CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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SECOND REVISED TENTATIVE ORDER NO. R9-2015-0117
NPDES NO. CA0109185

WASTE DISCHARGE REQUIREMENTS FOR THE UNITED STATES DEPARTMENT OF THE NAVY NAVAL BASE CORONADO SAN DIEGO COUNTY

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

Table 1. Discharger Information

Discharger	United States Department of the Navy
Name of Facility	Naval Base Coronado (NBC)
Facility Address	937 N. Harbor Drive San Diego, CA 92132-0058 San Diego County
Facility Contact, Title, and Phone at adoption	Mr. Jason Golumbfskie~~Andrew Baughman~~ Installation Environmental Program Director for NBC (619) 545-3429
Mailing Address	Naval Base Coronado PWO, Bldg.3 PO Box 357088 San Diego, CA 92135-7088
Type of Facility	Naval Base
Facility Design Flow	Not Applicable
The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) have classified this discharge as a major discharge.	

Table 2. Discharge Location

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Industrial Process Water Effluent Discharges				
SC-001	Steam Condensate	32° 42' 22" N	117° 11' 23" W	San Diego Bay
SC-002	Steam Condensate	32° 42' 22" N	117° 11' 22" W	San Diego Bay
SC-003	Steam Condensate	32° 42" 23" N	117° 11' 22" W	San Diego Bay
SC-004	Steam Condensate	32° 42' 21" N	117° 11' 20" W	San Diego Bay
SC-005	Steam Condensate	32° 42' 21" N	117° 11' 18" W	San Diego Bay
SC-006	Steam Condensate	32° 42' 20" N	117° 11' 16" W	San Diego Bay
SC-007	Steam Condensate	32° 42' 20" N	117° 11' 15" W	San Diego Bay
SC-008	Steam Condensate	32° 42' 19" N	117° 11' 13" W	San Diego Bay

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
SC-009	Steam Condensate	32° 42' 29" N	117° 11' 23" W	San Diego Bay
SC-010	Steam Condensate	32° 41' 46" N	117° 11' 59" W	Pacific Ocean
CW-001	Diesel Engine Cooling Water	32° 41' 43" N	117° 13' 36" W	San Diego Bay
UV-001	Utility Vault and Manhole Dewatering	32' 42° 8" N	117' 10° 57" W	San Diego Bay
UV-002	Utility Vault and Manhole Dewatering	32° 42' 17" N	117° 11' 11" W	San Diego Bay
UV-003	Utility Vault and Manhole Dewatering	32' 42° 20" N	117' 11° 27" W	San Diego Bay
UV-004	Utility Vault and Manhole Dewatering	32° 42' 37" N	117° 11' 24" W	San Diego Bay
UV-005	Utility Vault and Manhole Dewatering	32° 42' 36" N	117° 11' 22" W	San Diego Bay
UV-006	Utility Vault and Manhole Dewatering	32' 42° 45" N	117, 11° 25" W	San Diego Bay
UV-007	Utility Vault and Manhole Dewatering	32° 42' 42" N	117° 12' 12" W	San Diego Bay
UV-008	Utility Vault and Manhole Dewatering	32° 42' 26" N	117° 11' 39" W	San Diego Bay
UV-009	Utility Vault and Manhole Dewatering	32° 42' 15" N	117° 11' 57" W	San Diego Bay
UV-010	Utility Vault and Manhole Dewatering	32° 42' 2" N	117° 11' 25" W	San Diego Bay
UV-011	Utility Vault and Manhole Dewatering	32° 40' 31" N	117° 9' 38" W	San Diego Bay
UV-012	Utility Vault and Manhole Dewatering	32° 40' 23" N	117° 10' 1" W	San Diego Bay
UV-013	Utility Vault and Manhole Dewatering	32° 35' 57" N	117° 7' 25" W	San Diego Bay
PW-001	Pier Washing	32º 41' 43" N	117º 13' 36" W	San Diego Bay
Small Military Base Municipal Separate Storm Sewer System (MS4) Outfalls				
See Attachment M of this order	Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean, San Diego Bay, ~~or~~ Tijuana River Estuary, San Luis Rey River Watershed, Morena Reservoir, or Canyon City Hydrologic Area
Industrial No Exposure Area Outfalls				

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
None	Industrial No Exposure Area Storm Water (wet weather) and Non-Storm Water (dry weather)	No Discharge	No Discharge	No Discharge
Industrial Low Risk Area Outfalls				
See Attachment M of this order	Industrial Low Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean, San Diego Bay, or Tijuana River Estuary
Industrial High Risk Area Outfalls				
See Attachment M of this order	Industrial High Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay

[1] TBD

Table 3. Administrative Information

This Order was adopted by the San Diego Water Board on:	**November 18, 2015**
This Order shall become effective on:	**January 1, 2016**
This Order shall expire on:	**December 31, 2020**
The Discharger shall file a Report of Waste Discharge as an application for renewal of waste discharge requirements in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to this Order expiration date**
The USEPA and the San Diego Water Board have classified this discharge as follows:	**Major**

I, **David W. Gibson,** Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of this Order adopted by the California Regional Water Quality Control Board, San Diego Region, on **November 18, 2015**.

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David W. Gibson, Executive Officer

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Tables

List of Attachments

I. FACILITY INFORMATION

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

II. FINDINGS

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

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

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 M are also incorporated into this Order.

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

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 CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.

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

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 the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The dumping, deposition or discharge of the following wastes directly into Waters of the United States (U.S.), including but not limited to the Pacific Ocean, San Diego Bay, ~~and~~ the Tijuana River Estuary, Morena Reservoir, a tributary to the San Luis Rey River watershed, and waters in the Canyon City Hydrologic Area, or adjacent to such waters in any manner which may permit its being transported into the waters is prohibited:

1. Paint chips;
2. Blasting materials;
3. Paint over spray;
4. Paint spills;
5. Water contaminated with abrasive blast materials, paint, oils, fuels, lubricants, solvents, or petroleum;
6. Hydro-blast water;
7. Treated or untreated sewage;
8. Tank cleaning water such as to remove sludge and/or dirt;
9. Clarified water from an oil and water separator, except for storm water discharges treated by an oil and water separator and having coverage under this Order;
10. Steam cleaning water;
11. Pipe and tank hydrostatic test water, unless regulated by an NPDES permit;
12. Saltbox water;
13. Hydraulic oil leaks and spills;
14. Fuel leaks and spills;
15. Trash;
16. Refuse and rubbish including but not limited to cans, bottles, paper, plastics, vegetable matter or dead animals;
17. Fiberglass dust;
18. Swept materials;
19. Ship repair and maintenance activity debris;
20. Waste zinc plates;
21. Demineralizer and reverse osmosis brine; and
22. Oily bilge water.

B. Diesel engine cooling water discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited.

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

D. The discharge of waste to Waters of the U.S. including but not limited to San Diego Bay, the Pacific Ocean, ~~and~~ the Tijuana River Estuary, Morena Reservoir, a tributary to the San Luis Rey River watershed, and waters in the Canyon City Hydrologic Area is prohibited except as specifically authorized by this Order or another NPDES permit.

E. All discharges regulated under this Order shall comply with waste discharge prohibitions contained in the San Diego Water Board's *Water Quality Control Plan for the San Diego Basin* (Basin Plan) and other applicable statewide water quality control plans described in Attachment F of this Order. The Basin Plan waste discharge prohibitions are listed in Attachment J to this Order.

F. Except as provided in Non-Storm Water Specifications, section IV.F of this Order or as otherwise regulated by this Order, discharges of liquids or materials others than storm water (i.e. non-storm water discharges) either directly or indirectly to Waters of the U.S., including but not limited to San Diego Bay, the Pacific Ocean, ~~or~~ the Tijuana River Estuary, Morena Reservoir, a tributary to the San Luis Rey River watershed, or waters in the Canyon City Hydrologic Area are prohibited.

G. The discharge of the first ¼ inch of storm water runoff (First Flush) from all areas designated as Industrial High Risk areas, as defined in section IV.B.1.d of this Order, is prohibited, unless the First Flush complies with the effluent limitations in section IV.C. Effluent limitations contained in section IV.C are applicable to all discharges of storm water from Industrial High Risk Areas on the Facility.

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

I. Discharges to Waters of the U.S., including but not limited to San Diego Bay, the Pacific Ocean, ~~and~~ the Tijuana River Estuary, Morena Reservoir, a tributary to the San Luis Rey River watershed, and waters in the Canyon City Hydrologic Area, containing a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR part 117, *Security Classification Regulations Pursuant To Executive Order 11652*, and/or 40 *CFR part 302, Designation, Reportable Quantities, and Notification*, are prohibited.

J. The discharge of Polychlorinated Biphenyls (PCBs) to Waters of the U.S., including but not limited to~~the~~ San Diego Bay, the Pacific Ocean, and the Tijuana River Estuary, Morena Reservoir, a tributary to the San Luis Rey River watershed, and waters in the Canyon City Hydrologic Area is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Industrial Process Wastewater

Industrial process wastewater discharges regulated under this order include pier washing, utility vault and manhole dewatering, pier boom cleaning, boat rinsing, steam condensate, and diesel engine cooling water.

1. **BMP Regulated Industrial Process Wastewater.** The discharge of pier washing wastewater at Discharge Point No. PW-001 and Utility Vault and Manhole Dewatering at Discharge Point No. UV-001 through UV-013 in Table 4 is regulated using a narrative effluent limitation BMP approach under section VI.C.3 of this Order. Pier boom cleaning and boat rinsing have no discharge to surface waters require BMPs under section VI.C.3 of this Order to prevent discharges.

Table 4. Industrial Process Wastewaters Regulated with BMPs

Type of Discharge	Discharge Point Nos.
Pier Washing Wastewater	PW-001

Utility Vault and Manhole Dewatering	UV-001 through UV-013
Boat Rinsing	No Discharge
Pier Boom Cleaning	No Discharge

2. **Steam Condensate Discharges.** Effluent Limitations for Steam Condensate – Discharge Point Nos. SC-001 through SC-010

   The Discharger shall maintain compliance with the effluent limitations in Table 5 at Discharge Point Nos. SC-001 through SC-010 with compliance measured at Monitoring Locations SC-001 through SC-010 as described in the Monitoring and Reporting Program (MRP), Attachment E of this Order.

Table 5. Effluent Limitations for Steam Condensate

Parameter	Units	Effluent Limitations				
		6-Month Median	Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Discharges to the San Diego Bay – Discharge Point Nos. SC-001 through SC-009						
Oil and Grease	mg/L	--	25	40	--	75
Turbidity	NTU	--	75	100	--	225
pH	standard units	--	--	--	--	[1]
Settleable Solids	ml/L	--	1.0	1.5	--	3.0
Chronic Toxicity	Pass/Fail	--	[2]	--	[2]	--
Arsenic, Total Recoverable	µg/L	--	30	--	59	--
Copper, Total Recoverable	µg/L	--	1.9	--	5.8	--
Lead, Total Recoverable	µg/L	--	3.4	--	12	--
Nickel, Total Recoverable	µg/L	--	6.8	--	14	--
Selenium, Total Recoverable	µg/L	--	58	--	120	--
Zinc, Total Recoverable	µg/L	--	47	--	95	--
2,3,7,8-TCDD	µg/L	--	$1.4x10^{-8}$	--	$2.8x10^{-8}$	--
Bis(2-Ethylhexyl)Phthalate	µg/L	--	5.9	--	12	--
Aldrin	µg/L	--	0.00014	--	0.00028	--
4,4'-DDT	ug/L	--	0.00059	--	0.00118	--
4,4'-DDE	ug/L	--	0.00059	--	0.00118	--
4,4'-DDD	ug/L	--	0.00084	--	0.00169	--
Heptachlor	µg/L	--	0.00021	--	0.00042	--
Heptachlor Epoxide	µg/L	--	0.00011	--	0.00022	--
Discharges to the Pacific Ocean – Discharge Point No. SC-010						
Oil and Grease	mg/L	--	25	40	--	75
Turbidity	NTU	--	75	100	--	225
pH	standard units	--	--	--	--	[1]
Settleable Solids	ml/L	--	1.0	1.5	--	3.0
Chronic Toxicity	Pass/Fail	--	[2]	--	[2]	--
Copper, Total Recoverable	µg/L	3	--	--	5.8	30
Lead, Total Recoverable	µg/L	2	--	--	8	20

Parameter	Units	Effluent Limitations				
		6-Month Median	Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Zinc, Total Recoverable	µg/L	20	--	--	80	200
TCDD Equivalents	µg/L	--	$3.9x10^{-9}$	--	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	--	3.5	--	--	--

[1] Within limits of 7.0 – 9.0 standard units at all times.
[2] As defined in section VII.J of this Order.

