nitrobenzene	µg/L	Grab	Semiannually	[1]
N-Nitrosodimethylamine	µg/L	Grab	Semiannually	[1]
N-Nitrosodi-n-Propylamine	µg/L	Grab	Semiannually	[1]
N-Nitrosodiphenylamine	µg/L	Grab	Semiannually	[1]
Phenanthrene	µg/L	Grab	Semiannually	[1]
Pyrene	µg/L	Grab	Semiannually	[1]
1,2,4-Trichlorobenzene	µg/L	Grab	Semiannually	[1]
Aldrin	µg/L	Grab	Semiannually	[1]
Alpha-BHC	µg/L	Grab	Semiannually	[1]
Beta-BHC	µg/L	Grab	Semiannually	[1]
Gamma-BHC	µg/L	Grab	Semiannually	[1]
Delta-BHC	µg/L	Grab	Semiannually	[1]
Chlordane	µg/L	Grab	Semiannually	[1]
4,4'-DDT	µg/L	Grab	Semiannually	[1]
4,4'-DDE	µg/L	Grab	Semiannually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
4,4'-DDD	µg/L	Grab	Semiannually	[1]
Dieldrin	µg/L	Grab	Semiannually	[1]
Alpha-Endosulfan	µg/L	Grab	Semiannually	[1]
Beta-Endosulfan	µg/L	Grab	Semiannually	[1]
Endosulfan Sulfate	µg/L	Grab	Semiannually	[1]
Endrin	µg/L	Grab	Semiannually	[1]
Endrin Aldehyde	µg/L	Grab	Semiannually	[1]
Heptachlor	µg/L	Grab	Semiannually	[1]
Heptachlor Epoxide	µg/L	Grab	Semiannually	[1]
Polychlorinated Biphenyls (PCBs)	µg/L	Grab	Semiannually	[1]
Toxaphene	µg/L	Grab	Semiannually	[1]

[1] As specified in 40 CFR part 136.

[2] Influent and 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 that is analyzed by methods 6010B or 200.7 are known.

[3] As specified in Section IV of this MRP.

[4] Sampling is required only when a discharge occurs (i.e. flooding of the graving dock during launch or retrieval evolution).

C. Storm Water Monitoring of Industrial High Risk Areas

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

(1) Does the storm water discharge meet permit effluent limitations for toxicity thereby ensuring water quality standards are achieved in the receiving water?

(2) Does the storm water discharge meet Numeric Action Levels (NALs)?

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

(4) 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 monthly visual observations shall include evaluation of the implementation and effectiveness of Best Management Practices (BMPs).

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 of the discharge.

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. In the Industrial Storm Water Annual Report referenced in section III.C.7 below, the Discharger shall provide a summary and evaluation of visual observations as well as an explanation for uncompleted monthly visual observations.

3. Industrial Storm Water Diversion System Assessment

a. The Discharger shall conduct annual evaluations of the Storm Water Diversion System (SWDS) including berms, pumps, pipes, tanks, and sewer connections to ensure that all elements are in good repair and in an operational status.

b. The Discharger shall conduct annual visual observations during a precipitation event which produces runoff to observe the perimeter of the Facility and the receiving water to ensure that no storm water discharges are visible during storms less than 3.5 inches.

4. Industrial Storm Water Discharge 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, 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 discharge prohibitions contained in section III of this Order.

c. If the Discharger is employing volume-based or flow-based treatment Best Management Practices (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.

[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.

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.

f. The Discharger 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.

h. In the Industrial Storm Water Annual Report referenced in section III.C.7 below, the Discharger shall provide a summary and evaluation of visual observations as well as an explanation for uncompleted visual observations.

5. Industrial High Risk Storm Water Sampling and Analysis

a. A Qualifying Storm Event (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 QSEs during each semiannual period (i.e. January – June, July – December). Representative storm water discharge locations for Industrial High Risk Areas, as defined under section IV.A. of this Order, shall be sampled as specified in Table E-4 below.

c. Samples shall be collected from all industrial storm water monitoring locations (Monitoring Location Nos. SW-1 and SW-2) 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.

d. The Discharger shall visually observe and collect samples of storm water discharges from Discharge Point Nos. SW-001 through SW-009 that represent the quality and quantity of the Facility's industrial storm water discharges from the storm event. Monitoring stations shall be positioned at points where the industrial storm water flow has not commingled with any flow of water from a non-industrial area, and where samples representative of the discharge of storm water runoff associated with industrial activity in the drainage area can be obtained.

e. Monitoring locations shall be identified in the SWPPP, depicted on a site map, and shall not be changed without notice to and the approval of the San Diego Water Board.

f. 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 QSEs during each semiannual period (i.e. January –June, July – December).

g. Composite samples shall be flow-weighted storm water samples for the duration of the storm. If composite samples are collected, all parameters identified in Table E-4 with a sample type of grab or composite must be analyzed using composite samples.

h. 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.

i. The industrial storm water discharges from the Industrial High Risk Areas, shall be sampled and analyzed as shown in Table E-4 below.

Table E-4. Monitoring Requirements for Industrial Storm Water Discharges

Parameter	Units	Sample Type	Minimum Frequency[6]	Required Analytical Test Method
Discharge Volume	gallons	Estimate[1]	Two storms per semiannual period	Estimate
Conventional Pollutants				
Chemical Oxygen Demand	mg/L	Grab	Two storms per semiannual period	[2]
Oil and Grease	mg/L	Grab	Two storms per semiannual period	[2]
Total Suspended Solids	mg/L	Grab	Two storms per semiannual period	[2]
Settleable Solids	ml/L	Grab	Two storms per semiannual period	[2]
pH	pH Units	Grab	Two storms per semiannual period	[5]
Priority Pollutants				
Arsenic, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Cadmium, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Chromium, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Copper, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Lead, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Mercury, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Nickel, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Silver, Total Recoverable[7]	µg/L	Grab	Two storms per semiannual period	[2]
Zinc, Total Recoverable	µg/L	Grab	Two storms per semiannual period	[2]
Non-Conventional Pollutants				
Aluminum, Total Recoverable[7]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Iron, Total Recoverable[7]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Magnesium, Total	µg/L	Grab or Composite	Two storms per	[2]

Parameter	Units	Sample Type	Minimum Frequency[6]	Required Analytical Test Method
Recoverable[7]			semiannual period.	
Nitrate+Nitrite Nitrogen[7]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Phosphorus, Total[7]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Ammonia[7]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Chronic Toxicity	Pass/ Fail, % effect (TST)	Grab	Two storms per semiannual period	[3]
Other Pollutants[4,7]	µg/L	Grab	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 Table G-1 of Attachment G to this Order or 40 CFR section 136.3.
3 The presence of chronic toxicity in the storm water shall be determined as specified in section IV. 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 reduce the pollutant analysis to only the first QSE each year. 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 part 136.
6 Sampling shall occur during QSEs, or if collected, prior to release to receiving water. If there are no QSEs 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.
7 After four consecutive sample events where parameters are not detected or below the Annual Numerical Action Level (NAL) values, analysis for those parameters may be reduced to only the first QSE each year.

j. Sampling Frequency Reduction Certification

i. The Discharger is eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:

a) Results from four 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.

c) The Discharger has certified that it meets conditions a) and b) above.

ii. 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.

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

iv. 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.

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

6. Visual Observation and Sample Collection Exceptions

The Discharger shall be prepared to collect samples and conduct visual observations at the beginning of the semiannual 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 offsite 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.

7. Industrial Storm Water Annual Report

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:

a. A summary and evaluation of visual observations.

b. A certification that the SWDS is in good repair and with an operational status and continues to have capacity to capture a 100-year frequency storm event (equivalent to approximately 3.5 inches of rain in 24 hours).

c. The Annual Comprehensive Site Compliance Evaluation Report as required by section IX of the SWPPP requirements contained in Attachment G.

d. A list of authorized and non-authorized non-storm water discharges.

e. If there were no storm water discharges during the monitoring period, a statement certifying that no storm water discharges occurred during the monitoring period.

f. If there was a storm water discharge during the monitoring period, a discussion describing the discharges including an estimate of the volume discharged, visual observations, size of storm, and circumstances of the discharge(s).

g. All sample data including laboratory reports.

IV. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

Whole effluent toxicity (WET) refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent.

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 the effluent does not comply with permit effluent limitations for chronic toxicity, are unmeasured pollutants causing risk to aquatic life? Are unmeasured pollutants causing risk to aquatic life?

(3) If the effluent does not comply with permit effluent limitations for chronic toxicity, are pollutants in combinations causing risk to aquatic life? Are conditions in receiving water getting better or worse with regard to toxicity?

A. Monitoring Frequency for Chronic Toxicity

The Discharger shall conduct chronic toxicity monitoring at the frequencies and locations specified in Tables E-2, E-3, E-4, and E-5 of this Order.

B. 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 Instream Waste Concentration (IWC) during a species sensitivity screening (i.e. the most sensitive species) shall be utilized for routine monitoring during the permit cycle.

The Discharger shall follow the methods for chronic toxicity tests as established in 40 CFR section 136.3. The U.S. EPA 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).

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 1006.0 (Daily observations for mortality make it possible to calculate acute toxicity for desired exposure periods (i.e. 7-day LC50, 96-hour LC50, etc.)); 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).

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.

The total sample volume shall be determined by the specific toxicity test method(s) used. Sufficient sample volume shall be collected to perform the required toxicity test. Sufficient sample volume shall also be collected during accelerated monitoring for subsequent Toxicity Identification Evaluation (TIE) studies, if necessary, at each sampling event. 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. For static-renewal toxicity tests, each grab or composite sample may also be used to prepare test solutions for renewal at 24 h, 48 h, and/or 72 h after first use, if stored at 0-6 °C, with minimum head space.

C. Compliance Determination

The Maximum Daily Effluent Limitation (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 Test of Significant Toxicity (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:

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

D. 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 during the next discharge event after receiving results of an exceedance.

If the additional test result for industrial process wastewater results in a "Pass" or a "Fail at a percent effect less than 25%, 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 IV.F of this MRP.

E. Quality Assurance (QA)

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

1. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the TST statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1.
2. For this discharge, a mixing zone or dilution allowance is not authorized. The chronic IWC for this discharge is 100% effluent.
3. Effluent dilution water and control water should be prepared and used as specified in the test methods manual *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) and/or *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used. If the use of artificial sea salts is considered provisional in the test method, then artificial sea salts shall not be used to increase the salinity of the effluent sample prior to toxicity testing without written approval by the permitting authority.
4. 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.).

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

6. Because this permit requires sublethal hypothesis testing endpoints from test methods in *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), within-test variability must be reviewed for acceptability and a variability criterion (upper Percent Minimum Significant Difference bound) must be applied, as directed under each test method. Based on this review, only accepted effluent toxicity test results shall be reported on the Discharger Monitoring Report (DMR). If excessive within-test variability invalidates a test result, then the Discharger must resample and retest within 14 days.

7. pH drift during the toxicity test may contribute to artifactual toxicity when pH-dependent toxicants (e.g. ammonia, metals) are present in an effluent. To determine whether or not pH drift during the toxicity test is contributing to artifactual toxicity, the Discharger shall conduct three sets of parallel toxicity tests, in which the pH of one treatment is controlled at the pH of the effluent and the pH of the other treatment is not controlled, as described in section 11.3.6.1 of the test methods manual, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit or trigger is observed in the treatments controlled at the pH of the effluent. If toxicity is confirmed to be artifactual and due to pH drift, then, following written approval by the permitting authority, the Discharger may use the procedures outlined in section 11.3.6.2 of the test methods manual to control sample pH during the toxicity test.

F. Accelerated Chronic Toxicity Testing Monitoring Schedule

The Discharger shall implement an accelerated chronic toxicity monitoring schedule, as required by section IV.D of this MRP, conducted at approximately two week intervals, over an eight-week period (or as soon as possible for storm or flood water). 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” or “Fail” with less than 25% percent effect, 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 Toxicity Reduction Evaluation (TRE) Work Plan as set forth below in section IV.G 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.

G. 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 that industrial process water or storm water from an Industrial High Risk Area had a chronic toxicity test result in a “Fail” and exhibit a percent effect greater than or equal to 25% during accelerated monitoring.

2. **TRE Work Plan.** The TRE Work Plan shall be in conformance with the U.S. EPA 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.

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 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-6. 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 the 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.

f. A schedule for status reports at least quarterly.

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

H. 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.

I. Reporting of Chronic Toxicity Monitoring Results

1. The Discharger shall submit:
    a. 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). All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported.
    b. 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.
    c. A summary of water quality measurements for each toxicity test (e.g. pH, dissolved oxygen, temperature, conductivity, hardness, salinity).
    d. All results for effluent parameters monitored concurrently with the toxicity tests.
    e. Statistical program (e.g. TST Calculator, CETIS, etc.) output results, including graphical plots for each toxicity test.
    f. Any additional Quality Assurance/ Quality Control (QA/QC) documentation or any additional toxicity related information.
2. 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.

V. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

The receiving water and sediment monitoring requirements set forth below are designed to measure the effects of the Facility discharges on San Diego Bay receiving waters.

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

(3) Does the Facility cause or contribute to violations of the receiving water limitations in section V of this Order?

(4) Is the sediment condition changing over time?