3. Diesel Engine Cooling Water Discharges. Effluent Limitations for Diesel Engine Cooling Water – Discharge Point No. CW-001

The Discharger shall maintain compliance with the effluent limitations in Table 6 at Discharge Point No. CW-001 with compliance measured at Monitoring Location CW-001 as described in the MRP, Attachment E of this Order.

Table 6. Effluent Limitations for Diesel Engine Cooling Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	75
Turbidity	NTU	75	100	--	225
pH	standard units	--	--	--	[1]
Settleable Solids	ml/L	1.0	1.5	--	3.0
Chronic Toxicity	Pass/Fail	[2]	--	[2]	--
Arsenic, Total Recoverable	µg/L	20	--	62	--
Chromium VI, Total Recoverable	µg/L	27	--	85	--
Copper, Total Recoverable	µg/L	2.0	--	5.8	--
Lead, Total Recoverable	µg/L	5.8	--	15	--
Nickel, Total Recoverable	µg/L	5.7	--	15	--
Selenium, Total Recoverable	µg/L	58	--	120	--
Zinc, Total Recoverable	µg/L	37	--	95	--
4,4-DDT	µg/L	0.00059	--	0.0017	--
4,4-DDE	µg/L	0.00059	--	0.0012	--
4,4-DDD	µg/L	0.00084	--	0.0017	--

[1] Within the limit of 7.0 – 9.0 standard units at all times.
[2] As defined in section VII.J of this Order.

B. Storm Water Risk Level Designations

1. Storm Water Risk Level Designation Definitions

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

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

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

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

2. Annual Storm Water Risk Designation Level Report

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

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

b. Facility Map. A Facility map clearly labeled with (i) storm water discharge points; (ii) storm drain systems, features, drainage basin boundaries, and risk level designations; and (iii) land uses. The current storm water outfall maps are included in Attachment B of

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

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

this Order and updated maps shall be in a format suitable for the replacement of the figures in Attachment B.

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

3. Annual Storm Water Risk Level Designation Implementation

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

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

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

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

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

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

f. Reports or complaints;

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

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

4. Storm Water Risk Level Inspections

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

C. Effluent Limitations for Discharges from Industrial High Risk Areas

For discharges of pollutants in storm water discharges, from areas designated as Industrial High Risk Areas as defined in section IV.B.1.d of this Order, the Discharger shall maintain compliance with the following Maximum Daily Effluent Limitations (MDEL) for acute toxicity with

compliance measured at Monitoring Locations as described in the MRP Attachment E and Attachment M as updated annually of this Order:

Table 7. Effluent Limitations for Industrial Storm Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Acute Toxicity	Pass/Fail	--	Pass or % effect <40[a]	--	--

[a] Compliance with the Maximum Daily Effluent Limitation shall be based on the procedures specified in section IV. of the MRP, Attachment E, of this Order.

D. Small Military Base MS4 Discharge Specifications

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

2. **Storm Water Management Plan (SWMP) Implementation.** The Discharger shall prepare and submit to the San Diego Water Board, an adequate SWMP no later than 18 months following the effective date of this Order. The Discharger shall implement the SWMP no later than 24 months following the effective date of this Order. The Discharger shall make revisions to the SWMP as necessary or as required by the San Diego Water Board. The SWMP shall be designed to reduce the discharge of pollutants from "Small Military Base MS4 Areas" to the technology–based standard of MEP to protect receiving water quality. The SWMP shall serve as the framework for identification, assignment, and implementation of measures and BMPs to control Small Military Base MS4 discharges. Existing programs such as street sweeping that have storm water quality benefits should be identified in the SWMP and be a part of the Discharger's storm water program. The SWMP shall at a minimum contain the elements described in Attachment L of this Order. A SWMP is not required if the Discharger certifies annually in the Annual Storm Water Risk Designation Level Report the following for any installation unless otherwise directed by the San Diego Water Board in writing within 90 days of submission:

   a. Population of staff and visitors is under 1,000 and;

   b. The installation MS4 system is not contributing substantially to the pollutant loadings of a physically interconnected regulated MS4 and can demonstrate the following:

      i. The installation discharges less than ten percent of its storm water to the regulated MS4 or;

      ii. The installation's discharge makes up less than ten percent of the permitted MS4's total storm water volume; and

   c. If the Installation discharges any pollutants identified as a cause of Clean Water Act Section 303(d) impairment of any water body to which it discharges, storm water

controls are not needed to comply with Waste Load Assessments of an adopted Total Maximum Daily Load that addresses pollutants of concern.

3. **Bacteria Project I – Twenty Beaches and Creeks TMDL.** The Remote Training Site Warner Springs (RTSWS) shall take the following actions to meet the requirements of the TMDL:

   a. Implement the SWMP required by section IV.D.2 of this Order and any other additional measures necessary to achieve reductions in fecal coliform, enterococcus, and total coliform by the final compliance dates as required by the TMDL. The SWMP must include short term and long term BMP strategies appropriate for the prioritization schedule in Attachment A page A-65 of Resolution No. R9 2010- 0001.

   b. Collaborate and coordinate, to the extent feasible, with Phase I MS4s and other responsible parties to the Bacteria TMDL using an adaptive framework approach as part of the waste load reduction planning and implementation strategies in the required SWMP pursuant to section IV.D.2 of this Order. Coordinated efforts by all responsible parties are encouraged by the San Diego Water Board and will accomplish the waste load reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

   c. Monitor discharges from their facilities including MS4 discharge locations to demonstrate progress towards compliance with final waste load allocations. The monitoring and assessment results must be submitted as part of the Annual Reports required under section E.16 of this Order.

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

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

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

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

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

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

   b. The SWPPP shall include identification, assignment, and guidance for implementation of measures and BMPs to control discharges from industrial activities in the Industrial No Exposure, Industrial Low Risk and Industrial High Risk Areas of NBC. 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 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 and submit the revised SWPPP.

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

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

a. NAL Exceedance Determination Method:

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

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

Where:

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

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

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

For calculating the average, all effluent sampling analytical results that are reported by the laboratory as less than the Minimum Level (ML), a value of zero 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 from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (TSS, oil and grease), or are outside the NAL range (pH).

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

b. NAL Exceedance Response Actions (ERAs)

i. Baseline Status – No Exceedance

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

ii. Level 1 Status

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

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

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

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

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

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

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

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

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

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

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

iii. Level 2 Status

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

(a) Level 2 ERA Action Plan

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

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

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

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

(b) Level 2 ERA Technical Report

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

a) Industrial Activity BMPs Demonstration:

b) Non-Industrial Pollutant Source Demonstration; or

c) Natural Background Pollutant Source Demonstration.

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

(3) Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area, facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation, etc.). The Level 2 ERA Technical Report shall be certified and submitted by the Discharger with each Storm Water Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

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

(5) Eligibility for Returning to Baseline Status

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

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

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

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

(iii) A natural background pollutant source demonstration.

(6) Level 2 ERA Implementation Extension

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

(i) Reasons for the time extension;

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

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

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

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

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

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

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

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

[4] All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).
[5] The County of San Diego isopluvial map is located at http://www.sdcounty.ca.gov/dpw/watersheds/susmp/susmppdf/susmp_85precip.pdf may be used.
[6] Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, pg. 175 Equation 5.2 (1998).

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

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

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

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

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

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

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

F. Non-Storm Water Discharge Specifications

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

a. Diverted stream flows;

b. Rising groundwaters;

c. Uncontaminated groundwater infiltration [as defined at 40 CFR section 35.2005(b)(20)] to MS4s;

d. Uncontaminated pumped groundwater, foundation drains, crawl space pumps and, footing drain discharges not subject to a groundwater extraction permit such as NPDES Permit No. ~~CAG919001~~CAG919003, (*General Waste Discharge Requirements for ~~Discharges from Temporary~~ Groundwater Extraction Discharges to Surface Waters*

[7] California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. Web. 28 February 2013. <http://www.cabmphandbooks.com/Development.asp>.

within the San Diego Region ~~*and Similar Waste Discharges to San Diego Bay, Tributaries Thereto under Tidal Influence, and Storm Drains or Other Conveyance Systems Tributary Thereto*~~) or subsequent superseding NPDES renewal permit;

e. Springs;

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

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

h. Flows from riparian habitats and wetlands;

i. Discharges from potable water sources not subject to an NPDES permit such as NPDES Permit No. ~~CAG679001~~ CAG140001 (~~*General Waste Discharge Requirements for Discharges of Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains or Other Conveyance Systems*~~*Statewide National Pollutant Discharge* ~~*Elimnation*~~*Elimination System (NPDES) Permit for Drinking Water* ~~*s*~~*System Discharges to Waters of the United States*) or subsequent superseding NPDES renewal permit;

j. Individual residential car washing;

k. Dechlorinated swimming pool discharges;

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

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

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

m. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) not otherwise regulated by this Order; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

    b. Proper design and aiming of sprinkler heads; and

    c. Elimination of landscape irrigation during precipitation events.

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

V. RECEIVING WATER LIMITATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

1. Physical Characteristics

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

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

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

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

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

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

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. In addition, within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, and measured by a standard Secchi disk. Wherever the water is less than 10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone. [Basin Plan]

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

2. Chemical Characteristics

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

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

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

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

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

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

3. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [Ocean Plan-BPJ][11]

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

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

4. Bacterial Characteristics

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

b. The median total coliform concentration throughout the water column for any 30-day period shall not exceed 70 organisms per 100 ml nor shall more than 10 percent of the samples collected during any 30-day period exceed 230 organisms per 100 ml for a five-tube decimal dilution test or 330 organisms per 100 ml when a three-tube decimal dilution test is used where shellfish harvesting is designated. [Basin Plan]

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

5. Radioactivity

[11] Ocean Plan-BPJ means that Best Professional Judgment (BPJ) was used to apply standards from the Ocean Plan to San Diego Bay.

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

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

6. Toxicity

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

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

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

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

1. Bacterial Characteristics

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

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

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

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

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

ii. Single Sample Maximum:

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

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

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

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

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

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

2. Physical Characteristics

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

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

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

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

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

3. Chemical Characteristics

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

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

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

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

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

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

4. Numerical Water Quality Objectives

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

5. Biological Characteristics

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

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

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

6. Radioactivity

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

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

D. Discharges to Inland Surface Waters. Discharges from the Facility to Morena Reservoir, tributaries to the San Luis Rey River, or waters in the Canyon City Hydrologic Area shall not by itself or jointly with any other discharge(s) cause or contribute to violations of the following receiving water limitations:

1. Bacterial Characteristics

a. **Total Coliform Organisms [Basin Plan]:** Total coliform organisms concentration shall not exceed the following:

i. 1,000 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and

ii. 10,000 MPN/100 mL at any time.

b. **Fecal Coliform [Basin Plan]:** Fecal coliform organisms concentration shall not exceed the following:

i. 200 MPN/100 mL geometric mean, based on a minimum of not less than five samples for any 30-day period; and

ii. 400 MPN/100 mL for more than 10 percent of the total samples during any 30-day period.

c. **Enterococci [Basin Plan]:** Enterococci concentration shall not exceed the following:

i. 33 MPN/100 mL geometric mean, based on all samples during a 30-day period; and

ii. 61 MPN/100 mL at any time.

d. **Escherichia coli [Basin Plan]:** Escherichia coli concentration shall not exceed the following:

i. 126 MPN/100 mL geometric mean, based on all samples during a 30-day period; and

ii. 235 MPN/100 mL at any time.

2. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be less than five mg/L in inland surface waters with designated WARM beneficial use or less than six mg/L in waters designated COLD beneficial use. The annual mean dissolved oxygen concentration shall not be less than seven mg/L more than 10 percent of the time. [Basin Plan]

b. Changes in normal ambient pH levels shall not exceed 0.5 units. The pH shall not be depressed below 6.5 nor raised above 8.5. [Basin Plan]

c. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. [Basin Plan]

d. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH3) to exceed 0.025 mg/L as nitrogen. [Basin Plan]

3. Physical Characteristics

a. Water shall be free of coloration that causes nuisance or adversely affects beneficial uses. The natural color of fish, shellfish, or other resources shall not be impaired. [Basin Plan]

b. 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 otherwise adversely affect beneficial uses. [Basin Plan]

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

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

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

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

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

h. The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the San Diego Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature of any waters with designated cold freshwater habitat be increased more than 5°F above the natural receiving water temperature.

4. **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. Compliance will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the San Diego Water Board.

5. **Radioactivity.** Radionuclides shall not be present in concentrations that are harmful/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.

~~D.~~E. Corrective Actions for Receiving Water Limitations Violations

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

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

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

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

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

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

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

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

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

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

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

a. Describes the facility evaluation;

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

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

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

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

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

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

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

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

VI. PROVISIONS

A. Standard Provisions

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

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

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

   b. This Order expires on ~~January 31, 2021~~December 31, 2020, after which, the terms and conditions of this permit are automatically continued pending issuance of a new Order, provided that all requirements of USEPA' s NPDES regulations at 40 CFR section 122.6 and the state's regulations at CCR title 23, section 2235.4 regarding the continuation of expired Orders and waste discharge requirements are met.