At this time, receiving water and sediment monitoring in the vicinity of the Facility shall be conducted as specified below. This program is intended to document conditions of receiving waters and bay bottom sediments within the vicinity of the Facility discharges. Station location, sampling, sample preservation, and analyses, when not specified, shall be by methods approved by the San Diego Water Board. The monitoring program may be modified by the San Diego Water Board at any time. The Discharger may also submit proposals, including the supporting rationale, for reductions or other changes to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

During monitoring events sample stations shall be located using a land-based microwave positioning system or a satellite positioning system such as Global Positioning System (GPS). If an alternate navigation system is proposed, its accuracy should be compared to that of microwave and satellite based systems, and any compromises in accuracy shall be justified.

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 surface water receiving water monitoring requirements in section VIII.A of Attachment E (MRP) to Order No. R9-2009-0099 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 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 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 part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* and the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (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.

3. **Receiving Water Monitoring**

   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-5 below. The proposed sampling must be based upon results on the fate and transport of pollutants from the conceptual model (see section V.D.5 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-5 below:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Copper, Total Recoverable	µg/L	Grab	Monthly	[1,2]
Zinc, Total Recoverable	µg/L	Grab	Quarterly	[1]
Chronic Toxicity	Pass/ Fail	Grab	Annually	[3]
Antimony, Total Recoverable	µg/L	Grab	Annually	[1]
Arsenic	µg/L	Grab	Annually	[1]
Beryllium	µg/L	Grab	Annually	[1]
Cadmium, Total Recoverable	µg/L	Grab	Annually	[1]
Chromium III	µg/L	Grab	Annually	[1]
Chromium VI	µg/L	Grab	Annually	[1]
Silver, Total Recoverable	µg/L	Grab	Annually	[1]
Lead, Total Recoverable	µg/L	Grab	Annually	[1]
Mercury, Total Recoverable	µg/L	Grab	Annually	[1]
Nickel, Total Recoverable	µg/L	Grab	Annually	[1]
Selenium, Total Recoverable	µg/L	Grab	Annually	[1]
Thallium	µg/L	Grab	Annually	[1]
Cyanide, Total (as CN) 3	µg/L	Grab	Annually	[1]
Asbestos	µg/L	Grab	Annually	[1]
2,3,7,8-TCDD (Dioxin)	µg/L	Grab	Annually	[1]
Acrolein	µg/L	Grab	Annually	[1]
Acrylonitrile	µg/L	Grab	Annually	[1]
Benzene	µg/L	Grab	Annually	[1]
Bromoform	µg/L	Grab	Annually	[1]
Carbon Tetrachloride	µg/L	Grab	Annually	[1]
Chlorobenzene	µg/L	Grab	Annually	[1]
Chlorodibromomethane	µg/L	Grab	Annually	[1]
Chloroethane	µg/L	Grab	Annually	[1]
2-Chloroethylvinyl Ether	µg/L	Grab	Annually	[1]
Chloroform	µg/L	Grab	Annually	[1]
Dichlorobromomethane	µg/L	Grab	Annually	[1]
1,1-Dichloroethane	µg/L	Grab	Annually	[1]
1,2-Dichloroethane	µg/L	Grab	Annually	[1]
1,1-Dichloroethylene	µg/L	Grab	Annually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
1,2-Dichloropropane	µg/L	Grab	Annually	[1]
1,3-Dichloropropylene	µg/L	Grab	Annually	[1]
Ethylbenzene	µg/L	Grab	Annually	[1]
Methyl Bromide	µg/L	Grab	Annually	[1]
Methyl Chloride	µg/L	Grab	Annually	[1]
Dichloromethane (Methylene Chloride)	µg/L	Grab	Annually	[1]
Methylene Chloride	µg/L	Grab	Annually	[1]
1,1,2,2-Tetrachloroethane	µg/L	Grab	Annually	[1]
Tetrachloroethylene	µg/L	Grab	Annually	[1]
Toluene	µg/L	Grab	Annually	[1]
1,2-Trans-Dichloroethelyene	µg/L	Grab	Annually	[1]
1,1,1-Trichloroethane	µg/L	Grab	Annually	[1]
1,1,2-Trichloroethane	µg/L	Grab	Annually	[1]
Trichloroethylene (Trichloroethene)	µg/L	Grab	Annually	[1]
Vinyl Chloride	µg/L	Grab	Annually	[1]
2-Chlorophenol	µg/L	Grab	Annually	[1]
2,4-Dichlorophenol	µg/L	Grab	Annually	[1]
2,4-Dimethylphenol	µg/L	Grab	Annually	[1]
2-Methyl-4,6-Dinitophenol	µg/L	Grab	Annually	[1]
2,4-Dinitrophenol	µg/L	Grab	Annually	[1]
2-Nitophenol	µg/L	Grab	Annually	[1]
3-Methyl-4-Chlorophenol	µg/L	Grab	Annually	[1]
Pentachlorophenol	µg/L	Grab	Annually	[1]
Phenol	µg/L	Grab	Annually	[1]
2,4,6-Trichlorophenol	µg/L	Grab	Annually	[1]
Acenaphthene	µg/L	Grab	Annually	[1]
Acenaphthylene	µg/L	Grab	Annually	[1]
Anthracene	µg/L	Grab	Annually	[1]
Benzidine	µg/L	Grab	Annually	[1]
Benzo(a)Anthracene	µg/L	Grab	Annually	[1]
Benzo(a)Pyrene	µg/L	Grab	Annually	[1]
Benzo(b)Fluoranthene	µg/L	Grab	Annually	[1]
Benzo(ghi)Perylene	µg/L	Grab	Annually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Benzo(k)Fluoranthene	µg/L	Grab	Annually	[1]
Bis(2-Chloroethoxy)Methane	µg/L	Grab	Annually	[1]
Bis(d-Chloroethyl)Ether	µg/L	Grab	Annually	[1]
Bis(2-Chloroisopropyl)Ether	µg/L	Grab	Annually	[1]
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Annually	[1]
4-Bromophenyl Phenyl Ether	µg/L	Grab	Annually	[1]
Butylbenzyl Phthalate	µg/L	Grab	Annually	[1]
2-Chloronaphthalene	µg/L	Grab	Annually	[1]
4-Chlorophenyl Phenyl Ether	µg/L	Grab	Annually	[1]
Chrysene	µg/L	Grab	Annually	[1]
Dibenzo(a,h)Anthracene	µg/L	Grab	Annually	[1]
1,2 Dichlorobenzene	µg/L	Grab	Annually	[1]
1,3 Dichlorobenzene	µg/L	Grab	Annually	[1]
1,4 Dichlorobenzene	µg/L	Grab	Annually	[1]
3,3'-Dichlorobenzidine	µg/L	Grab	Annually	[1]
Diethyl Phthalate	µg/L	Grab	Annually	[1]
Dimethyl Phthalate	µg/L	Grab	Annually	[1]
Di-n-Butyl Phthalate	µg/L	Grab	Annually	[1]
2,4-Dinitrotoluene	µg/L	Grab	Annually	[1]
2,6-Dinitrotoluene	µg/L	Grab	Annually	[1]
Di-n-Octyl Phthalate	µg/L	Grab	Annually	[1]
1,2-Diphenylhydrazine	µg/L	Grab	Annually	[1]
Fluoranthene	µg/L	Grab	Annually	[1]
Fluorene	µg/L	Grab	Annually	[1]
Hexachlorobenzene	µg/L	Grab	Annually	[1]
Hexachlorobutadien	µg/L	Grab	Annually	[1]
Hexachlorocyclopentadiene	µg/L	Grab	Annually	[1]
Hexachloroethane	µg/L	Grab	Annually	[1]
Ideno(1,2,3-cd) Pyrene	µg/L	Grab	Annually	[1]
Isophorone	µg/L	Grab	Annually	[1]
Naphthalene	µg/L	Grab	Annually	[1]
Nitrobenzene	µg/L	Grab	Annually	[1]
N-Nitrosodimethylamine	µg/L	Grab	Annually	[1]
N-Nitrosodi-n-Propylamine	µg/L	Grab	Annually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
N-Nitrosodiphenylamine	µg/L	Grab	Annually	[1]
Phenanthrene	µg/L	Grab	Annually	[1]
Pyrene	µg/L	Grab	Annually	[1]
1,2,4-Trichlorobenzene	µg/L	Grab	Annually	[1]
Aldrin	µg/L	Grab	Annually	[1]
Alpha-BHC	µg/L	Grab	Annually	[1]
Beta-BHC	µg/L	Grab	Annually	[1]
Gamma-BHC	µg/L	Grab	Annually	[1]
Delta-BHC	µg/L	Grab	Annually	[1]
Chlordane	µg/L	Grab	Annually	[1]
4,4'-DDT	µg/L	Grab	Annually	[1]
4,4'-DDE	µg/L	Grab	Annually	[1]
4,4'-DDD	µg/L	Grab	Annually	[1]
Dieldrin	µg/L	Grab	Annually	[1]
Alpha-Endosulfan	µg/L	Grab	Annually	[1]
Beta-Endosulfan	µg/L	Grab	Annually	[1]
Endosulfan Sulfate	µg/L	Grab	Annually	[1]
Endrin	µg/L	Grab	Annually	[1]
Endrin Aldehyde	µg/L	Grab	Annually	[1]
Heptachlor	µg/L	Grab	Annually	[1]
Heptachlor Epoxide	µg/L	Grab	Annually	[1]
Polychlorinated Biphenyls (PCBs)	µg/L	Grab	Annually	[1]
Toxaphene	µg/L	Grab	Annually	[1]

[1] As specified in 40 CFR part 136.3

[2] Water 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 that is analyzed by methods 6010B or 200.7 are known.

[3] The presence of chronic toxicity shall be determined as specified in section IV of this MRP.

4. Sediment Monitoring

a. **Frequency**: Sediment chemistry, toxicity, and benthic organism monitoring shall be done, at a minimum twice during the term of this Order. For stations that are consistently classified as unimpacted or likely unimpacted, the frequency may be reduced to once per permit cycle in the next permit.

b. **Station Locations:** Triad station locations shall be identified after evaluating the items in section V.D.5 through V.D.8 below.

c. **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 under the Sediment Quality Plan. The proposal must also include the following:

i. **Sediment Chemistry:** Bulk sediment chemical analysis shall include at a minimum the pollutants identified in Attachment A of the Sediment Quality Plan and listed in Attachment I of this Order.

ii. **Sediment Toxicity:** Short term survival tests and sublethal tests shall be performed as specified in section V.F of Sediment Quality Plan. The results shall be recorded as "percent of control response".

iii. **Benthic Community- Subtidal Habitat:** The benthic community shall be evaluated using the line of evidence approach described in section V.G of the Sediment Quality Plan.

d. **Aquatic-Dependent Wildlife and Human Health Risk Assessments:** An aquatic-dependent wildlife and human health screening-level risk assessment shall be conducted to evaluate if sediment conditions potentially pose an unacceptable risk to aquatic-dependent wildlife and human health. The Tier I screening-level risk assessment shall be based on tissue data derived from the exposure of the clam *Macoma nasuta* to site sediments for 28 days using American Society for Testing and Materials (ASTM) protocols or similar procedures. A risk assessment shall be conducted considering any applicable and relevant information, including California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) policies for fish consumption and risk assessment, Cal/EPA's Department of Toxic Substances Control (DTSC) Risk Assessment, and U.S. EPA Human Health Risk Assessment policies

5. 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.

h. Other sources or discharges in the immediate vicinity.

6. 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.

7. **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.

8. **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.

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

10. **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 Water and sediment Monitoring Reports described in section V.F and V.G of this MRP.

E. Water and Sediment Monitoring Plan Implementation. The Discharger or water body monitoring coalition 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. At the latest, implementation of the receiving water monitoring shall begin within 24 months of the effective date of this Order. 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. Receiving Water Monitoring Reports. The Discharger or water body monitoring coalition shall submit Receiving Water Monitoring Reports annually in accordance with the schedule in the Water and Sediment Monitoring Plan. The Receiving Water Monitoring Reports shall contain:

1. **Monitoring Results.** The results of the monitoring in tabular and graphical form.

2. **Data Analysis, Interpretation, and Conclusions.** An analysis of the data to evaluate trends and interpretations and conclusions on the data.

3. **Receiving Water Limitation Compliance Determination.** A determination as to whether applicable receiving water limitations in this Order have been attained.

4. **Sample Location Map.** The locations, type, and number of samples shall be identified and shown on a site map(s).

5. **Laboratory Reports.** The reports from laboratories with the original analysis results including any QA/QC information.

G. Sediment Monitoring Reports. The Discharger or water body monitoring coalition shall submit a Sediment Monitoring Report twice during the term of the permit in accordance with the schedule in the Water and Sediment Monitoring Plan. The Sediment Monitoring Report shall contain the following information:

1. **Aquatic Life Analysis.** The data, analyses, interpretation, and integration of the multiple lines of evidence (MLOE), and station assessment shall be performed using the MLOE approach as prescribed in the Sediment Quality Plan. Compliance with receiving water limitations for sediment quality shall be determined for each station by integrating the sediment chemistry, toxicity, and benthic community lines of evidence to derive a benthic triad station assessment in accordance with the methodology in section V.I of the Sediment Quality Plan.

2. **Aquatic-dependent Wildlife and Human Health.** The data, analyses, interpretation, and results of the screening-level risk assessments for aquatic-dependent wildlife and human health shall be performed in accordance with section VI of the Sediment Quality Plan. Compliance with receiving water limitations for sediment quality shall be determined for the site based on the aquatic-dependent wildlife and human health screening-level risk assessments.
3. **Receiving Water Limitation Compliance Determination.** A determination shall be made for each sediment station of attainment of the applicable receiving water limitations.
4. **Sample Location Map.** The locations, type, and number of samples shall be identified and shown on a site map(s).
5. **Laboratory Reports.** The reports from laboratories with the original analysis results including any quality assurance / quality control information.