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

B. Monitoring and Reporting Program (MRP) Requirements

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

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

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

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

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

C. Special Provisions

1. Reopener Provisions

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

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

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

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

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

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

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

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

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

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

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

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

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

vii. The Discharger has requested, and submitted technical information demonstrating to the satisfaction of the San Diego Water Board, that technology-based or water quality based effluent limitations may be adjusted on a pollutant-by-pollutant or discharge by discharge basis to reflect credit for pollutants in the Discharger's intake water in conformance with the applicable

requirements of 40 CFR section 122.45(g) and section 1.4.4 of the State Water Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP).

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

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

2. Special Studies, Technical Reports and Additional Monitoring Requirements[12]

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

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

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

The work plan shall include the following elements:

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

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

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

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

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

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

a. BMP and PPP for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan)

The Discharger shall continue to implement a Utility Vault Plan for utility vault and manhole dewatering discharges to prevent the discharge of pollutants into the receiving waters at levels that would contribute to the degradation of the receiving waters or otherwise adversely affect the beneficial uses of the receiving water. At a minimum, the Utility Vault Plan shall be maintained and implemented in accordance with Attachment H to prevent, or minimize the potential for, the release of pollutants to Waters of the State and Waters of the U.S.

b. BMP Plan for Pier Washing, Pier Boom Cleaning, and Boat Rinsing

The Discharger shall develop and implement a BMP Plan for discharges from pier washing that prevents the discharge of pollutants at Discharge Point No. PW-001 into the receiving waters at levels that would contribute to the degradation of the receiving waters or otherwise adversely affect the beneficial uses of the receiving water. Additionally within the BMP Plan, the Discharger shall include BMPs to prevent discharges to Waters of the U.S. from pier boom cleaning and boat rinsing activities performed at NBC. At a minimum, the BMP Plan shall be developed and implemented in accordance with Attachment I of this Order to prevent, or minimize the potential for, the release of pollutants to Waters of the State and Waters of the U.S.

c. PPP for Industrial Storm Water

The Discharger shall prepare and implement a PPP for storm water discharges associated with the Industrial High Risk Areas for acute toxicity and copper and zinc (Discharge Points specified in Attachment M of this Order, as updated annually pursuant to section IV.B.2 of this Order).

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

4. Flood and Runoff Protection Requirements

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

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

5. Other Special Provisions – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. General

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

B. Multiple Sample Data

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

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

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

C. Mass Emission Rate

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

$$\text{Mass Emission Rate (lb/day)} = 8.34 \times Q \times C$$

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

D. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by section VII.B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for discretionary penalties. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

E. Maximum Daily Effluent Limitation (MDEL)

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

F. Instantaneous Minimum Effluent Limitation

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

G. Instantaneous Maximum Effluent Limitation

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

H. Median Monthly Effluent Limit (MMEL)

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

I. Acute Toxicity for Discharges

1. The Maximum Daily Effluent Limitation (MDEL) for acute toxicity is exceeded and a violation will be flagged when a toxicity test results in a "fail" in accordance with the TST approach and the percent effect is greater than or equal to ~~0.40~~40%.

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

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

   Pass

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

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

   Fail

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

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

J. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (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 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 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 Maximum Daily Effluent Limitation (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 ≥~~0.~~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 Median Monthly Effluent Limitation (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~~using the TST outcome and percent effect. 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)*. 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 Regional Water Board (40 CFR section 122.41(h)). The Regional Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Board may consider results of any TIE/TRE studies in an enforcement action.

ATTACHMENT A – ABREVIATIONS AND GLOSSARY

Part 1 – Abbreviations

Abbreviation	Definition
AAEL	Average Annual Effluent Limitation
AMEL	Average Monthly Effluent Limitation
ASBS	Areas of Special Biological Significance
AWEL	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD_5	Biochemical Oxygen Demand (5-Day at 20°C)
BPJ	Best Professional Judgment
BPT	Best Practicable Treatment Control Technology
CCR	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
CNRSW	Commander, Navy Region Southwest
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
DMR	Discharger Monitoring Report
DNQ	Detected, but Not Quantified
DoD	Department of Defense
ECA	Effluent Concentration Allowance
ERA	Exceedance Response Action
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
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~~ Median Monthly Effluent Limitation
MPCD	Marine Pollution Control Device
MPN	Most Probable Number
MRP	Monitoring and Reporting Program

Abbreviation	Definition
MS4	Municipal Separate Storm Sewer System
NAB	Naval Amphibious Base, Coronado
NAL	Numeric Action Level
NASNI	Naval Air Station, North Island
NBC	Naval Base Coronado
ND	Not Detected
NOEL	No Observed Effect Level
NOLF	Naval Outlying Landing Field, Imperial Beach
NPDES	National Pollutant Discharge Elimination System
NR	Not Reported
NTR	National Toxics Rule
Ocean Plan	California Ocean Plan, Water Quality Control Plan Ocean Waters Of California
PCB	Polychlorinated Biphenyls
PMP	Pollutant Minimization Program
PPP	Pollution Prevention Plan
QAPP	Quality Assurance Project Plan
QSE	Qualifying Storm Event
REC-1	Contact Water Recreation Beneficial Use
RL	Reporting Level
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SCCWRP	Southern California Coastal Waters Research Project
Sediment Quality Plan	Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality
SIP	State Implementation Plan
SQO	Sediment Quality Objective
SSTC	Silver Strand Training Complex
State Water Board	State Water Resources Control Board
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TBEL	Technology-Based Effluent Limitations
Thermal Plan	Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
U.S.	United States
UNDS	Uniform National Discharge Standards
USEPA	United Stated Environmental Protection Agency
WDR	Waste Discharge Requirements
WEF	Water Environment Federation

Abbreviation	Definition
WET	Whole Effluent Toxicity
WLA	Wasteload Allocation
WQBEL	Water Quality-Based Effluent Limitation
µg	Microgram
µg/L	Micrograms per Liter

Part 2 – Glossary of Common Terms

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

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

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

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

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

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

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

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

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States (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.

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
Carcinogenic pollutants are substances that are known to have the potential to cause cancer in living organisms.

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

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

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

Contamination
"Contamination" means an impairment of the quality of the Waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not Waters of the State are affected. [CWC 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.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation (WQBEL), based on the allowance of a specified mixing zone. It is

calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

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

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

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

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

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

Facility
Naval Base Coronado (NBC). NBC consists of the following eight installations: Naval Air Station, North Island (NASNI), Naval Amphibious Base, Coronado (NAB), Naval Outlying Landing Field, Imperial Beach (NOLF), Silver Strand Training Complex (SSTC), formerly known as the Naval Radio Receiving Facility (NRRF), Naval Auxiliary Landing Field, San Clemente Island (NALF), Remote Training Site Warner Springs (RTSWS)~~Survival, Evasion, Resistance, and Escape (SERE) Training School~~, ~~La Posta Mountain Warfare Training Center (La Posta MWTC)~~Camp Michael Monsoor, and Camp Morena. Of the eight installations aligned under NBC, only ~~NASNI, NAB, NOLF, SSTC, and NALF have discharges subject to NPDES permitting.~~seven are regulated by this Order. NALF is located in the Los Angeles Regional Water Quality Control Board jurisdictional area and, therefore, is not regulated by this Order.

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

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

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

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

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

Instantaneous Minimum Effluent Limitation
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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pollutant
"Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well, used either to facilitate production or for disposal purposes, is approved by authority of the state in which the well is located, and if the state determines that the injection or disposal will not result in the degradation of ground or surface water resources. NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976). (40 CFR section 122.2)

Pollution
"Pollution" means an alteration of the quality of the Waters of the State by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses. "Pollution" may include "contamination." [CWC 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 CWC section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or San Diego Water Board.

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

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

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

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

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

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

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

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

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

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

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

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

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

Storm Water Discharge Associated with Industrial Activity
The discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters; sites used for residual treatment, storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, state, or municipally owned or operated that meet the description of the facilities referenced in this paragraph) include those facilities designated under 40 CFR section 122.26(a)(1)(v).

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

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

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

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

Vessel
Includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on navigable Waters of the 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 40 CFR131.6, consist of 1) the beneficial uses of a water body, 2) criteria (referred to as water quality objectives in California law) to protect those uses, and 3) an anti-degradation policy. Under state law, the water boards establish beneficial uses and water quality objectives in their water quality control or basin plans. Together with an anti-degradation policy (State Water Board Resolution 68-16), these beneficial uses and water quality objectives serve as water quality standards under the CWA. In CWA parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme. The water quality standards described in section V of this Order are enforceable receiving water limitations for the surface water bodies for which they are established.

Waters of the State
Waters of the State means any surface water or groundwater, including saline waters, within the boundaries of the state.

Waters of the United States (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 Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA." (40 CFR section 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. NBC Installations

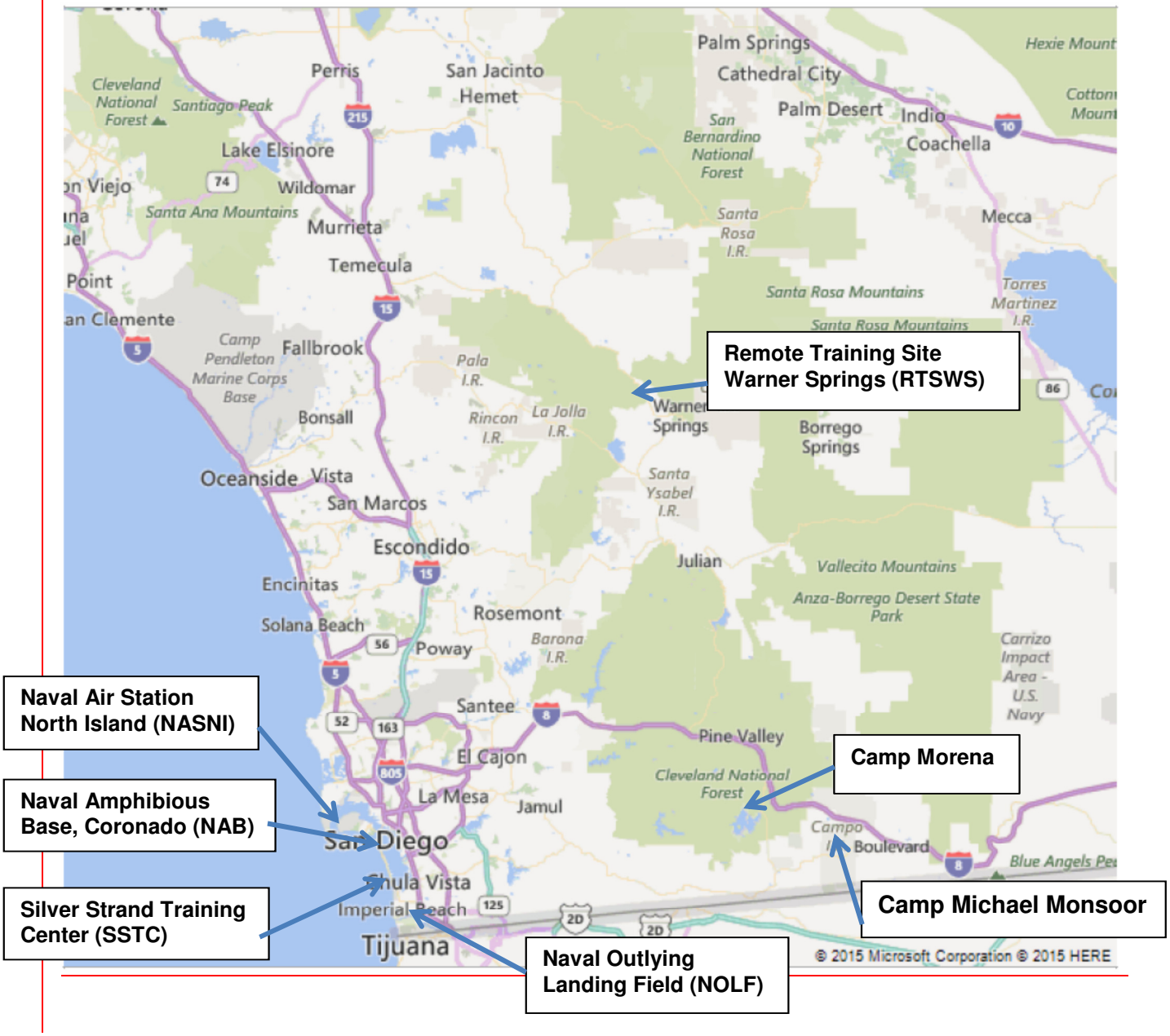


Figure B-2. NBC Installations Detail

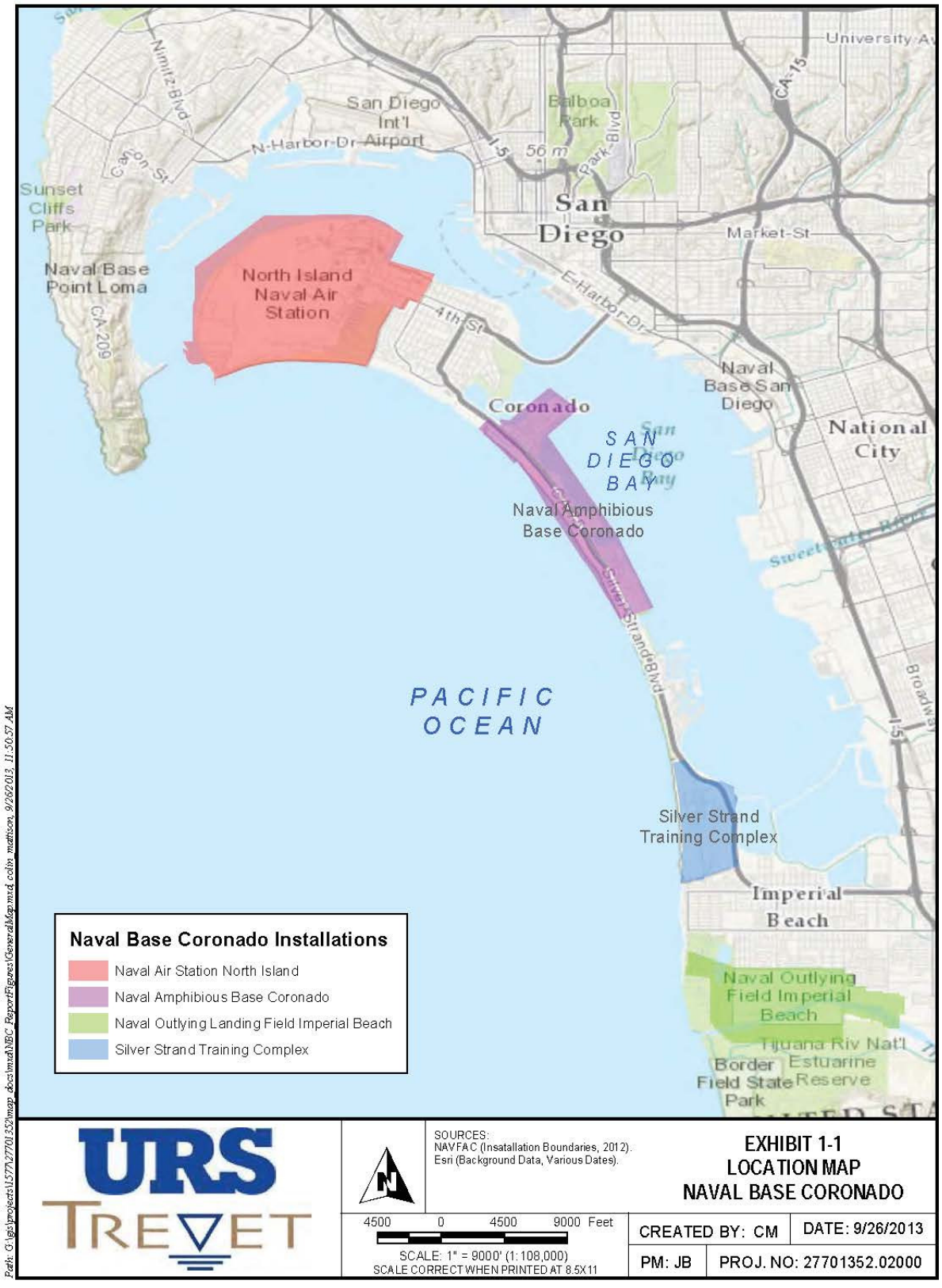


Figure B-~~2~~3. NBC Topographic Map

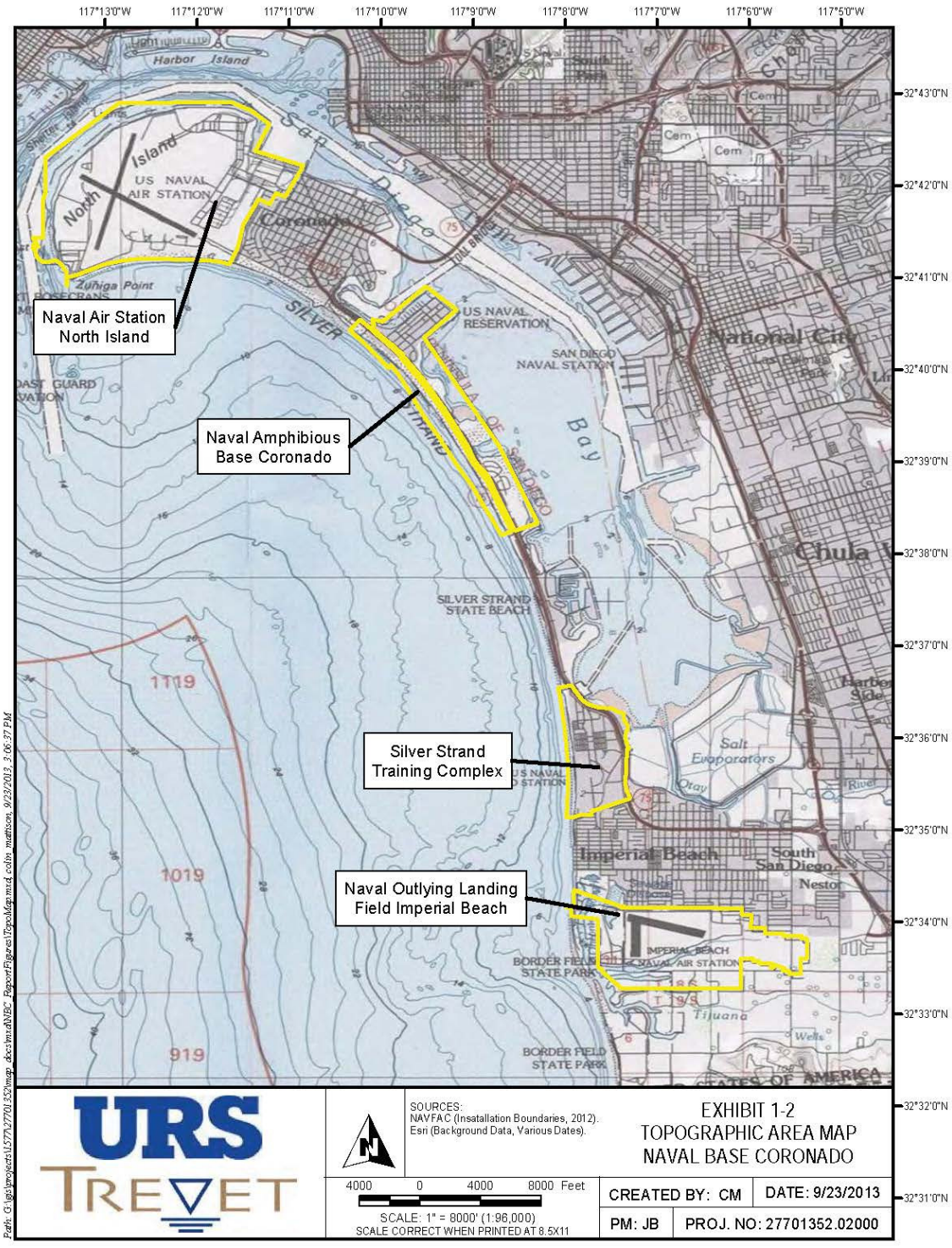


Figure B-~~34~~. NBC Steam Condensate Discharge Locations at NASNI

Figure B-45. NBC Diesel Engine Cooling Water Discharge Location at NASNI

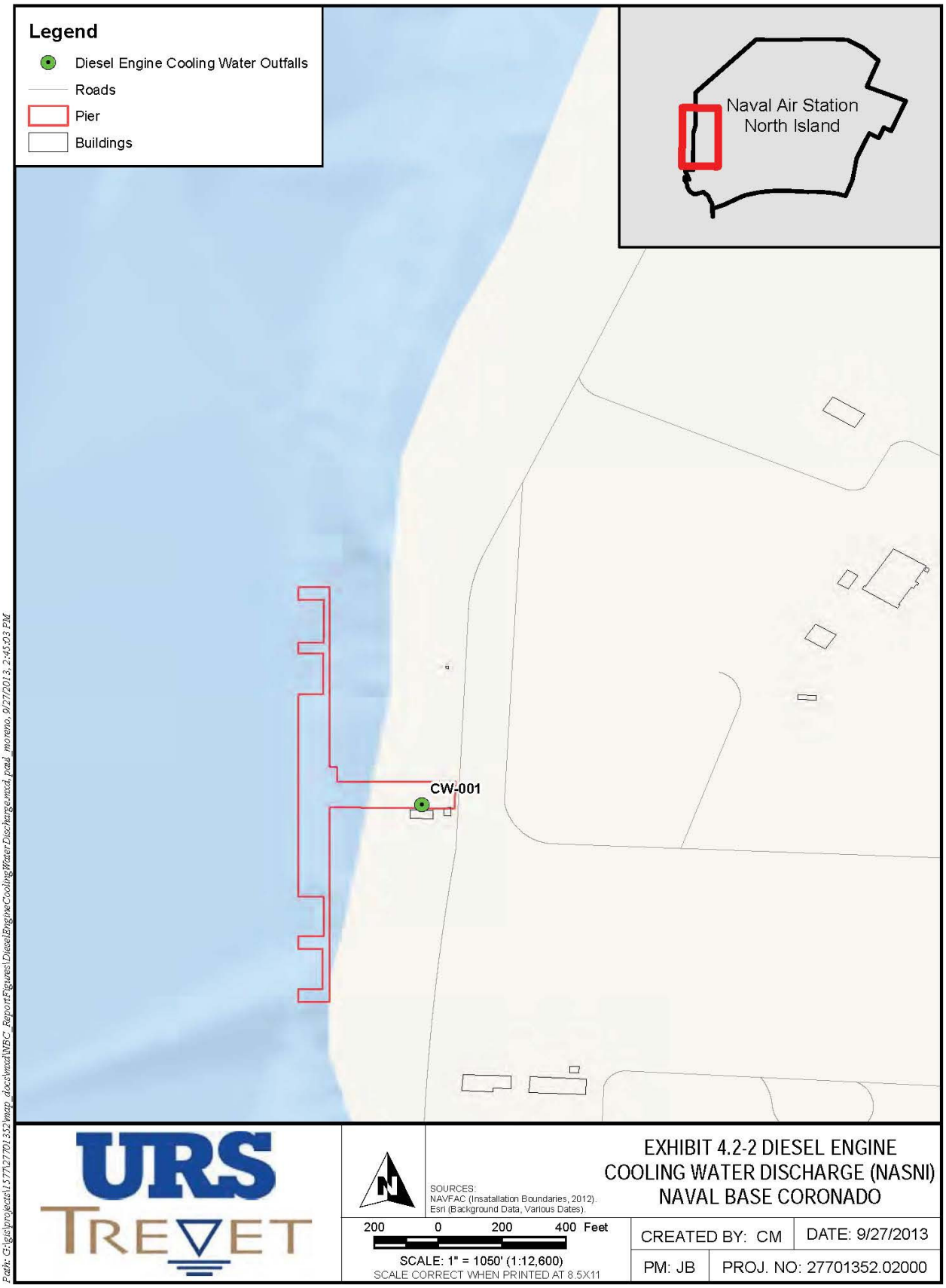


Figure B-~~56~~. NBC Utility Vault and Manhole Dewatering Discharge Locations at NASNI