VI. REGIONAL MONITORING REQUIREMENTS

Regional receiving water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of receiving waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through intercalibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in receiving waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring receiving waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for receiving waters in the San Diego Region and discharges to those waters. These programs shall be developed and implemented so as to answer the following primary questions:

(1) What are the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses?

i. Are fish and shellfish safe to eat?

ii. Is water quality safe for swimming?

iii. Are ecosystems healthy?

(2) What are the primary stressors causing or contributing to conditions of concern?

(3) What are the major sources of the stressors causing or contributing to conditions of concern?

(4) How effective (i.e. environmental outcomes) are actions taken to address such stressors and sources?

Development and implementation of new and improved monitoring and assessment programs for receiving waters will be guided by the following:

(1) San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*.

(2) San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*.

(3) Other guidance materials, as appropriate.

The San Diego Water Board may modify the receiving waters monitoring and reporting requirements, regional monitoring requirements, and/or special studies requirements of this Order as 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*.

VII. OTHER MONITORING REQUIREMENTS

A. Floating Dry Dock Submergence/Emergence Water Discharge, Shipbuilding Ways Flood Water Discharge, and Graving Dock Flood Water Discharge

1. **Monitoring Questions.** This submergence, flooding monitoring program is designed to answer the following primary questions:

   (1) Are the dry dock, ways, and graving dock adequately cleaned prior to flooding?

   (2) Are pollutants being prevented from contact with San Diego Bay waters prior to flooding?

2. **Submergence or Flooding 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, shipbuilding ways, or graving dock. If the dry dock, shipbuilding ways, or graving 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. **Submergence or Flooding Records.** The Discharger shall record on forms approved by the San Diego Water Board including photographs the condition of its dry dock, shipbuilding ways, or graving dock immediately prior to each flooding when industrial activity has occurred in the dry dock, building ways, or graving dock. Quarterly as specified in Table E-6, the Discharger shall submit the records to the San Diego Water Board. If flooding is to occur at night, photographs shall be taken during daylight hours as close to flooding as possible. The Discharger does not need to record the condition of the dry dock, building ways, or graving dock prior to the flooding when industrial activity has not occurred and a flooding evolution is required for training or other purposes.

4. **Submergence or Flooding Certification.** Quarterly as specified in Table E-6, the Discharger must submit a certification statement regarding the condition of the dry dock, building ways, and graving dock prior to each flooding event during the reporting period. If the dry dock, building ways, or graving dock was not flooded during the quarter, the Discharger shall document in the quarterly report that no flooding occurred during that monitoring period.

B. Floating Dry Dock Ballast Tank

Monitoring Questions. This ballast tank program is designed to answer the following primary questions:

(1) Are the dry dock ballast tanks in good repair?

(2) Are pollutants being prevented from entering the ballast tanks prior to discharge to San Diego Bay?

The Discharger shall submit U.S. Navy and ASTM reports certifying the integrity of the floating dry dock ballast tanks annually, in accordance with Table E-6.

C. Floating Boom Cleaning

Monitoring Questions. The boom cleaning program is designed to answer the following primary questions:

(1) What is the scope and magnitude of the discharge?

(2) What are the potential impacts to San Diego Bay?

Annually as part of the annual report, the Discharger shall submit a log of in-water floating boom cleaning activities, including the personnel-in-charge of the cleaning, the quantity of the discharge, the date, a summary of any potential impacts to receiving water quality, and a summary regarding the description and location of any boom removed from San Diego Bay to be cleaned because of oil or other pollutants. The annual log shall be submitted with the annual report in accordance with Table E-6.

D. Spill and Illicit Discharge Log

Monitoring Questions. 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 industrial activities in the area.
6. The fate of the spill or illicit discharge (e.g. discharge to 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.
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-6 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 during the annual reporting period to reduce, eliminate, and prevent reoccurrence of spills and illicit discharges.

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 submit an annual report discussing the compliance record and corrective actions taken, or which may be taken, or which may be needed to bring the discharge into full compliance with the requirements of this Order.
3. 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. If 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.
4. The Discharger shall attach a cover letter to the Self-Monitoring Report (SMR). The information contained in the cover letter shall clearly identify violations of the Waste Discharge Requirements (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.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal. Any reports not in CIWQS shall be submitted electronically to the San Diego Water Board's e-mail at sandiego@waterboards.ca.gov or as otherwise directed by the San Diego Water Board.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP. The Discharger shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required monitoring using U.S. EPA-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-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly 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	1st day of calendar month through last day of calendar month	30 days following the end of the monitoring period
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	30 days following the end of the monitoring period
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	30 days following the end of the monitoring period
Annually	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
Annual Storm Water Report	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

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136. 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 RL shall be reported as measured by the laboratory (i.e. the measured chemical concentration in the sample).

   b. Sample results less than the 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. 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.

5. **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 San Diego Water Board and State Water Board, 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 reporting level (RL).

6. **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.

C. Discharge Monitoring Reports (DMRs)

1. DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

2. The purpose of the Discharge Monitoring Report - Quality Assurance (DMR-QA) Study is to ensure the integrity of data submitted by the Discharger for DMR reporting requirements and evaluate performance of the laboratories to analyze wastewater samples. Additional information on the DMR-QA can be found at https://www.epa.gov/compliance/discharge-monitoring-report-quality-assurance-study-program. The Discharger shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

   State Water Resources Control Board
   Quality Assurance Program Officer
   Office of Information Management and Analysis
   1001 I Street, Sacramento, CA 95814

D. Other Reports

Special Reports. As specified in this Order, special reports or program components shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

Table E-7. Reporting Requirements for Special Reports

Report Name	Section No.	Report Due Date
Toxicity Reduction Evaluation (TRE) Work Plan	MRP section IV.G.1	During accelerated monitoring, see Section IV.G.1 of MRP
Water and Sediment Monitoring Plan	MRP section V.D	Within 12 months of the effective date of this Order
Receiving Water Monitoring Reports	MRP section V.F	Annually in accordance with the schedule contained in the Water and Sediment Monitoring Plan
Sediment Monitoring Reports	MRP section V.G	Twice during the permit cycle in accordance with the schedule contained in the Water and Sediment Monitoring Plan

ATTACHMENT F – FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

As described in section II 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. General Dynamic National Steel and Shipbuilding Company (NASSCO or Discharger) is the owner and operator of General Dynamics NASSCO shipyard facility (Facility) for the construction, conversion, and repair of ships for the U.S. Navy and commercial customers.

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.

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	9 000000066
Discharger	General Dynamics National Steel and Shipbuilding Company (NASSCO)
Name of Facility	General Dynamics National Steel and Shipbuilding Company (NASSCO)
Facility Address	2798 East Harbor Drive
	San Diego, CA 92113
	San Diego County
Facility Contact, Title and Phone	T. Michael Chee, Manager, Environmental Engineering, (619) 544-7778
Authorized Person to Sign and Submit Reports	T. Michael Chee, Manager, Environmental Engineering, (619) 544-7778
Mailing Address	2798 East Harbor Drive, San Diego, CA 92113
Billing Address	2798 East Harbor Drive, San Diego, CA 92113
Type of Facility	Shipbuilding and Repair (SIC Code# 3731)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	Not Applicable
Facility Design Flow	Not Applicable
Watershed	San Diego Bay
Receiving Water	San Diego Bay and Mouth of Chollas Creek
Receiving Water Type	Enclosed Bay and Estuary

B. The Facility discharges wastewater and storm water to San Diego Bay, a water of the U.S. and conducts activities controlled by Best Management Practices (BMPs) adjacent to the Mouth of Chollas Creek, a water of the U.S. The Discharger was previously regulated by Order R9-2009-0099 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109134, adopted on August 12, 2009 and expired on September 1, 2014. Attachment B provides a map of the Facility and surrounding area. Attachment C provides a flow schematic of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under California Water Code (Water Code) section 1211.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on March 5, 2013. Supplemental information was provided by the Discharger on April 30, 2014. The application was deemed complete on May 13, 2014. A site visit was conducted on May 24, 2016 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

NASSCO is a business unit of General Dynamics Corporation, located at 2798 East Harbor Drive in San Diego, California. NASSCO provides a full range of ship construction, conversion, and repair capabilities to the U.S. Navy and commercial customers. NASSCO covers approximately 133 acres of tidelands property leased (land and water) from the San Diego Unified Port District. The land portion of the lease covers approximately 85 acres. Improvements to the land lease include approximately 1.6 million square feet of office, shop and warehouse space, and 392,800 square feet of concrete platens used for steel fabrication, a floating dry dock, a graving dock (building dock), two building ways, twelve berths, and a blast and paint facility. A sheet pile bulkhead and a wall along most of the waterfront separate the land and the adjacent receiving waters of San Diego Bay.

A storm water containment berm encompasses the entire shipyard to prevent the discharge of contact storm water and separate the land and the adjacent receiving waters of San Diego Bay.

General industrial processes associated with shipbuilding, conversion, repair, and maintenance include: metal fabrication, welding and brazing, abrasive blasting, hydroblasting, fiberglass work, paint and coating application, mechanical work, electrical work, wood work (including sanding), chemical cleaning of piping, line heating, and hazardous waste storage. Several shipbuilding and repair activities take place over water or near shore locations, while others may be performed in workshops or at work sites located inland on the shipyard property. Crane transportation of components and storage operations are also provided. Ships are constructed in the building ways or the graving dock. Ships can be repaired in the floating dry dock, graving dock, building ways, or pier side.

A. Description of Wastewater

A description of these types of wastewater generated at the Facility is provided in the subsections below.

1. **Graving Dock and Building Ways Hydrostatic Relief Water.** Hydrostatic relief water is water pumped from the ground to prevent seepage or buckling of the floor or walls of the graving dock and building ways. Discharges from the hydrostatic relief systems are

estimated at 208,000 gallons per day and are directed to the ion exchange treatment system.

2. **Building Ways Flood Water.** Building Ways 3 and Building Ways 4 are flooded with bay water to launch vessels. Flood water discharges from Building Ways 3 and Building Ways 4 are estimated at 750,000 gallons per launch pumped at a rate of 5,810 gallons per minute and are directed to the ion exchange treatment system.

3. **Ion Exchange Treatment System Effluent.** Hydrostatic relief water and flood water from Building Ways 3 and Building Ways 4 are directed to an ion exchange treatment system for treatment to remove copper, nickel, and zinc. The effluent from the ion exchange treatment system is discharged to San Diego Bay. The ion exchange treatment system consists of three 10.5K gallon storage tanks, two centrifugal pumps, three multimedia filter vessels in parallel, two granular activated carbon (GAC) vessels in parallel, and two ion exchange media vessels in series as shown in Flow Schematic C-2.

   The previous permit contained individual outfalls for each of these wastewaters at Discharge Point Nos. HR-1, HR-2, HR-3, M-3, and M-4. These wastewaters are now directed to the ion exchange treatment system prior to discharging from the combined outfall of Discharge Point No. IX-1 to San Diego Bay.

4. **Floating Dry Dock Ballast Water.** The floating dry dock is a vessel which can be submerged and raised to bring another vessel out of the water to conduct repairs. Sinking and floating of the dry dock is accomplished by flooding and emptying the ballast tanks of the floating dry dock. Ballast tanks are also used to adjust the trim of the dock. Ballast water is discharged through Discharge Point No. M-1 to San Diego Bay. Discharges of floating dry dock ballast water are estimated at a maximum of 104,000 gallons per minute. Discharges of ballast water while docking or undocking a vessel are not regulated by this Order but are regulated by United Stated Environmental Protection Agency's (U.S. EPA) Vessel General Permit (VGP) under Permit Tracking No. VPAAO662O. Discharges of ballast water while the dry dock is not operating as a means of transportation, such as when the floating dry dock is at its mooring position to conduct ship repair activity, are regulated by this Order.

5. **Graving Dock Flood Water.** The graving dock is flooded with San Diego Bay water to launch and retrieve vessels. Flood water is discharged to San Diego Bay via Discharge Point No. M-2 when vessels are launched or retrieved. Estimates of the discharge volumes from flooding are approximately 18-22 million gallons per flooding event pumped at a rate of 18,000 gallons per minute. This Order includes a requirement for Best Management Practices (BMPs) for graving dock cleaning to prevent or minimize the discharge of pollutants prior to and during flooding.

   The graving dock is primarily used for new construction of vessels and a non-copper based antifouling hull coating system is applied to new vessels as a best management practice to achieve compliance with the effluent limitation for copper. Occasionally, the graving dock is used for repair or minor maintenance of vessels with existing antifouling hull coating systems which may contain copper. NASSCO has no control over hull coating systems on existing vessels and does not remove or change these hull coating systems without the sole approval of the customer.

6. **Storm Water.** NASSCO operates and maintains a Storm Water Diversion System (SWDS) that is designed to capture storm water runoff from all industrial areas. NASSCO developed the SWDS to eliminate the discharge of industrial storm water to San Diego Bay with a capacity to retain in excess of 33,858,000 gallons, more than enough capacity to capture a 100-year storm event (approximately 3.5 inches of rain in 24 hours). AII

storm water captured within the facility is discharged to the San Diego Metropolitan Sanitary Sewer System (SDMSSS). Storm water that flows into the graving dock during a graving dock flooding event will be discharged to San Diego Bay through Discharge Point No. M-2. Storm water exceeding the capacity of the SWSD will be discharged to San Diego Bay through SW-1 or SW-2.

B. Discharge Points and Receiving Waters

1. Wastewater is discharged into San Diego Bay as summarized in Table F-2 below:

Table F-2. Discharge Points and Receiving Waters

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
IX-1 (Ion Exchange Treatment System)	Treated Hydrostatic Relief and Ways Dewatering	32º 41’ 30” N	-117º 8' 26" W	San Diego Bay
M-1 (Floating Dry Dock)	Ballast Water	32º 41’ 33” N	-117º 8' 37" W	San Diego Bay
M-2 (Graving Dock)	Dewatering Flood Water	32º 41’ 27” N	-117º 8' 25" W	San Diego Bay
SW-1 (North Shipyard)	Northwest Storm Water Collection	32° 41' 25" N	-117° 8' 33" W	San Diego Bay
SW-2 (South Shipyard	Southwest Storm Water Collection	32° 41' 21" N	-117° 8' 20" W	San Diego Bay

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Discharge prohibitions for all authorized discharges contained in Order No. R9-2009-0099 include:

   a. The Discharger shall comply with all requirements of the Basin Plan Waste Discharge Prohibitions which are hereby included in this Order by reference.

   b. The discharge of sewage, except as noted in the Basin Plan Waste Discharge Prohibitions, to San Diego Bay is prohibited.

   c. The discharge of industrial process water, other than miscellaneous low volume water, is prohibited.

   d. The discharge of the first flush of storm water runoff from high risk areas is prohibited, except if the pollutants in the discharge are reduced to the extent and demonstrated through testing that the discharge achieves compliance with the acute toxicity limitation specified in section IV.A.5 of this Order. The discharge of the remainder of the storm water must also achieve compliance with the acute toxicity limitations specified in section IV.A.5 of this Order but only needs to be demonstrated twice per year unless under accelerated testing.

   e. The discharges of municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate to San Diego Bay is prohibited.

   f. The discharge of rubbish, refuse, debris, materials of petroleum origin, waste zinc plates, abrasives, primer, paint, paint chips, solvents, and marine fouling

organisms, and the deposition of such wastes at any place where they could eventually be discharged is prohibited. This prohibition does not apply to the discharge of marine fouling organisms removed from unpainted, uncoated surfaces by underwater operations and discharges that result from floating booms that were installed for "Force Protection" purposes. Rubbish and refuse include, but are not limited to, any cans, bottles, paper, plastic, vegetable matter, or dead animals deposited or caused to be deposited by man.

g. The discharge of materials of petroleum origin in sufficient quantities to be visible is prohibited.

h. The discharge or bypassing of untreated waste to San Diego Bay is prohibited. This prohibition does not apply to non-contact cooling water, miscellaneous low volume water, and fire protection water streams which comply with the requirements of this Order for elevated temperature waste discharges and which do not contain pollutants or waste other than heat.

i. The discharge of polychlorinated biphenyl compounds, such as those used for transformer fluid, is prohibited.

j. The discharge of wastes and pollutants from underwater operations, such as underwater paint and coating removal and underwater hull cleaning, is prohibited. This prohibition does not apply to the discharge of marine fouling organisms removed from unpainted and uncoated surfaces by underwater operations, or to discharges that result from the cleaning of floating booms that were installed for "Force Protection" purposes.

k. The discharge of wastes that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) is prohibited.

l. The discharge of flood waters from the graving dock (M-2), Ways 3 (M-3), and Ways 4 (M-4) more than 15 times per year total is prohibited.

2. Discharge effluent limitations for Discharge Point Nos. HR-1, HR-2, HR-3, M-1, M-2, M-3, M-4, and M-8 contained in the previous Order are summarized in Table F-3.

Table F-3. Previous Effluent Limits and Monitoring Data – Discharge Point Nos. HR-1 through HR-3, M-1 through M-4, and M-8

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
Oil and Grease	mg/L	25	40	75
Settleable Solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	pH units	--	--	[1]
Temperature	ºF	--	--	[2]
Acute Toxicity	Pass/Fail	--	--	1[3]
Chronic Toxicity	TUc	--	--	1

[1] Within limits of 7.0 – 9.0 at all times.

[2] At no time shall any discharge be greater than 20°F over the natural temperature of the receiving water.

[3] Discharges shall achieve a rating of "Pass" for acute toxicity with compliance determined as specified in section VII.I. of Order No. R9-2009-0099.

3. Discharge effluent limitations for Discharge Point Nos. HR-1, HR-2, and HR-3 contained in the previous Order are summarized in Table F-4.

Table F-4. Previous Effluent Limits – Summary of Additional Effluent Limitations for Hydraulic Relief Water

Discharge Location	Parameter	Units	Effluent Limitations		
			Annual Average	Average Monthly	Maximum Daily
HR-1 (Graving Dock Hydraulic Relief)	Copper, Total Recoverable	µg/L	[1]	--	11.9
	Zinc, Total Recoverable	µg/L	--	31.29	95.14
HR-2 (Ways 3 Hydraulic Relief)	Cadmium, Total Recoverable	µg/L	--	7.66	15.38
	Copper, Total Recoverable	µg/L	[1]	--	8.38
	Nickel, Total Recoverable	µg/L	--	6.84	13.43
	Zinc, Total Recoverable	µg/L	--	36.25	95.14
HR-3 (Ways 4 Hydraulic Relief)	Copper, Total Recoverable	µg/L	[1]	--	11.2
	Nickel, Total Recoverable[2]	µg/L	--	5.40	15.26

[1] Discharges shall achieve an annual average effluent concentration that is no greater than the running annual average of the receiving water concentration. The annual average of the effluent concentrations shall be calculated once each month and compared to the average of the receiving water concentrations for the same 12-month time period.

[2] These effluent limitations do not apply if the Discharger documents that the intake water concentration at the time of the discharge exceeds the effluent limitation. If the intake water concentration exceeds the effluent limitation, the Average Monthly and Maximum Daily effluent limitation shall be equal to the intake water concentration.

4. Discharge effluent limitations for Discharge Point Nos. M-2, M-3, and M-4 contained in the previous Order are summarized in Table F-5.

Table F-5. Previous Effluent Limits – Summary of Additional Effluent Limitations for Flood Dewatering

Discharge Location	Parameter	Units	Effluent Limitations
			Average Monthly
Flood Dewatering (Graving Dock, Building Ways 3, and Building Ways 4)	Copper, Total Recoverable	µg/L	12.8
	Nickel, Total Recoverable[1]	µg/L	13.60

[1] These effluent limitations do not apply if the Discharger documents that the Intake water concentration at the time of the discharge exceeds the effluent limitation. If the intake water concentration exceeds the effluent limitation, the Maximum Daily effluent limitation shall be equal to the intake water concentration.

5. The previous Order contained the following effluent limitation for industrial storm water:

Discharges of industrial contact storm water from the Facility shall achieve a rating of "Pass" for acute toxicity with compliance determined as specified in section VII.H of this Order.

6. Interim Effluent Limitations

a. Interim effluent limitations for Discharge Point Nos. HR-1, HR-2, and HR-3 contained in the previous Order were effective from September 1, 2009 – May 18, 2010, and. are summarized in Table F-6.

Table F-6. Previous Interim Effluent Limitations for Hydraulic Relief

Discharge Location	Parameter	Units	Interim Maximum Daily
HR-1 (Graving Dock Hydraulic Relief	Copper, Total Recoverable	µg/L	13.12
	Zinc, Total Recoverable	µg/L	362
HR-2 (Ways 3 Hydraulic Relief)	Cadmium, Total Recoverable	µg/L	15.38
	Copper, Total Recoverable	µg/L	66.84
	Nickel, Total Recoverable	µg/L	13.60
	Zinc, Total Recoverable	µg/L	331
HR-3 (Ways 4 Hydraulic Relief	Copper, Total Recoverable	µg/L	42.8
	Nickel, Total Recoverable	µg/L	15.26

b. Interim effluent limitations for Discharge Point Nos. M-2, M-2, and M-3 contained in the previous Order were effective from September 1, 2009 – May 18, 2010 and are summarized in Table F-7.

Table F-7. Previous Interim Effluent Limitations for Flood Dewatering

Discharge Location	Parameter	Units	Interim Maximum Daily
M-2 (Graving Dock Flood Dewatering)	Copper, Total Recoverable	µg/L	41.5
	Nickel, Total Recoverable	µg/L	18.7
M-3 (Ways 3 Flood Dewatering)	Copper, Total Recoverable	µg/L	25.9
M-4 (Ways 4 Flood Dewatering)	Copper, Total Recoverable	µg/L	72.8

D. Compliance Summary

The following table summarizes the violations of effluent limitations and facility incidents based on data collected from September 2009 through May 2016.

Table F-8. Compliance Summary

Date	Violation Type	Incident Summary
12/9/2015	Unauthorized Discharge	40-50 gallons of wash water from the floating dry dock discharged into San Diego Bay
12/3/2015	Unauthorized Discharge	Less than two pounds of blast dust was discharged to San Diego Bay
11/13/2015	Unauthorized Discharge	Less than a half pound of blast dust was discharged to San Diego Bay

Date	Violation Type	Incident Summary
12/29/2014	Unauthorized Discharge	Water discharged to San Diego Bay from a pipe near the wastewater treatment facility
12/17/2014	Deficient Monitoring	Storm water discharged to San Diego Bay was not sampled.
8/22/2014	Unauthorized Discharge	Three separate instances of sewage leakages from restroom R-3 that flowed to San Diego Bay carried on into September 2014
6/10/2014	Unauthorized Discharge	5,000 gallons of hydrostatic relief water bypassed part of the ion exchange treatment system and was discharged into San Diego Bay
5/15/2014	Unauthorized Discharge	Paint overspray into San Diego Bay along the Graving Dock caisson gate
6/9/2013	Unauthorized Discharge	500 gallons of fresh water from a broken fresh water main between Buildings 19 and 11 was discharged into San Diego Bay
5/25/2013	Unauthorized Discharge	Sewage from a leaking hose at the head of the Floating Dry-dock was discharged to San Diego Bay
1/20/2013	Unauthorized Discharge	30 gallons of rusty water overflowed into San Diego Bay
11/302012	Late Report	The third Quarter 2012 monitoring report was submitted late
10/29/2012	Unauthorized Discharge	10,000 gallons of saltwater was discharged to San Diego Bay from Pier 12
3/22/2012	Effluent Limitation Violation	The total recoverable zinc concentration of 43 µg/L exceeded the effluent limitation of 31.29 µg/L at HR-1.
12/12/2011	Deficient Monitoring	500 gallons of storm water held in a containment area was discharged into San Diego Bay and not sampled.
6/2/2011	Late Report	The April 2011 monitoring report was submitted late
5/3/2011	Late Report	The March 2011 and first quarter 2011 monitoring reports were submitted late
4/1/2011	Late Report	The February 2011 monitoring report was submitted late
3/18/2011	Unauthorized Discharge	Paint chips, debris, and abrasive dust was observed floating in San Diego Bay on the side of the floating dry dock

E. Planned Changes – Not Applicable

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 serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260). This Order is also issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). This Order shall serve as an NPDES permit waters authorizing the Discharger to discharge into waters of the U.S. at the discharge location described in Table 2 subject to the WDRs in this Order.

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, division 13, chapter 3 (commencing with section 21100).

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The San Diego Water Board adopted a Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994. 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 was last amended by the San Diego Water Board on April 15, 2015. 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 are as follows:

Table F-9. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
IX-1; M-1; M-2	San Diego Bay and Mouth of Chollas Creek	Existing: 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).

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. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.

3. **Sediment Quality Plan.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* (Sediment Quality Plan) 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 sediment quality objectives of this Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the

State. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

5. **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 U.S. EPA 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 U.S. EPA 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.

6. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California* (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. Ocean Plan biological characteristic water quality objectives have been included in this Oder as receiving water limitations to protect the beneficial uses of BIOL, COMM, EST, WILD, RARE, MAR, MIGR, SPWN, and SHELL. It is appropriate to use these Ocean Plan objectives because San Diego Bay and the Pacific Ocean are contiguous, have similar salinities, and have many of the same aquatic species.

7. **Antidegradation Policy.** Title 40 Code of Federal Regulations (40 CFR) section 131.12 requires 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 68-16. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The 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 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, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 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. **Uniform National Discharge Standards (UNDS).** In 1996, Congress passed legislation amending CWA section 312 to provide the Department Of Defense and the U.S. EPA

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 U.S. EPA 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, the Department of Defense and U.S. EPA 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 proposing MPCD performance standards for the first batch of 11 discharges was promulgated on February 3, 2014. A Coastal Zone Management Act National Consistency Determination has been developed for the first batch and an Environmental Species Act consolation is underway. For the second batch of 11 discharges, federal and tribal consultations occurred in March 2016 and a Notice of Public Rulemaking is anticipated for Fall 2016 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 naval vessel discharges with applicable MPCDs (as BMPs) identified in the draft UNDS rule.

11. **Vessel General Permit.** U.S. EPA issued the Vessel General Permit (VGP) on March 28, 2013, with an effective date of December 19, 2013. The VGP provides NPDES permit coverage for ballast water and for other discharges incidental to the normal operation of commercial vessels greater than or equal to 79 feet in length and operating as a means of transportation. The U.S. EPA issued a Small Vessel General Permit (sVGP) for discharges incidental to the normal operation of small vessels on August 21, 2014. The sVGP provides NPDES permit coverage for small vessels defined as non-military, non-recreational vessels less than 79 feet in length and operating as a means of transportation. Discharges from vessels not operating as a means of transportation as described below are regulated by this Order:

    a. Vessels in a dry dock are not operating as a means of transportation.

    b. Floating dry docks have been determined to be operating as a means of transportation when they are docking or undocking a vessel inclusive of the transition from that operation. Floating dry docks are not operating as a means of transportation when docked at the Facility. Ballast water and other discharges from floating dry docks which are docked at the Facility are regulated by this Order.