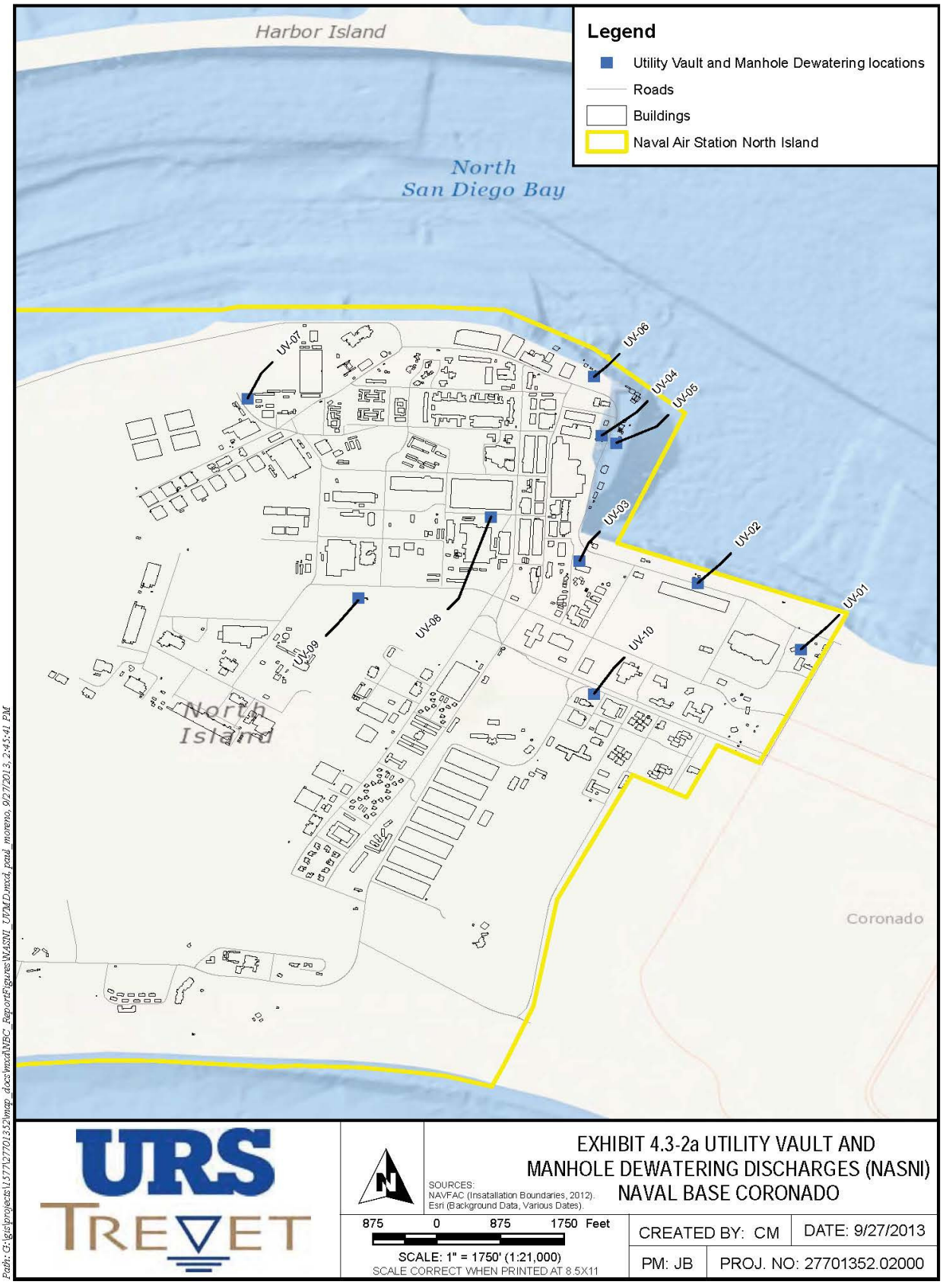


Figure B-~~67~~7. NBC Utility Vault and Manhole Dewatering Discharge Locations at NAB

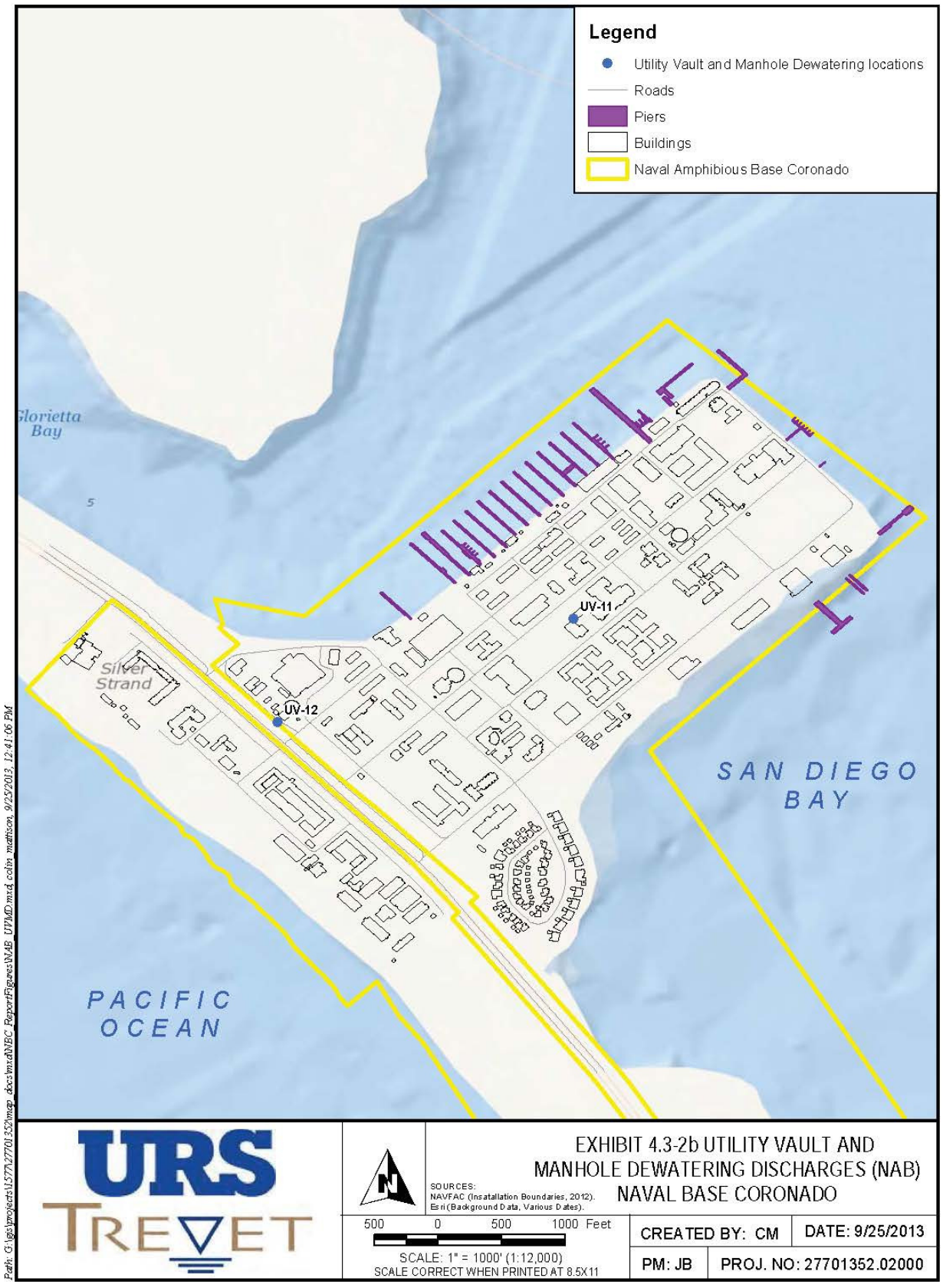


Figure B-~~78~~78. NBC Utility Vault and Manhole Dewatering Discharge Locations at SSTC