D. Impaired Water Bodies on the CWA section 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 July 30, 2015, the U.S. EPA approved a revised 303(d) List of Water Quality Limited Segments in California. San Diego Bay, as a whole, is listed as impaired for polychlorinated biphenyls (PCBs). Additional portions of San Diego Bay are listed as impaired for additional parameters. Portions of San Diego Bay applicable to the Facility include, "San Diego Bay Shoreline, between Sampson and 28th Streets" and "San Diego Bay Shoreline, near Chollas Creek". These portions of San Diego Bay are listed in the 303(d) list as impaired for: benthic community effects, copper, mercury, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), sediment toxicity, and zinc. The table below lists San Diego Bay impairments near the Facility:

Table F-10. San Diego Bay CWA 303(d) Impairments near the Facility

Waterbody	Location	Constituent
San Diego Bay	San Diego Bay	Polychlorinated biphenyls (PCBs)
San Diego Bay	San Diego Bay Shoreline, between Sampson and 28th Streets	Copper, Mercury, Zinc, Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) in Sediment
San Diego Bay	San Diego Bay Shoreline, near Chollas Creek	Benthic Community Effects, Sediment Toxicity

An applicable Total Maximum Daily Load (TMDL) for these impairments has not yet been adopted by the San Diego Water Board and approved by U.S. EPA. Investigative Order No. R9-2015-0058 was issued on October 26, 2015, to NASSCO, the California Department of Transportation, the City of La Mesa, the City of Lemon Grove, the City of San Diego, the San Diego Unified Port District, and the U.S. Navy to address the "San Diego Bay Shoreline, Mouth of Chollas Creek".

Cleanup and Abatement Order No. R9-2012-0024 was issued to the Discharger, BAE Systems San Diego Ship Repair, the City of San Diego, Campbell Industries, San Diego Gas and Electric, the U.S. Navy, the San Diego Unified Port District on March 14, 2012, to address the “San Diego Bay Shoreline, between Sampson and 28th Streets”. The *South Shipyard Remedial Action Plan Implementation Report, San Diego Shipyard Sediment Site – South Shipyard* was submitted to the Water Board in April 2015 and documents and verifies the completion of remedial activities at the South Shipyard portion of the San Diego Shipyard Sediment Site. The report documents South Shipyard compliance with Directives A.2.a and A.2.b of the Cleanup and Abatement Order, while compliance with Directive A.2.c will be determined pending post-remedial monitoring to occur 2 and 5 years after completion of cleanup work at the entire San Diego Shipyard Sediment Site.

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 the San Diego Water Board only when the 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 the San Diego Water Board under waste discharge requirements that provide protection to the beneficial uses of the receiving water.

   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 non-contact fire protection system water, hydrostatic relief water, and flood water. For the purpose of the Bays and Estuaries Policy and this Order, the discharges of fire protection water; potable water leaks from hoses, and steam condensate leaks from hoses effluent will be considered innocuous non-municipal wastewaters and, as such, will not be considered industrial process wastes.

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 Code of Federal Regulations: 40 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations 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.** This prohibition is based on the requirements of the Basin Plan.
2. **Discharge Prohibition III.B. and III.C.** Ship repair and maintenance activities may result in the discharge of pollutants and wastes to waters of the U.S. Discharge Prohibition III.B prohibits the discharge of wastes associated with ship repair and maintenance activities. These prohibitions are based on the requirements of the Enclosed Bays and Estuaries Policy and 40 CFR section 122.21(a) and Water Code section 13260. Water Code section 13260 requires filing an application and Report of Waste Discharge before a discharge can occur. Discharges not described in the application and Report of Waste Discharge, and subsequently in this Order, are prohibited.
3. **Discharge Prohibition III.D.** This prohibition is based on the requirements of the Enclosed Bays and Estuaries Policy.
4. **Discharge Prohibition III.E**. This prohibition is based on the requirements of the Bays and Estuaries Policy and is consistent with prohibitions established for similar facilities.
5. **Discharge Prohibition III.F.** 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.
6. **Discharge Prohibition III.G.** 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.H.** This prohibition is retained from the previous Order No. R9-2009-0099 based on the 303(d) listing for PCB compounds in San Diego Bay and prohibits the discharge of PCBs to the Bay.
8. **Discharge Prohibition III.I.** This prohibition is retained from the previous Order No. R9-2009-0099 because the intake water credit effluent limitation for copper is a maximum daily effluent limitation without an average monthly effluent limitation.
9. **Discharge Prohibition III.J.** This requirement prohibits the addition of chlorine or other additive pollutants to the fire protection system, potable water system, steam system, or dry dock ballast tanks to ensure that the minimum of pollutants is discharged.
10. **Discharge Prohibition III.K.** Waste discharges from ship repair and maintenance activities on ships, piers, and shore side 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.E is based on the toxicity requirements contained in the Basin Plan and prohibits the discharge of the first 1 inch (first flush) of storm water runoff from Industrial High Risk Areas, as defined in section IV.A of this Order, unless the discharge can be demonstrated to meet the effluent limitations of this Order.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 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 technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities 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 U.S. EPA 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 best professional judgment (BPJ) to derive technology-based effluent limitations 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 section 125.3.

2. Applicable Technology-Based Effluent Limitations

a. The State Water Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on October 16, 2012, which became effective on August 19, 2013. Although the Ocean Plan is not directly applicable to enclosed bays, such as San Diego Bay, the salinity and beneficial uses of San Diego Bay are similar to those of the ocean waters of the State. Therefore, in order to protect the beneficial uses of San Diego Bay, the previous Order used the Ocean Plan as a reference for developing discharge specifications, receiving water prohibitions, and narrative limitations and to supplement the provisions contained in the CTR, the SIP, and the Bays and Estuaries Policy.

The Ocean Plan establishes water quality objectives, general requirements for management of waste discharged to the ocean, effluent quality requirements for waste discharges, discharge prohibitions, and general provisions. Further, Table 2 of the Ocean Plan establishes technology-based effluent limitations for discharges for which ELGs have not been established pursuant to sections 301, 302, 304, or 306 of the federal CWA.

Based on Table 2 of the Ocean Plan, Board Order No. R9-2009-0099 established numeric effluent limitations for the discharge of industrial discharges from the facility.

The effluent limitations contained in Table 2 of the Ocean Plan are summarized below:

Table F-11. Ocean Plan Table 2 Effluent Limitations

Parameter	Units	Table 2 Effluent Limitations		
		Average Monthly	Weekly Average	Instantaneous Maximum
Oil and Grease	mg/L	25	40	75
Settleable Solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	standard units	Within 6.0 - 9.0 at all times.		

Effluent limitations for oil and grease, settleable solids, turbidity, and pH have been carried over based on anti-backsliding requirements.

b. In addition to numeric TBELs and in accordance with 40 CFR 122.44(k), the previous Order determined that the implementation of BMPs for the discharge of industrial wastes associated with ship construction, repair and maintenance activities were appropriate. To carry out the purpose and intent of the CWA, the previous Order required the Discharger to develop and implement a BMP plan, as authorized by CWA section 304(e) and section 402(p), for toxic pollutants and hazardous substances.

c. The requirement to implement an appropriate BMP plan for non-storm water discharges is carried over from Order No. R9-2009-0099. The BMP plan shall be incorporated into the Facility's Storm Water Pollution Prevention Plan (SWPPP).

d. The requirement to implement appropriate BMPs for shipyard activities to prevent discharges of waste is carried over from Order No. R9-2009-0099, and in the form of a SWPPP.

e. In addition to the retention of BMPs in a SWPPP, this Order establishes Numeric Action Levels (NALs) for storm water from areas identified as Industrial High Risk Areas. The statewide Industrial Storm Water General Permit, *General Permit for Storm Water Discharges Associated with Industrial Activities*, Order No. 2014-00570DWQ, NPDES No. CAS000001, was adopted on April 1, 2014, by the State Water Board and became effective on July 1, 2015. This statewide Industrial Storm Water General Permit contains NALs based on benchmarks in U.S. EPA'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.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have 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 there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) U.S. EPA 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 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 and the mouth of Chollas Creek 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 water.

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 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 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 applicable to non-storm water discharges. Discharges from the Facility to San Diego Bay include discharges treated hydrostatic relief water and Ways dewatering, floating dry dock

ballast water, and graving dock dewatering. A Reasonable Potential Analysis (RPA) was conducted for the non-storm water discharges to San Diego Bay using all the available data.

The table below summarizes the applicable water quality criteria/objectives for priority pollutants in the effluent or receiving water. These criteria were used in conducting the RPAs for this Order.

Table F-12. Applicable CTR/NTR Water Quality Criteria

Constituent	Selected 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	4,300	Not Applicable		--	--	Not Applicable	4,300
Arsenic	36			69	36		--
Beryllium	No Criteria			--	--		--
Cadmium	9.4			42	9.4		--
Chromium (III)	No Criteria			--	--		--
Chromium (VI)	50			1,108	50		--
Copper	3.7			5.8	3.7		--
Lead	8.5			221	8.5		--
Mercury	0.051			--	--		0.051
Nickel	8.3			75	8.3		4,600
Selenium	71			291	71		--
Silver	2.2			2.2			--
Thallium	6.3			--	--		6.3
Zinc	86			95	86		--
Cyanide	1			1	1		220,000
Asbestos	No Criteria			--	--		--
2,3,7,8 TCDD	1.40E-08			--	--		1.40E-08
TCDD Equivalents	1.40E-08			--	--		1.40E-08
Acrolein	780			--	--		780
Acrylonitrile	0.66			--	--		0.66
Benzene	71			--	--		71
Bromoform	360			--	--		360
Carbon Tetrachloride	4.4			--	--		4.4
Chlorobenzene	21,000			--	--		21,000
Chlorodibromomethane	34			--	--		34
Chloroethane	No Criteria			--	--		--
2-Chloroethylvinyl ether	No Criteria			--	--		--

Constituent	Selected 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
Chloroform	No Criteria			--	--		--
Dichlorobromomethane	46			--	--		46
1,1-Dichloroethane	No Criteria			--	--		--
1,2-Dichloroethane	99			--	--		99
1,1-Dichloroethylene	3.2			--	--		3.2
1,2-Dichloropropane	39			--	--		39
1,3-Dichloropropylene	1,700			--	--		1,700
Ethylbenzene	29,000			--	--		29,000
Methyl Bromide	4,000			--	--		4,000
Methyl Chloride	No Criteria			--	--		--
Methylene Chloride	1600			--	--		1,600
1,1,2,2-Tetrachloroethane	11			--	--		11
Tetrachloroethylene	8.9			--	--		8.85
Toluene	200,000			--	--		200,000
1,2-Trans-Dichloroethylene	140,000			--	--		140,000
1,1,1-Trichloroethane	No Criteria			--	--		--
1,1,2-Trichloroethane	42			--	--		42
Trichloroethylene	81			--	--		81
Vinyl Chloride	525			--	--		525
2-Chlorophenol	400			--	--		400
2,4-Dichlorophenol	790			--	--		790
2,4-Dimethylphenol	2,300			--	--		2,300
4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	765			--	--		765
2,4-Dinitrophenol	14,000			--	--		14,000
2-Nitrophenol	No Criteria			--	--		--
4-Nitrophenol	No Criteria			--	--		--
3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No Criteria			--	--		--
Pentachlorophenol	7.9			13	7.9		8.2
Phenol	4,600,000			--	--		4,600,000
2,4,6-Trichlorophenol	6.5			--	--		6.5
Acenaphthene	2,700			--	--		2,700
Acenaphthylene	No Criteria			--	--		--

Constituent	Selected 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
Benzidine	0.00054			--	--		0.00054
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-Chloroethoxy)Methane	No Criteria			--	--		--
Bis(2-Chloroethyl)Ether	1.4			--	--		1.4
Bis(2-Chloroisopropyl)Ether	170,000			--	--		170,000
Bis(2-Ethylhexyl)Phthalate	5.9			--	--		5.9
4-Bromophenyl Phenyl Ether	No Criteria			--	--		--
Butylbenzyl Phthalate	5,200			--	--		5,200
2-Chloronaphthalene	4,300			--	--		4,300
4-Chlorophenyl Phenyl Ether	No Criteria			--	--		--
Chrysene	0.049			--	--		0.049
Dibenzo(a,h)Anthracene	0.049			--	--		0.049
1,2-Dichlorobenzene	17,000			--	--		17,000
1,3-Dichlorobenzene	2,600			--	--		2,600
1,4-Dichlorobenzene	2,600			--	--		2,600
3,3 Dichlorobenzidine	0.08			--	--		0.077
Diethyl Phthalate	120,000			--	--		120,000
Dimethyl Phthalate	2,900,000			--	--		2,900,000
Di-n-Butyl Phthalate	12,000			--	--		12,000
2,4-Dinitrotoluene	9.1			--	--		9.1
2,6-Dinitrotoluene	No Criteria			--	--		--
Di-n-Octyl Phthalate	No Criteria			--	--		--
1,2-Diphenylhydrazine	0.54			--	--		0.54
Fluoranthene	370			--	--		370
Fluorene	14,000			--	--		14,000
Hexachlorobenzene	0.00077			--	--		0.00077
Hexachlorobutadiene	50			--	--		50
Hexachlorocyclopentadiene	17,000			--	--		17,000

Constituent	Selected 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
Hexachloroethane	8.9			--	--		8.9
Indeno(1,2,3-cd)Pyrene	0.049			--	--		0.049
Isophorone	600			--	--		600
Naphthalene	No Criteria			--	--		--
Nitrobenzene	1,900			--	--		1,900
N-Nitrosodimethylamine	8.1			--	--		8.1
N-Nitrosodi-n-Propylamine	1.4			--	--		1.4
N-Nitrosodiphenylamine	16			--	--		16
Phenanthrene	No Criteria			--	--		--
Pyrene	11,000			--	--		11,000
1,2,4-Trichlorobenzene	No Criteria			--	--		--
Aldrin	0.00014			1.3			0.00014
alpha-BHC	0.013			--	--		0.013
beta-BHC	0.046			--	--		0.046
gamma-BHC	0.063			0.16	--		0.063
delta-BHC	No Criteria			--	--		--
Chlordane	0.00059			0.09	0.004		0.00059
4,4'-DDT	0.00059			0.13	0.001		0.00059
4,4'-DDE (linked to DDT)	0.00059			--	--		0.00059
4,4'-DDD	0.00084			--	--		0.00084
Dieldrin	0.00014			0.71	0.0019		0.00014
alpha-Endosulfan	0.0087			0.034	0.0087		240
beta-Endolsulfan	0.0087			0.034	0.0087		240
Endosulfan Sulfate	240			--	--		240
Endrin	0.0023			0.037	0.0023		0.81
Endrin Aldehyde	0.81			--	--		0.81
Heptachlor	0.00021			0.053	0.0036		0.00021
Heptachlor Epoxide	0.00011			0.053	0.0036		0.00011
PCBs sum (2)	0.00017			--	0.03		0.00017
Toxaphene	0.0002			0.21	0.0002		0.00075

b. 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.