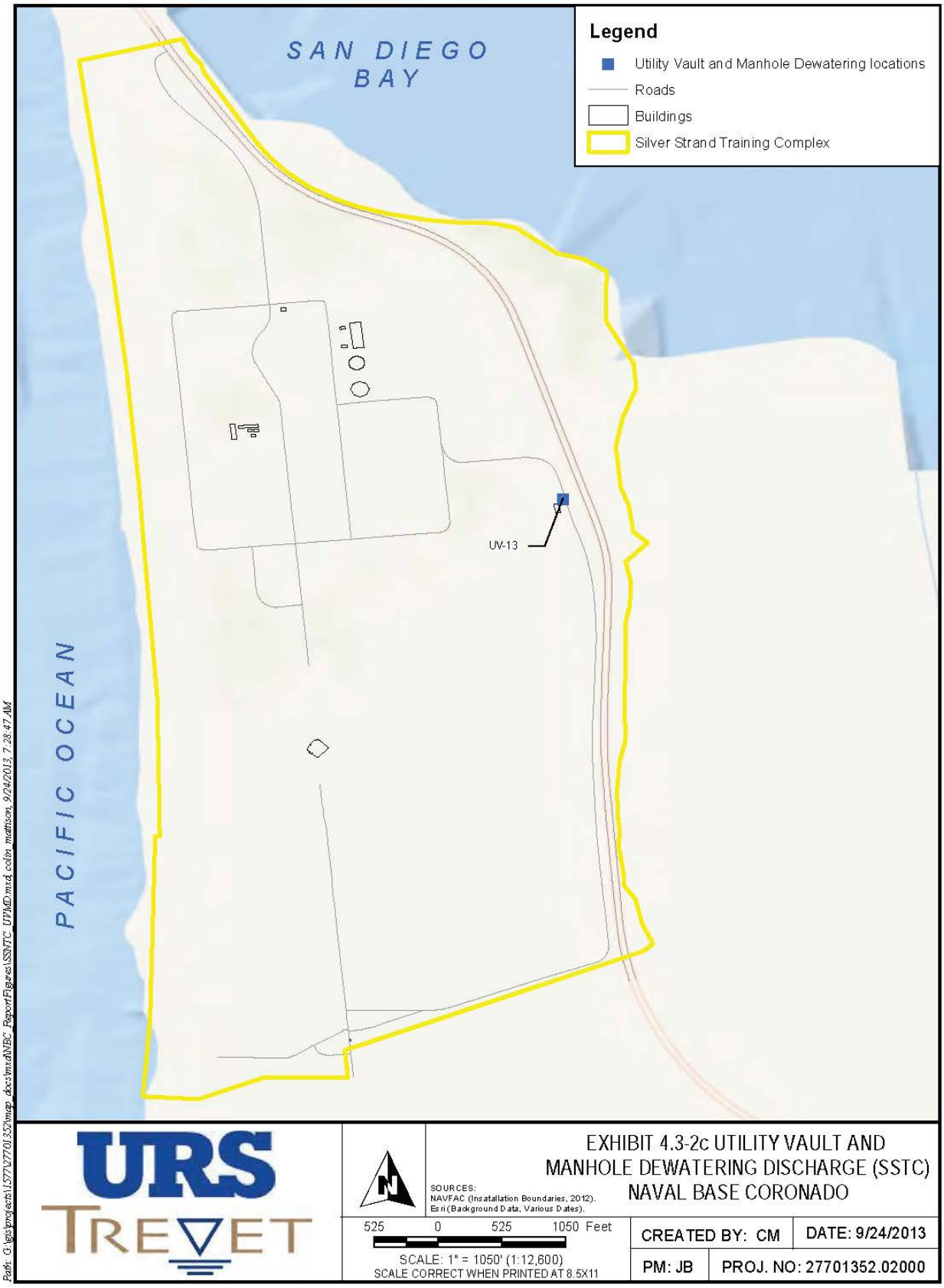


Figure B-~~89~~. NBC Pier Washing Discharge Locations at NASNI

Figure B-~~9~~10. NBC Industrial Storm Water Dischare Locations at NASNI

Figure B-~~10~~11. NBC Industrial Storm Water Dischare Locations at NAB

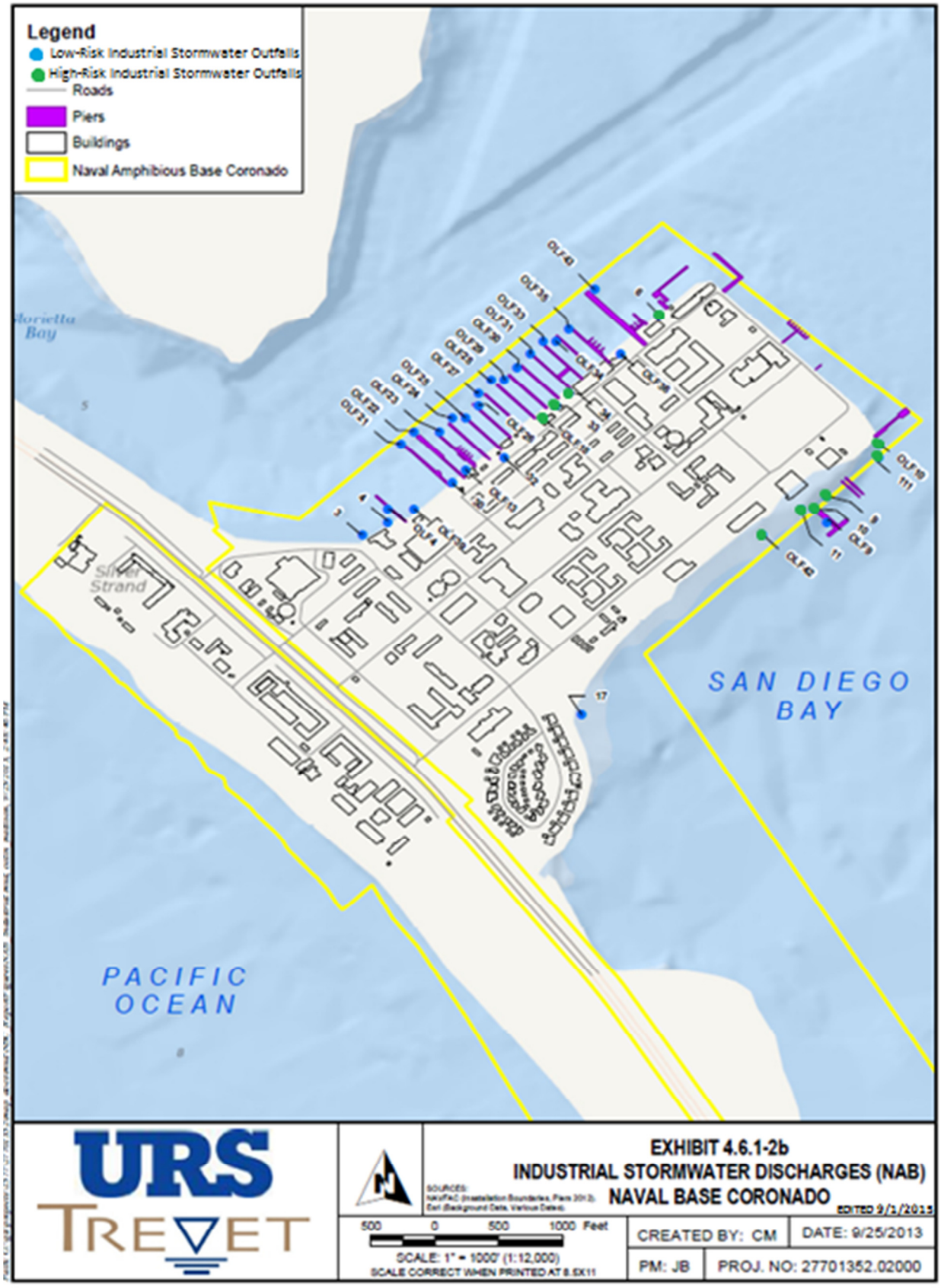


Figure B-~~11~~12. NBC Industrial Stormwater Dischare Locations at NOLF

Figure B-~~12~~13. NBC Small Military Base MS4 Discharge Locations at NASNI

Figure B-~~13~~14. NBC Small Military Base MS4 Discharge Locations at NAB

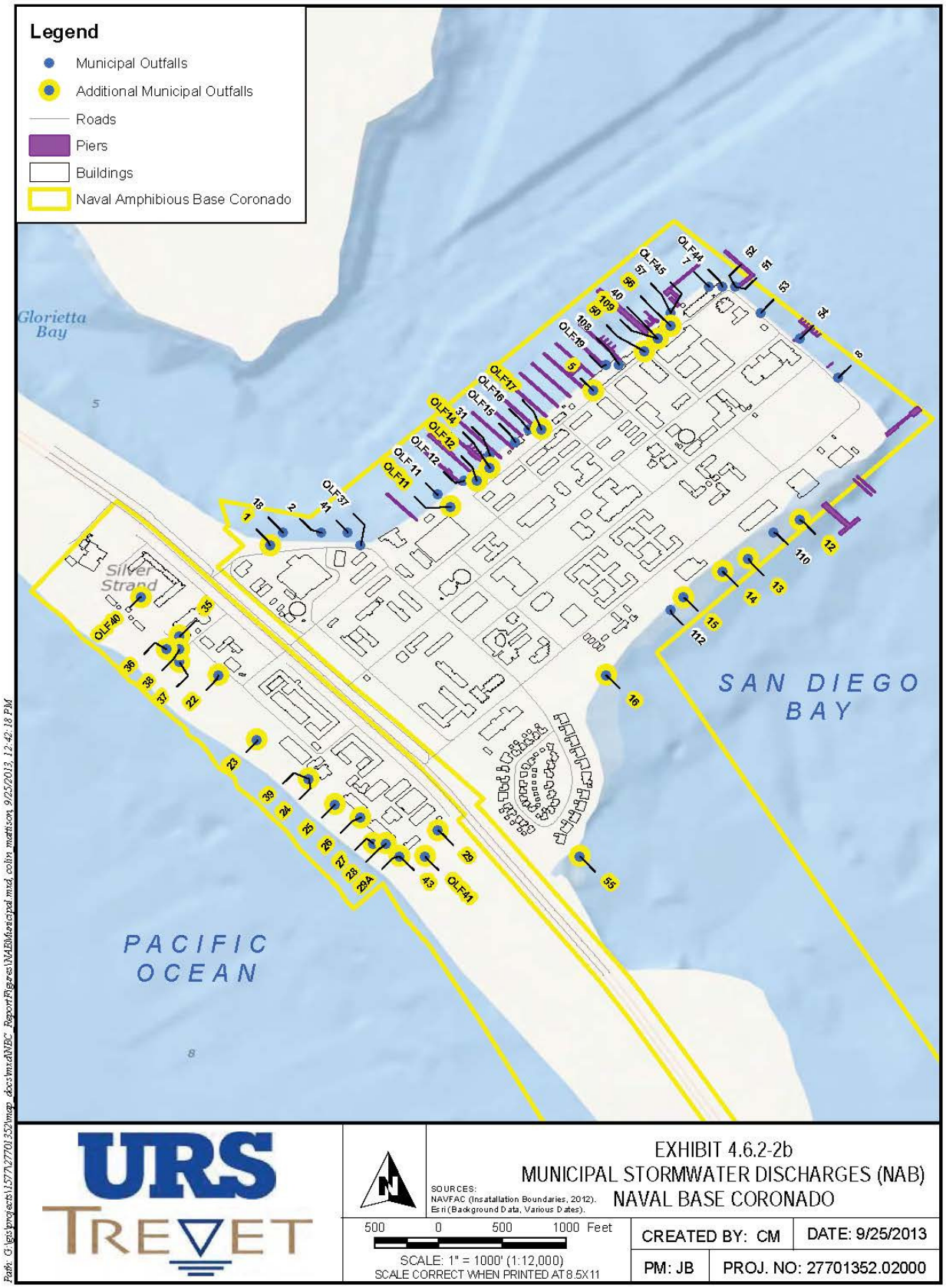


Figure B-~~14~~15. NBC Small Military Base MS4 Discharge Locations at NOLF

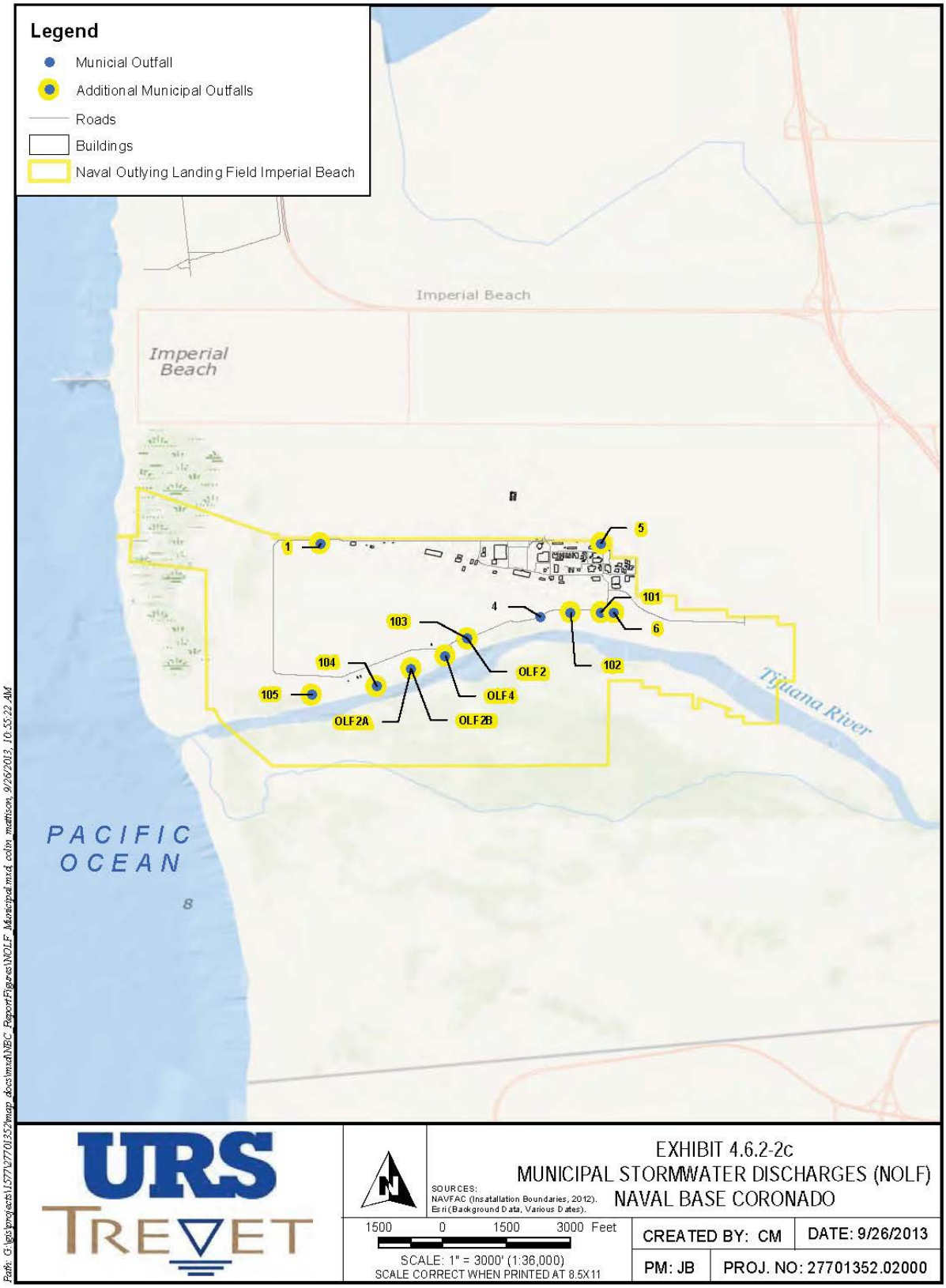


Figure B-~~15~~16. NBC Small Military Base MS4 Discharge Locations at SSTC

ATTACHMENT C – FLOW SCHEMATIC

Figure C-1. Steam Condensate Discharges

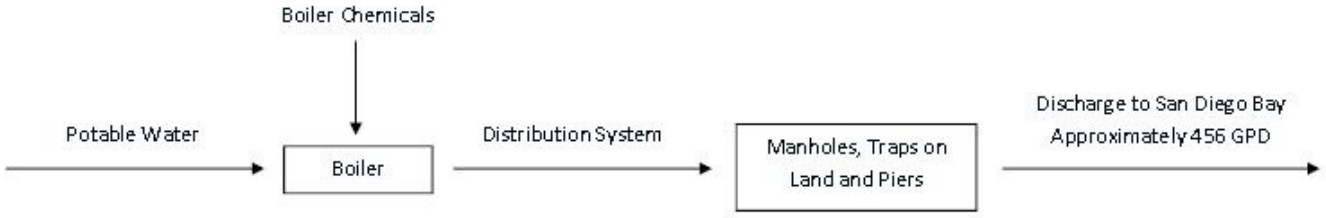


Figure C-2. Diesel Engine Cooling Water Discharges

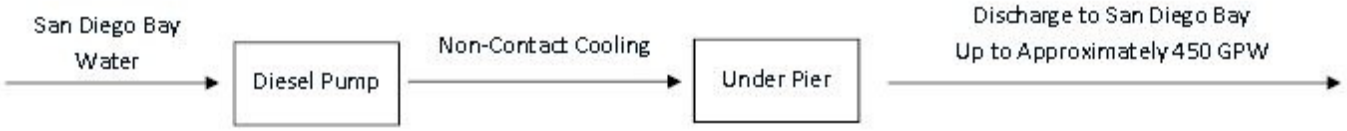


Figure C-3. Utility Vault and Manhole Dewatering Discharges

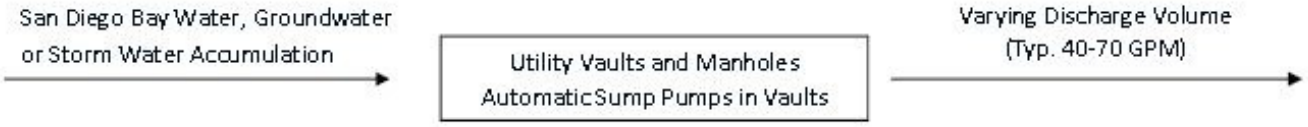
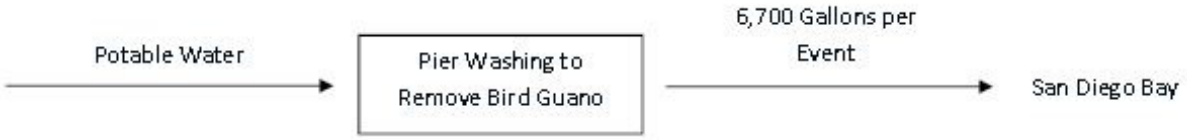


Figure C-4. Pier Washing Discharges



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 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 section122.41(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 San Diego Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR section 122.41(i); CWC, 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)); and

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

c. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 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 a notice, if possible at least 10 days before the date of the bypass. (40 CFR section 122.41(m)(3)(i).)

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

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 this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR 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 results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR section 122.41(j)(4); section 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 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)); and

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)); and

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

B. Signatory and Certification Requirements

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

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

3. All reports required by this Order and other information requested by the San Diego Water Board, State Water Board, or USEPA shall be signed by a person described in

Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

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

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).)

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 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 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 Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board. (40 CFR 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 that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 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)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 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 or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 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. (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 USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

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)); or

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 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 Naval Base Coronado (Discharger or NBC) to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified 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, characterize wastewater flows, 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:

- Management Information Need – Why does the San Diego Water Board need to know the answer?
- Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?
- Expected Product – How should the answer be expressed and reported?
- 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 pursuant to section VI 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 United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* as amended, unless other test procedures are specified in this Order and/or in this MRP. Alternative test procedures not specified in this Order are subject to San Diego Water Board and USEPA approval.

C. The monitoring reports, signed and certified as required by Attachment D, Standard Provisions V.B, of this Order, shall be submitted electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program website in accordance with section VIII.B.1 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 the San Diego Water Board or by the USEPA at any time.

E. All analyses shall be performed in a laboratory certified to perform such analyses by the State Water Board's 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. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger should have a success rate equal to or greater than 80 percent.

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 or the USEPA to enable the Discharger to participate in comprehensive regional monitoring activities.

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
SC-001	SC-001	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 22" N; 117° 11' 23" W
SC-002	SC-002	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 22" N; 117° 11' 22" W
SC-003	SC-003	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 23" N; 117° 11' 22" W
SC-004	SC-004	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 21" N; 117° 11' 20" W
SC-005	SC-005	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 21" N; 117° 11' 18" W
SC-006	SC-006	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 20" N; 117° 11' 16" W
SC-007	SC-007	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 20" N; 117° 11' 15" W
SC-008	SC-008	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 19" N; 117° 11' 13" W
SC-009	SC-009	A location where a representative sample of the Steam Condensate can be obtained: 32° 42' 29" N; 117° 11' 23" W
SC-010	SC-010	A location where a representative sample of the Steam Condensate can be obtained: 32° 41' 46" N; 117° 11' 59" W
CW-001	CW-001	A location where a representative sample of Diesel Engine Cooling Water can be obtained: 32° 41' 43" N; 117° 13' 36" W
UV-001	UV-001	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32' 42° 8" N; 117' 10° 57" W
UV-002	UV-002	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 17" N; 117° 11' 11" W
UV-003	UV-003	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32' 42° 20" N; 117' 11° 27" W
UV-004	UV-004	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 37" N; 117° 11' 24" W
UV-005	UV-005	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 36" N; 117° 11' 22" W
UV-006	UV-006	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32' 42° 45" N; 117, 11° 25" W
UV-007	UV-007	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 42" N; 117° 12' 12" W
UV-008	UV-008	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 26" N; 117° 11' 39" W
UV-009	UV-009	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 15" N; 117° 11' 57" W

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
UV-010	UV-010	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 42' 2" N; 117° 11' 25" W
UV-011	UV-011	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 40' 31" N; 117° 9' 38" W
UV-012	UV-012	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 40' 23" N; 117° 10' 1" W
UV-013	UV-013	A location where a representative sample of Utility Vault and Manhole Dewatering can be obtained: 32° 35' 57" N; 117° 7' 25" W
PW-001	PW-001	A location where a representative sample of Pier Washing Water can be obtained: 32º 41' 43" N; 117º 13' 36" W
--	Industrial Storm Water See Attachment M	The Discharger shall identify storm water monitoring locations at a point prior to or at the point of discharge for all "Industrial High Risk Areas" and "Industrial Low Risk Areas), as identified in Attachment M of this Order. The Discharger shall establish monitoring locations as described in section II.B of the MRP.
--	Municipal Storm Water See Attachment M	The Discharger shall identify storm water monitoring locations at a point prior to or at the point of discharge for Small Military Base MS4 Areas, as identified in Attachment M of this Order. The Discharger shall establish monitoring locations sufficient to meet the requirements described in section VII.B of the MRP. The number and location of monitoring locations shall be sufficient to characterize storm water runoff to the MS4 throughout the Facility.

B. Industrial Storm Water Monitoring Location Report

1. The Discharger shall prepare and submit, no later than May 1, 2016, an Industrial Storm Water Monitoring Location Plan to identify representative monitoring locations for industrial storm water discharges from Industrial High Risk Areas, and Industrial Low Risk Areas. The Plan shall contain the following information:

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

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

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

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

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

III. CORE MONITORING REQUIREMENTS

A. Influent Monitoring Requirements – Not Applicable

B. Steam Condensate Monitoring Locations SC-001 through SC-010

The Discharger shall monitor steam condensate discharges at a minimum of three representative monitoring locations from Monitoring Locations SC-001 through SC-010 as specified below to answer the following primary questions:

1. Does the effluent meet permit effluent limitations based on water quality standards for the receiving water?

2. What is the mass discharged annually of each constituent monitored?

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

The three representative monitoring locations shall be chosen at random and may be different each year depending upon which steam systems are active.

Table E-2. Effluent Monitoring for Steam Condensate

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Grab or Estimate	Quarterly	Estimate
Oil and Grease	mg/L	Grab	Quarterly	[1]
Turbidity	NTU	Grab	Quarterly	[1]
Settleable Solids	ml/L	Grab	Quarterly	[1]
Chronic Toxicity	Pass/Fail	Grab	Annually	[1,2]
pH	standard units	Grab	Quarterly	[1]
Priority Pollutants				
Antimony, Total Recoverable	µg/L	Grab	Quarterly	[1]
Arsenic, Total Recoverable	µg/L	Grab	Quarterly	[1]
Copper, Total Recoverable	µg/L	Grab	Quarterly	[1]
Lead, Total Recoverable	µg/L	Grab	Quarterly	[1]
Nickel, Total Recoverable	µg/L	Grab	Quarterly	[1]
Selenium, Total Recoverable	µg/L	Grab	Quarterly	[1]
Zinc, Total Recoverable	µg/L	Grab	Quarterly	[1]
2,3,7,8-TCDD[3]	µg/L	Grab	Quarterly	[1]
TCDD Equivalents[4]	µg/L	Grab	Quarterly	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Quarterly	[1]
Aldrin	µg/L	Grab	Quarterly	[1]
4,4'-DDT	µg/L	Grab	Quarterly	[1]
4,4'-DDE	µg/L	Grab	Quarterly	[1]
4,4'-DDD	µg/L	Grab	Quarterly	[1]
Heptachlor	µg/L	Grab	Quarterly	[1]
Heptachlor Epoxide	µg/L	Grab	Quarterly	[1]
Remaining CTR Priority Pollutants	µg/L	Grab	Annual	[1]

[1] As specified in 40 CFR part 136.
[2] As described in section IV.B of this MRP.
[3] Applicable to discharges to San Diego Bay, SC-001 to SC-009 only.
[4] Applicable to discharges to the Pacific Ocean, SC-010 only.

C. Diesel Engine Cooling Water Location CW-001

The Discharger shall monitor diesel engine cooling water discharges at Monitoring Location CW-001 as specified below to answer the following primary questions:

1. Does the effluent meet permit effluent limitations based on water quality standards for the receiving water?

2. What is the mass discharged annually of each constituent monitored?

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

Table E-3. Effluent Monitoring for Diesel Engine Cooling Water

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Grab or Estimate	Quarterly	Estimate
Oil and Grease	mg/L	Grab	Quarterly	[1]
Turbidity	NTU	Grab	Quarterly	[1]
pH	standard units	Grab	Quarterly	[1]
Temperature	^{0}F	Grab	Quarterly	[1]
Settleable Solids	ml/L	Grab	Quarterly	[1]
Chronic Toxicity	Pass/Fail	Grab	Annually	[1,2]
Priority Pollutants				
Arsenic, Total Recoverable	µg/L	Grab	Quarterly	[1]
Chromium VI, Total Recoverable	µg/L	Grab	Quarterly	[1]
Copper, Total Recoverable	µg/L	Grab	Quarterly	[1]
Lead, Total Recoverable	µg/L	Grab	Quarterly	[1]
Nickel, Total Recoverable	µg/L	Grab	Quarterly	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Selenium, Total Recoverable	µg/L	Grab	Quarterly	[1]
Zinc, Total Recoverable	µg/L	Grab	Quarterly	[1]
4,4-DDT	µg/L	Grab	Quarterly	[1]
4,4-DDE	µg/L	Grab	Quarterly	[1]
4,4-DDD	µg/L	Grab	Quarterly	[1]
Remaining CTR Priority Pollutants	µg/L	Grab	Annually	[1]

[1] As specified in 40 CFR part 136.
[2] As described in section IV.B of this MRP.

D. Pier Washing Monitoring Location PW-001

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

1. How much pier washing occurs?

E. Utility Vault and Manhole Monitoring Locations UV-001 through UV-013

1. The Discharger shall monitor utility vault and manhole dewatering discharges at Monitoring Locations UV-001 through UV-013 at a minimum of three representative monitoring locations, including at least one electrical vault discharge and one manhole discharge as shown in Table E-4 below to address the following primary questions:

a. Does the effluent comply with Numeric Action Levels in Attachment H?

b. What is the mass discharged annually of each constituent monitored?

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

The electrical vault representative shall be chosen from Monitoring Location Nos. UV-001 through UV-013 and shall change each year. The manhole discharge and steam vault discharge monitoring location shall be chosen at random and may be different each year.

Table E-4. Effluent Monitoring Utility Vault and Manhole Dewatering for Discharges

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Grab or Estimate	Annually	Estimate
Oil and Grease	mg/L	Grab	Annually	[3]
pH	standard units	Grab	Annually	[1]
Total Suspended Solids	mg/L	Grab	Annually	[1]
Total Petroleum Hydrocarbons—Gasoline Range Organics[2]	mg/L	Grab	Annually	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Petroleum Hydrocarbons—Diesel Range Organics[3]	mg/L	Grab	Annually	[1]

[1] As specified in 40 CFR part 136.
[2] TPH Gasoline (TPH-g) – Report Benzene, Ethylbenzene, Toluene, and Xylene.
[3] TPH Diesel (TPH-d).

2. Annually in accordance with Table E-8, the Discharger shall submit a log of the utility vault and manhole dewatering discharges. For vaults with automatic sump pumps, the log shall include the total volume of each discharge point for each calendar quarter. For vaults or manholes that are dewatered manually, the log shall describe the estimated annual volume, flow rate, location of the discharge, date, and receiving water body. This Order does not require the Discharger to enter utility vaults if there is a human health/safety concern. If the Discharger cannot comply with these requirements due to human health/safety concerns, the Discharger shall submit a description of the circumstances for omitting required information. The log is designed to address the following primary questions:

a. How often does the discharge occur?

b. Is the discharge a major source of pollutants?

3. Annually in accordance with Table E-8, the Discharger shall submit an Annual Utility Vault Report containing, at a minimum, the following information:

a. An executive summary that includes a discussion of utility vault compliance and/or violation(s) of this Order including utility vault NAL exceedances.

b. The results of the annual Utility Vault Plan evaluation and any revisions to the Utility Vault Plan in accordance with section III.E.2 and 3 of Attachment H.

c. A summary of monitoring data generated with comparison to NALs.

d. A summary of relevant field observations.

e. A map showing the location of each monitored (i.e., annual sampling) discharge location.

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 toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent.

Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

(1) Does the effluent meet permit effluent limitations for toxicity based on water quality standards for the receiving water?

If not:

a. Are unmeasured pollutants causing risk to aquatic life?
b. Are pollutants in combination causing risk to aquatic life?

(2) Does the storm water runoff meet receiving water limitations for toxicity in the receiving water?

(3) Are conditions in receiving water getting better or worse with regard to toxicity?

(4) What is the relative storm water runoff contribution to the receiving water toxicity?

(5) What are the causes of the toxicity and the sources of the constituents responsible?

A. Acute Toxicity

1. Monitoring Frequency for Industrial High Risk Storm Water Discharges

The Discharger shall conduct acute toxicity monitoring at the frequencies specified in Table E-7 and section VII.A.4. of this MRP. For storm water sampling, sampling shall occur during storm events or if storm water is collected, prior to the release of storm water to the receiving water.