Dilution was not requested by the Discharger. No supporting documentation for granting dilution was submitted. Thus, no dilution was applied in the implementation of WQBELs for discharges associated with the Facility.

3. Determining the Need for WQBELs

a. 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 table below.

Table F-13. Summary of RPA Results

Discharge Location No.	Parameter	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Reason[1]
IX-1	Copper	2.8	10.0	3.7	B>C & pollutant detected in effluent
M-1	Copper	3.8	10.0	3.7	MEC & B>C
M-2	Copper	22	10.0	3.7	MEC & B>C
	Zinc	90	23	86	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. **Ballast Water.** As shown in Table F-13, the San Diego Water Board finds that discharges of ballast water from the dry dock at Discharge Point No. M-1 have the reasonable potential to exceed water quality criteria for copper. However, section 4.2.3 of the VGP Fact Sheet states that "*vessel operators cannot install equipment onboard their vessels until that equipment has been approved by the Coast Guard and, in some cases, their class societies. Hence, EPA cannot require use of equipment or technologies that would conflict with the requirements of these organizations without fully understanding the implications of such requirements. These factors create a situation where, at this time, it is generally not feasible for EPA to calculate numeric effluent limitations to effectively regulate vessel discharges."* Consistent with the VGP, the San Diego Water Board is not establishing numeric effluent limitations for ballast water in this Order. This Order contains a provision requiring the Discharger to continue the implementation of BMPs to reduce

the discharge of pollutants from ballast water. In addition, this Order prohibits the addition of chlorine or other additives to the ballast water tanks.

b. The WQBEL for pH is based on the water quality objective contained in the Basin Plan, which states, “In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 9.0.” The WQBEL for temperature is based on Part 4.B.(1) of the Thermal Plan.

c. Effluent limitations for copper and zinc were calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations for these parameters.

d. Effluent Limitation Calculations. In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$ECA_{acute} = CMC$ $ECA_{chronic} = CCC$

For the human health, agriculture, or other long-term criterion/objective, a dilution credit can be applied. The ECA is calculated as follows:

$ECA_{HH} = HH + D (HH - B)$

where:

ECA_{acute} = effluent concentration allowance for acute (1-hour average) toxicity criterion

$ECA_{chronic}$ = effluent concentration allowance for chronic (4-day average) toxicity criterion

ECA_{HH} = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective

CMC = criteria maximum concentration (1-hour average)

CCC = criteria continuous concentration (4-day average, unless otherwise noted)

HH = human health, agriculture, or other long-term criterion/objective

D = dilution credit

B = maximum receiving water concentration

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$AMEL = mult_{AMEL}[min(M_A ECA_{acute}, M_C ECA_{chronic})]$$

$$MDEL = mult_{MDEL}[min(M_A ECA_{acute}, M_C ECA_{chronic})]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where: mult AMEL = statistical multiplier converting minimum LTA to AMEL
mult MDEL = statistical multiplier converting minimum LTA to MDEL
M A = statistical multiplier converting CMC to LTA
M C = statistical multiplier converting CCC to LTA

WQBELs were calculated for copper and zinc as follows in Tables F-14 and F-15, below.

Table F-14. WQBEL Calculations for Copper

	IX-1		M-2	
	Acute	**Chronic**	**Acute**	**Chronic**
Criteria (µg/L)[1]	5.8	3.7	5.8	3.7
Dilution Credit	No Dilution	No Dilution	No Dilution	No Dilution
ECA	5.8	3.7	5.8	3.7
ECA Multiplier	0.41	0.62	0.40	0.60
LTA	2.4	2.3	2.3	2.3
AMEL Multiplier (95th%)	[2]	1.40	[2]	1.47
AMEL (µg/L)	[2]	**3.2**	[2]	**3.2**
MDEL Multiplier (99th%)	[2]	2.43	[2]	2.77
MDEL (µg/L)	[2]	**5.6**	[2]	**5.7**

[1] CTR Aquatic Life Criteria
[2] Limitations based on chronic LTA (Acute LTA > Chronic LTA)

Table F-15. WQBEL Calculations for Zinc

	M-2	
	Acute	**Chronic**
Criteria	95	86
Dilution Credit	No Dilution	No Dilution
ECA	95	86
ECA Multiplier	0.51	0.70
LTA	48	60
AMEL Multiplier (95th%)	1.28	[2]
AMEL (µg/L)	**62**	[2]
MDEL Multiplier (99th%)	1.98	[2]
MDEL (µg/L)	**95**	[2]

1 CTR Aquatic Life Criteria
2 Limitations based on acute LTA (Chronic LTA > Acute LTA)

e. A summary of the applicable WQBELs for the Discharger are summarized below:

i. The applicable CTR WQBELs are summarized in the following table:

Table F-16. Summary of CTR WQBELs

Discharge Locations	Parameter	Units	Effluent Limitations	
			Average Monthly[1]	Maximum Daily
IX-1	Copper	µg/L	3.2	5.6
M-2	Copper	µg/L	3.2	5.7
	Zinc	µg/L	62	95

[1] Average Monthly Effluent Limitations are not applicable for graving dock flood water discharges (M-2) unless there is a discharge more than one day in a 30 day period due to the short term and intermittent nature of the discharge.

ii. All discharges shall maintain a pH of between 7.0 and 9.0 standard units at all times.

iii. At no time shall any discharge be greater than 20ºF over the natural temperature of the receiving water.

5. Intake Water Credits

Section 1.4.4 of the SIP provides that the San Diego Water Board may consider priority pollutants in intake water, through the application of intake water credits. By request of the Discharger, the previous order established intake water credits for certain discharges, including discharges of hydrostatic relief water at Discharge Point Nos. HR-1, HR-2 and HR-3, and flood water from the building ways and graving dock at Discharge Point Nos. M-2, M-3, and M-4 for copper and nickel. The discharges of hydrostatic relief water at Discharge Point Nos. HR-1, HR-2 and HR-3, and flood water from the building ways at Discharge Point Nos. M-3 and M-4 have been combined into the ion exchange treatment system discharging at Discharge Point No. IX-1.

The SIP gives the San Diego Water Board the discretion to allow intake water credits. Intake water credits are not appropriate for copper at Discharge Point No. IX.1 because the Maximum Effluent Concentration (MEC) for copper is well below the water quality criteria, the background concentration, and the effluent limitations established by this Order. Intake water credits are not appropriate for nickel at Discharge Point No. IX-1 because no reasonable potential was determined for nickel at Discharge Point IX.-1.

Reasonable potential was again determined at Discharge Point No. M-2 for copper, however there is no longer reasonable potential for nickel. Effluent data indicates that the Discharger cannot comply with applicable WQBELs for copper (effluent data ranges from 4.2 µg/L to 22 µg/L, with an average of 9.4 µg/L). This Order continues the application of intake water credits for copper at Discharge Point No. M-2.

The previous Order established intake water credits at Discharge Point No. M-2 based on the background copper concentration of 12.8 µg/L, applied as a maximum daily effluent limitations. The maximum effluent concentration for copper within the receiving water from September 2009 through February 2016 was 10.0 µg/L on February 22, 2011. As such, this Order establishes an intake water credit of 10.0 µg/L for discharges from Discharge Point No. M-2 as a daily maximum effluent limitation.

6. 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. R9-2009-0099 established acute toxicity effluent limitations for all discharges. Available acute toxicity data from 2009 through 2016 do not indicate the presence of acute toxicity. Available chronic toxicity data from 2009 through 2016 do not indicate the presence of chronic toxicity. However, reasonable potential for chronic toxicity has been established for Discharge Point No. IX-1 due to copper and for Discharge Point No. M-2 for copper and zinc being present in the discharge of the waters at concentrations greater than applicable aquatic life water quality criteria.

U.S. EPA Region 9 has informed San Diego Water Board staff that the application of chronic toxicity monitoring and effluent limitations for all discharges 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 U.S. EPA Region 9 guidance, chronic toxicity monitoring and effluent limitations are established in this Order for discharges at the Facility. Because chronic toxicity is considered to be a more sensitive 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 San Diego Water Board has considered the following information in developing toxicity monitoring and effluent limitations:

- Discussions with U.S. EPA Region 9.
- U.S. EPA'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).
- U.S. EPA'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).

• State Water Board's 2015 Ocean Plan.

• The narrative water quality for objective for toxicity contained in the Water Quality Control Plan for the San Diego Basin (Basin Plan).

• An interpretation of applicable State and federal regulations.

Chronic toxicity monitoring requirements and effluent limitations have been established for industrial storm water, ion exchange system, and graving dock flood water discharges demonstrated to have toxic pollutants in toxic concentrations. These chronic toxicity requirements are consistent with U.S. EPA's Test of Significant Toxicity (TST) hypothesis approach. The chronic toxicity effluent limitations are expressed as "Pass" for the median monthly summary results and as "Pass" or "<50% Effect" for each maximum daily individual result.

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 Limitation Considerations

1. Applicable TBELs and WQBELs described in sections IV.B and IV.C of this Fact Sheet have been applied in this Order. Both WQBELs and TBELs for pH were applicable the discharges (6.0 – 9.0 standard units and 7.0 – 9.0 standard units, respectively). To insure the protection of water quality, the more stringent lower and upper limitations for pH have been applied as the final effluent limitations in this Order.

2. Discharges from the Facility shall not exceed the effluent limitations summarized below:

Table F-17. Effluent Limitations for All Discharges

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Oil and Grease	mg/L	25	40	40	75
Settleable Solids	mL/L	1.0	1.5	1.5	3.0
Turbidity	NTU	75	100	100	225
pH	pH units	--	--	--	[1]
Temperature	^{0}F	--	--	--	[2]
Chronic Toxicity	Pass or Fail	--	--	[3]	--

[1] Within limits of 7.0 - 9.0 at all times

[2] At no time shall any discharge be greater than 20^{0}F over the natural temperature of the receiving water.

[3] Discharges shall achieve compliance with chronic toxicity effluent limitations as specified in section VII.I of this Order.

3. Discharges from the Facility shall meet the location-specific effluent limitations specified below:

Table F-18. Summary of Final Effluent Limitations for Specific Discharge Locations

Discharge Locations	Parameter	Units	Effluent Limitations	
			Average Monthly	Maximum Daily
IX-1	Copper, Total Recoverable	µg/L	3.2	5.6
M-2	Copper, Total Recoverable	µg/L	[1]	10.0
	Zinc, Total Recoverable	µg/L	[1]	95

[1] Average Monthly Effluent Limitations are not applicable for the flood water discharges (M-2, 3, and 4) due to the short term and intermittent nature of the discharges.

4. 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.

Numeric effluent limitations have been removed for floating dry dock ballast water (M-1) because of new information pursuant to CWA section 402(o)(2)(B)(i). The floating dry dock is a vessel regulated under the VGP. Section 4.2.3 of the VGP Fact Sheet states that "*vessel operators cannot install equipment onboard their vessels until that equipment has been approved by the Coast Guard and, in some cases, their class societies. Hence, EPA cannot require use of equipment or technologies that would conflict with the requirements of these organizations without fully understanding the implications of such requirements. These factors create a situation where, at this time, it is generally not feasible for EPA to calculate numeric effluent limitations to effectively regulate vessel discharges."* During the previous permit cycle the VGP was issued by U.S. EPA. For the same reasons described by U.S. EPA in the VGP, the San Diego Water Board is not establishing numeric effluent limitations for ballast water in this Order. This Order instead contains a provision requiring the Discharger to continue the implementation of BMPs to reduce or prevent the discharge of pollutants from ballast water. In addition, this Order prohibits the addition of chlorine or other pollutant additives to the ballast water tanks. Removal of the limitations is not expected to negatively impact water quality.

As discussed in section IV.C.5 of this Fact Sheet, discharges from the Facility did not contain reasonable potential for acute toxicity. Further, this Order establishes effluent limitations for chronic toxicity for discharges of storm water, ion exchange treatment system discharge, and graving dock flood water at Discharge Point Nos. SW-1, SW-2, IX-1, and M-2. Chronic toxicity effluent limitations are protective of acute toxicity. The removal of the acute toxicity effluent limitations are consistent with State and federal anti-backsliding requirements and is not expected to negatively impact water quality.

Reasonable potential was not found for nickel in discharges of graving dock flood water from Discharge Point No. M-2 or for nickel, cadmium, or zinc in discharges from the ion exchange treatment system at Discharge Point No. IX.1 so these effluent limitations have been removed from this Order. The removal of these effluent limitations for nickel at Discharge Point No. M-2 and nickel, cadmium, and zinc at Discharge Point No. IX-1 is consistent with State and federal anti-backsliding requirements and is not expected to negatively impact water quality.

With the exception of the removal of effluent limitations discussed above, discharge prohibitions, and specifications in this Order are at least as stringent as the effluent limitations in Order No. R9-2009-0099 and meet State and federal anti-backsliding requirements.

5. **Satisfaction of Antidegradation Policies**

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*.

This Order establishes the same BMP requirements as the federal VGP for ballast water discharges from the dry dock in lieu of numeric effluent limitations because the floating dry dock is a vessel already regulated by the VGP. This Order also prohibits the addition of any chlorine or other pollutant additives to the ballast water tanks. Implementation of BMPs in lieu of numeric effluent limitations is expected to reduce or prevent the discharge of pollutants to San Diego Bay and this change is consistent with State and federal antidegradation requirements.

This Order establishes chronic toxicity effluent limitations and removes acute toxicity effluent limitations for Discharge Points SW-1, SW-2, IX-1, and M-2 due to a lack of reasonable potential for acute toxicity and adequate protection provided by the chronic toxicity effluent limitations. Because of a lack of reasonable potential due to an increase in discharge quality, effluent limitations have been removed in this Order for nickel at Discharge Point No. M-2 and nickel, cadmium, and zinc at Discharge Point No. IX-1.

The permitted discharges are 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 changes described above will not result in an increase in mass emissions of pollutants to San Diego Bay from dry dock ballast water.

6. **Stringency of Requirements for Individual Pollutants**

The implementation of BMPs for the discharge of industrial wastes associated with ship construction, repair and maintenance activities are appropriate in accordance with 40 CFR 122.44(k). Section VI.C.3 of this Order requires the continued implementation of a BMP Program. 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.

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. All beneficial uses and water quality objectives contained in the Basin Plan

were approved under State law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30,2000, but not approved by U.S. EPA before that date, are nonetheless "*applicable water quality standards for purposes of the CWA*" pursuant to section 131.21 (c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

D. Storm Water Risk Level Designation Definition

All industrial areas of the Facility have been designated as Industrial High Risk Areas due to the activities performed on-site and the contact of storm water within the industrial areas of the Facility.

E. Industrial Storm Water Discharge Specifications

1. **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 BAT and BCT to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards
2. **Storm Water Pollution Prevention Plan (SWPPP) for Industrial Areas**. 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.
3. **Numeric Action Levels (NALs).** Consistent with the direction of the State Water Board, and the Statewide Industrial Storm Water General Permit adopted on April 1, 2014, this Order establishes NALs based on U.S. EPA's benchmarks with a tiered compliance strategy. The Facility was deemed as an Industrial High Risk Area which is defined in section IV.A of this Order and the risk level strategy is explained in more detail in section IV.D. of this Fact Sheet.
4. **Storm Water Retention and Treatment Control BMPs**. The Discharger has installed a Storm Water Diversion System (SWDS) capable of retaining runoff from a 100-year storm event, or 3.5 inches over a 24-hour period. The Discharger is required to maintain and operate the Facility's storm water diversion system. Storm water that flows into the graving dock during a graving dock flooding event will be discharged to San Diego Bay through Discharge Point No. M-2. Storm water exceeding the capacity of the SWSD will be discharged to San Diego Bay through SW-1 or SW-2.

F. Floating Dry Dock, Graving Dock, and Building Ways Discharge Specifications

This Order requires specific BMPs for floating dry dock, graving dock, and building ways operation to prevent or minimize the discharge of pollutants.

G. Land Discharge Specifications – Not Applicable

H. Recycling Specifications – Not Applicable

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 (2015) and the Sediment Quality Plan (2008). San Diego Bay is listed as impaired for polychlorinated biphenyls (PCBs), sediment copper, sediment mercury, sediment zinc, sediment polycyclic aromatic hydrocarbons (PAHs), sediment PCBs, 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 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 section 122.42.

Sections 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 the Order. Section 123.25(a)(12) of 40 CFR 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

The Discharger is required to comply with the MRP in Attachment E and submit notifications as provided.

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 toxicity reduction evaluation/toxicity investigation evaluation TRE/TIE have been incorporated in the MRP (Attachment E).

3. Best Management Practices

To carry out the purpose and intent of the CWA, the previous Order required the Discharger to develop and implement a BMP Program, 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. This Order requires the Discharger to continue to implement and regularly update a BMP Program which incorporates a SWPPP as specified in Attachment G and addresses, at a minimum, dry dock pre-flood cleaning, building ways pre-flood cleaning, graving dock pre-flood cleaning, dry dock ballast water, and spills of including fire protection water, potable water, steam condensate.

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

6. Other Special Provisions – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR 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 MRP (Attachment E) establishes monitoring and reporting requirements that implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP (Attachment E) for this facility.

A. Influent Monitoring – Not Applicable

B. 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 effluent limitations.

1. Based on the industrial types of activities that occur on-site, and the types of discharges from the Facility, effluent monitoring at all effluent monitoring locations for settleable solids, turbidity, total suspended solids, oil and grease, total petroleum hydrocarbons, and chronic toxicity have been carried over from MRP No. R9-2009-0099. The frequency of sampling has been increased to annually for the remaining priority pollutants to ensure proper data collection.

2. Ion Exchange Treatment System (Monitoring Location IX-1)

a. Monthly flow monitoring has been retained from the previous permit because three 10,500 gallon surge tanks ensure a generally constant flow rate.

b. Monthly pH and temperature monitoring has been carried over from the previous permit.

c. Annual monitoring for settleable solids, turbidity, total suspended solids, and oil and grease has been increased from annually to monthly to better characterize the effluent.

d. Monthly monitoring for copper and zinc has been carried over from the previous permit.

e. Annual monitoring for total petroleum hydrocarbons has been increased to semiannual.

f. Annual chronic toxicity monitoring has been increased to semiannual from the previous permit to better characterize the effluent and to better understand the impacts of copper and zinc on the receiving water. Acute toxicity monitoring has been eliminated because chronic toxicity monitoring will achieve water quality greater than that necessary to achieve compliance with acute toxicity monitoring as explained in section IV.C.5 of this Fact Sheet, Attachment F to this Order.

g. Monitoring twice per permit term for the remaining CTR priority pollutants has been increased from the previous permit to semiannual monitoring to better characterize the effluent.

3. Ballast Water (Monitoring Location M-1)

Numeric effluent limitations have been removed for ballast water to be consistent with U.S. EPA's VGP. Therefore, all monitoring except submergence/emergence reporting has been eliminated.

4. Graving Dock Flood Water (Monitoring Location M-2)

a. Sampling is only required when a discharge occurs (i.e. flooding of the graving dock during a launch or retrieval evolution)

b. Monthly effluent flow monitoring has been revised from the previous permit to daily flow monitoring to accurately determine the volume of effluent being discharged from the Facility into San Diego Bay. Monitoring is only required when a discharge occurs (i.e. flooding of the graving dock during a launch or retrieval evolution)

c. Monthly effluent monitoring of pH and temperature has been carried over from the previous permit to characterize the discharge of graving dock flood water from the Facility into the San Diego Bay.

d. Annual monitoring for settleable solids, turbidity, total suspended solids, and oil and grease has been increased from annually to monthly to better characterize the effluent.

e. Monthly effluent monitoring for copper has been carried over from the previous permit and quarterly monitoring for zinc has been increased to monthly because reasonable potential was indicated for these pollutants and therefore required monitoring to evaluate compliance with applicable effluent limitations.

f. Annual monitoring for total petroleum hydrocarbons has been increased to semiannual.

g. Annual chronic toxicity monitoring has been revised from the previous permit to semiannual to better characterize the effluent and to better understand the impacts of copper and zinc on the receiving water. Acute toxicity monitoring has been eliminated because chronic toxicity monitoring will achieve water quality greater than that necessary to achieve compliance with acute toxicity monitoring as explained in section IV.C.5 of this Fact Sheet, Attachment F to this Order.

h. Monitoring twice per permit term of the graving dock flood water for the remaining CTR priority pollutants has been changed from the previous permit to semiannual monitoring to better characterize the effluent.

i. The graving dock may be used for constructing new vessels or for repairing existing vessels. When constructing new vessels, the Discharger applies a non-copper-based antifouling hull coating system as a BMP to achieve compliance with the copper effluent limitation at Discharge Point No. M-2. The graving dock can also be used for repair or minor maintenance of vessels with existing antifouling hull coatings which may contain copper. Copper-based antifouling hull coatings are regulated by the California Department of Pesticide Regulation (DPR) and are designed to leach copper into the surrounding water which could cause an exceedance of the numeric copper effluent limitation at Discharge Point No. M-2. Because the leaching of copper from antifouling hull coatings on existing vessels needing repair and maintenance is regulated by DPR, an alternate sample location has been determined appropriate to obtain a sample which is representative of the activities at NASSCO without contributions from the copper-based antifouling hull coating. For vessels with existing copper-based antifouling hull coatings, the Discharger is required to collect the sample of flood water before the vessel hull contacts the flood water.

Representative samples of graving dock flood water shall be collected as follows.

- For newly constructed vessels, the sample shall be collected when the graving dock is full of water and ready to launch the vessel immediately before the gate is opened.
- For repair of vessels with a preexisting copper-based antifouling hull coating, the sample shall be collected when the graving dock is full of water, before the gate is opened, and before the vessel enters the graving dock.
- For launching vessels with a preexisting copper-based antifouling hull coating, the sample shall be collected immediately before the flood water is deep enough to reach the vessel hull.

5. Storm Water Monitoring

The discharge of industrial contact storm water to San Diego Bay may contain pollutants from the surrounding areas which could contribute to the exceedance of the water quality criteria/objectives of the receiving waters. Industrial storm water monitoring requirements have been modified from the previous Order to be consistent with the State Water Board's Statewide Industrial Storm Water Permit. The purpose of the monitoring is to determine the effects of storm water discharges on the receiving water and monitor the effectiveness of the SWPPP to meet applicable effluent limitations, NALs, and receiving water limits. Storm water sampling has been increased from two storms per year to two storms per semiannual period consistent with the Statewide Industrial Storm Water Permit.

C. Whole Effluent Toxicity Testing Requirements

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 the effluent does not comply with permit effluent limitations for chronic toxicity, are unmeasured pollutants causing risk to aquatic life? Are unmeasured pollutants causing risk to aquatic life?
3. If the effluent does not comply with permit effluent limitations for chronic toxicity, are pollutants in combinations causing risk to aquatic life? Are conditions in receiving water getting better or worse with regard to toxicity?

As discussed above in section IV.C.5 of this Fact Sheet, chronic toxicity effluent limitations established in this Order are based on U.S. EPA's TST and percent effect. Chronic toxicity effluent limitations and monitoring are established for industrial storm water, ion exchange treatment system discharges, and graving dock flood water. Chronic toxicity monitoring is required to evaluate compliance with effluent limitations. This Order increases the chronic toxicity monitoring requirement from Order No. R9-2009-00099 of at least two industrial storm water discharge events annually to be consistent with the Statewide Industrial Storm Water Permit of two storms per semiannual period. This Order increases the annual chronic toxicity monitoring from the previous permit for the ion exchange treatment system and graving dock flood water to semiannual monitoring. Acute toxicity monitoring has been eliminated because chronic toxicity monitoring will achieve water quality greater than that necessary to achieve compliance with acute toxicity monitoring as explained in section IV.C.5 of this Fact Sheet, Attachment F to this Order.

This Order requires the Discharger to conduct an additional toxicity test for exceedances of the toxicity effluent limitations. If the additional test demonstrates toxicity, the Discharger is required to implement accelerated monitoring. If an accelerated monitoring test demonstrates

toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) Workplan in accordance with U.S. EPA 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.

D. Receiving Water Monitoring

1. Monitoring Questions

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?
- Are the receiving water conditions getting better or worse over time?
- Does the Facility cause or contribute to violations of the receiving water limitations in section V of this Order?
- Is the sediment condition changing over time?

2. 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.

3. Receiving Water Monitoring

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. Monthly monitoring of copper has been retained from the previous permit to help determine future intake credits. Quarterly monitoring of zinc has been retained from the previous permit.

d. This Order establishes annual monitoring of receiving water for chronic toxicity.

e. Annual monitoring of the CTR priority pollutants has been retained from the previous permit.

4. 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.

5. Monitoring Coalitions

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.

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.

6. Water and Sediment Monitoring Reports

The Discharger or water body monitoring coalition is required to submit annual Receiving Water Monitoring Reports and a Sediment Monitoring Report at least twice during a permit cycle in accordance with the Water and Sediment Monitoring Plan unless otherwise directed by the San Diego Water Board.

E. Regional Monitoring Requirements

The San Diego Water Board may modify the receiving waters monitoring and reporting requirements, regional monitoring requirements, and/or special studies requirements of this Order as 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*.

F. Other Monitoring Requirements

1. Monitoring requirements for floating dry dock submergence/emergence, shipbuilding ways flooding, and graving dock flooding; floating dry dock ballast tank monitoring; floating boom cleaning; and spill and illicit discharges have been carried over from Order No. R9-2009-0099 to help determine the effective of the BMP Plan and ensure that appropriate BMPs are properly implemented.

2. Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major permittees under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are

submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The San Diego Water Board has considered the issuance of WDRs in this Order that will serve as an NPDES permit for the Discharger. As a step in the adoption process of this Order for the Facility, the San Diego Water Board developed a Tentative Order and encouraged public participation in the Board's proceedings to consider adoption of the Tentative Order in accordance with the requirements of 40 CFR section 124.10 and Water Code section 13167.5.

A. Notification of Public Hearing and Public Comment Period

By electronic mail dated October 10, 2016 the San Diego Water Board notified the Discharger and interested agencies and persons of its intent to consider adoption of the Tentative Order in a public hearing during a regularly scheduled Board Meeting on December 14, 2016. The San Diego Water Board also provided notice that the Tentative Order was posted on the Board website and provided a period of 30 days for public review and comment. On October 10, 2016, notice of the public hearing and public comment period was also published in the San Diego Union Tribune, a daily newspaper within the area affected by the Facility.

The public also had access to the agenda including all supporting documents and any changes in meeting dates and locations through the San Diego Water Board's website at: http://www.waterboards.ca.gov/rwqcb9/.

B. Written Comments and Responses

Interested persons were invited to submit written comments concerning the Tentative Order as provided through the notification process. Written comments or e-mailed comments were required to be received in the San Diego Water Board office at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

To be fully responded to by staff and considered by the San Diego Water Board, the written or e-mailed comments were due at the San Diego Water Board office by 5:00 p.m. on November 9, 2016. The San Diego Water Board provided written responses to all timely received public comments on the Tentative Order and posted the response to comments document on the Board's website in advance of the public hearing date.

C. Public Hearing

The San Diego Water Board held a public hearing on the Tentative Order during its regular Board meeting on the following date and time and at the following location:

Date: December 14, 2016
Time: 9:00 am
Location: San Diego Water Board
Regional Board Meeting Room
2375 Northside Drive, Suite 100, San Diego CA 92108

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard and considered all comments and testimony pertinent to the discharge and the Tentative Order,. For accuracy of the record, important testimony was requested in writing.

D. Petition for State Water Board Review

Any aggrieved person may petition the State Water Board to review the decision of the San Diego Water Board regarding the final WDRs of this Order/Permit in accordance with Water

Code section 13320 and the 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, except that if the thirtieth day following the adoption date of this Order/Permit falls on a Saturday, Sunday, or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the State Water Board website at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Public Access to Records

Records pertinent to the San Diego Water Board's proceedings to adopt this Order including but not limited to the Report of Waste Discharge (ROWD), public notices, draft and finalized versions of the Tentative Order, public comments received, Board responses to comments received, and other supporting documents are maintained by the San Diego Water Board. These records are available for public access Monday through Friday between the hours of 8:00 a.m. to 5:00 p.m. at the San Diego Water Board office.

The San Diego Water Board website contains information and instructions on how to request access and obtain copies of these records at: http://www.waterboards.ca.gov/sandiego/about_us/contact_us/records.shtml

Before making a request to view public records in the San Diego Water Board office you 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/

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 at the e-mail address below, reference this Facility or Order, and provide a name, address, e-mail address (if available), and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Kristin Schwall at (619) 521-3368 or kristin.schwall@waterboards.ca.gov or to the San Diego Water Board via e-mail at rb9_questions@waterboards.ca.gov.

ATTACHMENT G – BEST MANAGEMENT PRACTICES PROGRAM AND STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS FOR INDUSTRIAL AREAS

I. IMPLEMENTATION SCHEDULE

The Discharger shall continue to implement the existing storm water pollution prevention plan (SWPPP) until the Discharger has fully completed the implementation of SWPPP requirements specified in section IV.C of this Order. 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 to achieve these 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 waters of the State and waters of the U.S.
4. To identify, describe, and implement site-specific Best Management Practices (BMPs) to reduce or prevent the discharge of pollutants associated with industrial activities to waters of the State and waters of the U.S.
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, and 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 Ares. 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 Ares. 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. Ares of Industrial Activity. 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 as defined in section IV.A 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 or otherwise be discharged. 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 United Stated Environmental Protection Agency (U.S. EPA) 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. Examples of unauthorized non-storm water discharges are rinse and wash water (whether detergents are used or not, contact and non-contact cooling water, boiler blow-down, etc.

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.

7. **Non-Industrial Storm Water Discharges.** Describe the Facility locations of non-industrial storm water discharges such as parking lots and rooftops. Explain how these discharges are kept separate from industrial activities and industrial materials. Describe good housekeeping and other non-structural BMPs, at a minimum, which are employed to reduce and minimize pollution from these areas.

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. Non-Structural BMPs. 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 BMPs 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 are 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)

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.C.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	SM 4500-NO3- E	mg/L as N	0.68	-

PARAMETER	TEST METHOD[1]	REPORTING UNITS	ANNUAL NAL VALUE	INSTANTANEOUS MAXIMUM NAL
Nitrogen				
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	-
Magnesium, total	EPA 200.7	mg/L	0.064	-
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 X.B.1.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.C.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 Monitoring and Reporting Program (MRP) (Attachment E). 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. Storm Water Diversion System (SWDS) evaluation procedures.

C. 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.

D. 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 California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) or U.S. EPA.

A. Upon notification by the San Diego Water Board and/or U.S. EPA that the SWPPP does not meet one or more of the minimum requirements of this Order or 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 and/or U.S. EPA.

B. 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.

C. 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.

D. 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, provides a schedule for completing and implementing that portion of the SWPPP.
   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 XII.D.1 above, or provide certification that the SWPPP revisions have been implemented.

E. The SWPPP shall be provided, upon request, to the San Diego Water Board, U.S. EPA, local agency, or Compliance Inspection Designees. The San Diego Water Board under section 308(b) of the Clean Water Act (CWA) considers the SWPPP a report that shall be available to the public.

XIII. AUTHORIZED NON-STORM WATER DISCHARGES SPECIAL REQUIREMENTS

The SWPPP shall address authorized non-storm water discharges and incorporate appropriate BMPs to prevent the discharge of pollutants.

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			
Dust generation / Particulate generation			
Cleaning areas / Rinsing areas			
Other areas of industrial activities			
List of Significant Materials			
For each material listed:			
Storage location			

Storm Water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
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			
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 – 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 California Water Code (Water Code) section 13050, is prohibited.

B. The discharge of waste to land, except as authorized by Waste Discharge Requirements (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 U.S. except as authorized by an National Pollutant Discharge Elimination System (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 California Regional Water Quality Control Board, San Diego Region (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 firefighting 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 I – SEDIMENT CHEMISTRY ANALYTES

All samples shall be tested for the analytes specified in Table I-1. If other toxic pollutants are believed to pose risk to benthic communities, aquatic-dependent wildlife, or human health, those toxic pollutants shall be identified and included by the Discharger. Analytes not on Attachment A of the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan) cannot be used in the exposure assessment in section V of the Sediment Quality Plan; however the data can be used to conduct more effective stressor identification studies as described in section VII.F of the Sediment Quality Plan.

Table I-1 Sediment Chemistry Analytes.

Chemical Name	Chemical Group
Total Organic Carbon[1]	General
Percent Fines[1]	General
Cadmium[1]	Metal
Copper[1]	Metal
Lead[1]	Metal
Mercury[1]	Metal
Zinc[1]	Metal
Acenaphthene[1]	PAH
Anthracene[1]	PAH
Biphenyl[1]	PAH
Naphthalene[1]	PAH
2,6-dimethylnaphthalene[1]	PAH
Fluorene[1]	PAH
1-methylnaphthalene[1]	PAH
2-methylnaphthalene[1]	PAH
1-methylphenanthrene[1]	PAH
Phenanthrene[1]	PAH
Benzo(a)anthracene[1]	PAH
Benzo(a)pyrene[1]	PAH
Benzo(e)pyrene[1]	PAH
Chrysene[1]	PAH
Dibenz(a,h)anthracene[1]	PAH
Fluoranthene[1]	PAH
Perylene[1]	PAH
Pyrene[1]	PAH
Alpha Chlordane[1]	Pesticide
Gamma Chlordane[1]	Pesticide
Trans Nonachlor[1]	Pesticide
Dieldrin[1]	Pesticide
o,p'-DDE[1]	Pesticide
o,p'-DDD[1]	Pesticide
o,p'-DDT[1]	Pesticide
p,p'-DDD[1]	Pesticide
p,p'-DDE[1]	Pesticide
p,p'-DDT[1]	Pesticide
2,4'-Dichlorobiphenyl[1]	PCB 8 - congener
2,2',5-Trichlorobiphenyl[1]	PCB 18 - congener
2,4,4'-Trichlorobiphenyl[1]	PCB 28 - congener
2,2',3,5'-Tetrachlorobiphenyl[1]	PCB 44 - congener
2,2',5,5'-Tetrachlorobiphenyl[1]	PCB 52 - congener
2,3',4,4'-Tetrachlorobiphenyl[1]	PCB 66 - congener
2,2',4,5,5'-Pentachlorobiphenyl[1]	PCB 101 - congener
2,3,3',4,4'-Pentachlorobiphenyl[1]	PCB 105 - congener
2,3',4,4',5-Pentachlorobiphenyl[1]	PCB 118 - congener
2,2',3,3',4,4'-	PCB 128 - congener

Chemical Name	Chemical Group
2,2',3,3',4,4',5-Heptachlorobiphenyl[1]	PCB 170 - congener
2,2',3,4,4',5,5'-Heptachlorobiphenyl[1]	PCB 180 - congener
2,2',3,4',5,5',6-Heptachlorobiphenyl[1]	PCB 187 - congener
2,2',3,3',4,4',5,6-Octachlorobiphenyl[1]	PCB 195 - congener
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl[1]	PCB 206 - congener
Decachlorobiphenyl[1]	PCB 209 - congener
2,3',6-Trichlorobiphenyl	PCB 27 - congener
2,4,5-Trichlorobiphenyl	PCB 29 - congener
2,4',5-Trichlorobiphenyl	PCB 31 - congener
2,3',4'-Trichlorobiphenyl	PCB 33 - congener
2,2',4,5'-Tetrachlorobiphenyl	PCB 49 - congener
2,3,3',4'-Tetrachlorobiphenyl	PCB 56 - congener
2,3,4,4'-Tetrachlorobiphenyl	PCB 60 - congener
2,3,4',6-Tetrachlorobiphenyl	PCB 64 - congener
2,3',4',5-Tetrachlorobiphenyl	PCB 70 - congener
2,4,4',5-Tetrachlorobiphenyl	PCB 74 - congener
3,3',4,4'-Tetrachlorobiphenyl	PCB 77 - congener
2,2',3,4,5'-Pentachlorobiphenyl	PCB 87 - congener
2,2',3,5',6-Pentachlorobiphenyl	PCB 95 - congener
2,2',3,4',5'-Pentachlorobiphenyl	PCB 97 - congener
2,2',4,4',5-Pentachlorobiphenyl	PCB 99 - congener
2,3,3',4',6-Pentachlorobiphenyl	PCB 110 - congener
2,3,4,4',5-Pentachlorobiphenyl	PCB 114 - congener
3,3',4,4',5-Pentachlorobiphenyl	PCB 126 - congener
2,2',3,4,4',5-Hexachlorobiphenyl	PCB 137 - congener
2,2',3,4,5,5'-Hexachlorobiphenyl	PCB 141 - congener
2,2',3,4',5,5'-Hexachlorobiphenyl	PCB 146 - congener
2,2',3,4',5',6-Hexachlorobiphenyl	PCB 149 - congener
2,2',3,5,5',6-Hexachlorobiphenyl	PCB 151 - congener
2,3,3',4,4',5-Hexachlorobiphenyl	PCB 156 - congener
2,3,3',4,4',5'-Hexachlorobiphenyl	PCB 157 - congener
2,3,3',4,4',6-Hexachlorobiphenyl	PCB 158 - congener
3,3',4,4',5,5'-Hexachlorobiphenyl	PCB 169 - congener
2,2',3,3',4,5,6'-Heptachlorobiphenyl	PCB 174 - congener
2,2',3,3',4,5',6'-Heptachlorobiphenyl	PCB 177 - congener
2,2',3,4,4',5',6-Heptachlorobiphenyl	PCB 183 - congener
2,3,3',4,4',5,5'-Heptachlorobiphenyl	PCB 189 - congener
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	PCB 194 - congener
2,2',3,3',4,5,5',6-Octachlorobiphenyl	PCB 198 - congener
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	PCB 199 - congener
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	PCB 200 - congener
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	PCB 201 - congener
2,2',3,4,4',5,5',6-Octachlorobiphenyl	PCB 203 - congener

Chemical Name	Chemical Group
Hexachlorobiphenyl[1]	
2,2',3,4,4',5'-Hexachlorobiphenyl[1]	PCB 138 - congener
2,2',4,4',5,5'-Hexachlorobiphenyl[1]	PCB 153 - congener

Chemical Name	Chemical Group

[1] From Attachment A of the Sediment Quality Plan