2. Marine and Estuarine Species and Test Methods

The Discharger shall conduct a species sensitivity screening for acute toxicity on a representative sample which shall include one vertebrate and one invertebrate during the first required monitoring period. The species sensitivity screening samples shall also be analyzed for the parameters required for the discharge. The test species that exhibits the highest percent effect at the 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. Routine toxicity test design shall, at a minimum, include a single-concentration analysis of the IWC compared to a control.

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

The total sample volume shall be determined by the specific toxicity test method 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 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. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

3. Compliance Determination

The acute toxicity Maximum Daily Effluent Limitation (MDEL) is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in a “fail” in accordance with the Test of Significant Toxicity (TST) approach and the percent effect is greater than or equal to ~~0.40~~40%.

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

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

Pass

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

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

Fail

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

Percent Effect

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

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

4. Acute Toxicity MDEL Exceedance Follow-up Action

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

5. Evaluation of Additional Toxicity Tests for Industrial Storm Water from High Risk Areas

If the additional test result for industrial storm water from high risk areas results in a "pass", the Discharger may return to routine monitoring for the following monitoring period. If the verification test results in a "fail" at a percent effect greater than or equal to 0.20, the Discharger shall implement an approved Toxicity Reduction Evaluation (TRE) Work Plan as set forth below in section IV.E 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.

B. Chronic Toxicity

1. Monitoring Frequency for Chronic Toxicity

The Discharger shall conduct chronic toxicity monitoring at the frequencies specified in Table E-2 and E-3.

2. Marine and Estuarine Species and Test Methods

The Discharger shall conduct a species sensitivity screening for chronic toxicity on a representative sample which shall include one vertebrate, one invertebrate, and one aquatic plant during the first required monitoring period. The species sensitivity screening samples shall also be analyzed for the parameters required for the discharge. The test species that exhibits the highest percent effect at the IWC during a species sensitivity screening (i.e. the most sensitive species) shall be utilized for routine monitoring during the permit cycle. If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. If only one species fails, then that species shall be used for routine monitoring during the permit cycle. If two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used 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 USEPA method manuals referenced therein include *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition* (EPA-821-R-02-013), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition* (EPA-821-R-02-014). Additional methods for chronic toxicity monitoring are outlined in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition* (EPA-600-R-95-136).

For discharges to marine and estuarine waters, the Discharger shall conduct a static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01); a static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and a static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0 or Embryo-Larval Development Test Method).

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 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. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

3. Compliance Determination

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a toxicity test during monitoring results in a "fail" in accordance with the TST approach and the percent effect relative to a control is greater than or equal to ~~0.~~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 chronic toxicity test at the IWC of 100 percent effluent shall be determined using the TST approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010).

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

Pass

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

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

Fail

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

Percent Effect

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

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

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (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 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 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.

4. Chronic Toxicity MDEL Exceedance Follow-up Action

A chronic toxicity test result during routine monitoring indicating a "fail" with a percent effect at or above ~~0.~~50% is an exceedance of the chronic toxicity MDEL. The Discharger shall implement corrective action to abate the source of the toxicity within 24 hours from the time the Discharger becomes aware of an MDEL exceedance, if the source of toxicity is known (e.g. operational upset). The Discharger shall also conduct an additional toxicity test within the same calendar month that the exceedance occurred or, in the event laboratory monitoring results are not received during the same month when the sampling was performed, the next discharge event after receiving results of an exceedance.

5. Evaluation of Additional Toxicity Tests for Industrial Process Wastewater (Steam Condensate and Diesel Engine Cooling Water)

If the additional test result for industrial process wastewater results in a "pass", the Discharger may return to routine monitoring for the following monitoring period. If the verification test results in a "fail" at a percent effect greater than or equal to ~~0.~~25%, the Discharger shall implement an accelerated monitoring schedule for chronic toxicity as set forth below in section IV.D of this MRP.

6. Evaluation of Additional Toxicity Tests for High Risk Industrial Storm Water

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

C. Quality Assurance

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

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

   b. The IWC for applicable discharges is 100 percent effluent.

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

d. Effluent dilution water and control water should be prepared and used as specified in the test methods manual *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002); or, for *Atherinops affinis*, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used.

e. 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.).

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

D. Accelerated Chronic Toxicity Testing Monitoring Schedule

The Discharger shall implement an accelerated chronic toxicity monitoring schedule, as required by section IV.B.5 of this MRP for industrial process wastewater discharges, consisting of four, five-concentration chronic toxicity tests, conducted at approximately two-week intervals, over an eight-week period. All toxicity tests conducted during an accelerated monitoring schedule shall, at a minimum, include the IWC and four additional concentrations. The additional effluent concentrations should provide useful information regarding the intensity and persistence of the toxic effect(s). If all of the additional tests result in a "pass" or "fail" with less than ~~0.~~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 ~~0.~~25%, the Discharger shall implement an approved TRE Work Plan as set forth below in section IV.E 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

E. Toxicity Reduction Evaluation (TRE)

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

   a. A TRE work plan is required for an industrial process wastewater discharge which had a chronic toxicity test result during accelerated monitoring that resulted in a "fail" and exhibited a percent effect greater than or equal to ~~0.~~25%; or

   b. A TRE work plan is required for a high risk industrial storm water discharge which had an additional acute toxicity test conducted following an MDEL exceedance that results in a "fail" and exhibits a percent effect greater than or equal to ~~0.~~20%; or

c. A TRE work plan is required for a high risk industrial storm water discharge which had a chronic toxicity test and a concurrent receiving water sample test both result in a "fail" and exhibit a percent effect greater than or equal to ~~0.~~25%.

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

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

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

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

   d. A schedule for completion of all activities, the expected duration of the toxicity noncompliance, and submission of a final report.

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

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

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

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

a. Criteria for initiating a TIE on a sample;

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

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

d. Data evaluation and communication;

e. Follow-up actions; and

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

F. 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.

G. Reporting of 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 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 AND SEDIMENT MONITORING REQUIREMENTS

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. The overall receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards listed in section V of this Order, Receiving Water Limitations?

(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?

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-based and satellite-based systems, and any compromises in accuracy shall be justified.

A. 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.

B. 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.

C. 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 quality assurance/quality control (QA/QC) protocols for the water and sediment monitoring.

2. **Sampling and Analysis Plan.** A Sampling and Analysis Plan based on methods or metrics described in 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* and the State Water Board's *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan). The Sampling and Analysis Plan shall include a list of chemical analytes for the water column and sediment as well as the monitoring frequency and sample station locations.

3. **Receiving Water Monitoring**

Pollutants and Frequency: The Sampling and Analysis Plan shall propose the pollutants to be monitored, and the frequency and timing for water column sampling to be performed in San Diego Bay. At a minimum, monitoring shall include the pollutants and frequency in Table E-5 below. The proposed sampling shall be based upon results on the fate and transport of pollutants from the conceptual model (see V.C.5 below).

Table E-5. Minimum Receiving Water Column Monitoring Requirements

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

[1] As specified in 40 CFR part 136.

[2] Effluent samples shall be analyzed for copper according to method 1638 or 1640. The commonly used methods 6010B (Inorganics by ICP-Atomic Emission Spectroscopy) and 200.7 (Trace Elements-ICP) have been found to give inaccurate copper readings in saline-matrix samples due to interference with the sodium-argon complex, which has a molecular weight similar to copper. Method 1638 (ICP/MS) or 1640 (On-Line Chelation) will eliminate the sodium-argon complex before the sample is tested for copper. No inaccurate readings for other metals in a saline-matrix sample is analyzed by methods 6010B or 200.7 are known.

[3] The Discharger shall monitor receiving water chronic toxicity twice per year concurrently with chronic toxicity monitoring at one location for end-of-pipe high risk industrial storm water discharge monitoring required in Table E-7 of this MRP during one storm event per semiannual period. The receiving water chronic toxicity sample shall be collected in the receiving water adjacent to the storm drain outfall sampled in Table E-7 during the storm event. The data for this chronic toxicity sampling shall be reported annually in the Annual Storm Water Report.

4. **Sediment Monitoring**

a. **Frequency**. Sediment chemistry, toxicity and benthic community monitoring shall be done at least 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.C.5 through V.C.9 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 set forth in the State Water Board's 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 State Water Board's Sediment Quality Plan and listed in Attachment K of this Order.

ii. Sediment Toxicity. Short term survival tests and sublethal tests shall be performed as specified in section V.F of the State Board's 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 State Water Board's Sediment Quality Plan.

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; and

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 the Water Column Monitoring Report and the Sediment Monitoring Report described section V.E. ~~and V.F~~ of this MRP.

D. 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 within 90 days of submission. 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.

E. Water Column and Sediment Monitoring Reports. The Discharger or water body monitoring coalition shall submit a Sediment Monitoring Report twice during the term of the permit by February 1 of the year after the sampling occurs. The Water Column and Sediment Monitoring Report shall contain the following information:

1. **Monitoring Results**. The results of the monitoring in tabular and graphical form.
2. **Data Analysis, Interpretations, and Conclusions**. An analysis of the data to evaluate trends and interpretations and conclusions on the data.
3. **Sediment 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 State Water Board 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 State Water Board Sediment Quality Plan.
4. **Receiving Water Limitation Determination.** A determination shall be made for each station of attainment of the applicable Receiving Water Limitations.
5. **Sample Location Map.** The locations, type, and number of samples shall be identified and shown on a site map(s).
6. **Laboratory Reports.** The reports from laboratories with the original analysis results including any QA/QC information.

VI. REGIONAL MONITORING REQUIREMENTS

Regional receiving water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the receiving water 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:

(1) Determine the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses, e.g.,

i. Are fish and shellfish safe to eat?

ii. Is water quality safe for swimming?

iii. Are ecosystems healthy?

(2) Identify the primary stressors causing or contributing to conditions of concern;

(3) Identify the major sources of the stressors causing or contributing to conditions of concern; and

(4) Evaluate the effectiveness (i.e., environmental outcomes) of 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*; and

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

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

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

b. Does the runoff comply with the Numeric Action Levels (NALs) in Attachment G?

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

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

2. Non-Storm Water Discharge Visual Observations and Assessment

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

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

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

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

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

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

3. Industrial Storm Water Discharge and Other Visual Observations

a. Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of storm water associated with industrial activity.

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

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

[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.

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

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

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

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

4. Industrial Storm Water Sampling and Analysis

a. A 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” and “Industrial Low Risk” areas, as designated under section IV.B.1 of this Order, shall be sampled as specified in Tables E-6 and E-7.

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

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

i. The start of the discharge, or

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

e. Composite samples shall be flow-weighted storm water samples for the duration of the storm. If composite samples are collected, all parameters identified in Tables E-6 and E-7 with a sample type of grab or composite must be analyzed using composite samples.

f. In the event that the first QSE in a semi-annual period does not produce a discharge that can be sampled at one or more sampling locations, the Discharger shall record which sampling locations were observed that did not discharge, and collect samples from those

locations during the next QSE(s) that produces a discharge in that semi-annual period. If the Discharger fails to collect a sample at one or more sampling locations that did produce a discharge, the Discharger is required to fulfill the sampling requirement from an additional QSE that produces a discharge. For each discharge location, the maximum number of storm water samples required per reporting year is four.

g. Section IX.A.3 of the MRP of Order No. R9-2009-0081 is incorporated by reference as if set forth herein. The Discharger shall continue monitoring in accordance with section IX.A.3 of the MRP of Order No. R9-2009-0081 until June 30, 2016, with the annual report due September 1, 2016, as required by Table E-8 of this MRP.

h. Beginning July 1, 2016, the industrial storm water discharges shall be sampled and analyzed in accordance with Table E-6 and Table E-7 below.

Table E-6. Monitoring Requirements for Industrial Storm Water Discharges from "Industrial Low Risk" Areas

Parameter	Unit	Sample Type	Minimum Frequency[5]	Required Analytical Test Method
Discharge Volume	gallons	Estimate[1]	Two storms per semi-annual period	Estimate
Conventional Pollutants				
Oil and Grease	mg/L	Grab	Two storms per semi-annual period	[2]
pH	pH Units	Grab	Two storms per semi-annual period	[4]
Total Suspended Solids	mg/L	Grab	Two storms per semi-annual period	[2]
Priority Pollutants				
Copper, Total Recoverable[6]	mg/L	Grab or Composite	Two storms per semi-annual period	[2]
Zinc, Total Recoverable[6]	mg/L	Grab or Composite	Two storms per semi-annual period	[2]
Non-Conventional Pollutants				
Other Pollutants[3]	µg/L	Grab or Composite	Two storms per semi-annual period	[2]

[1] The volume of storm water discharge can be estimated by multiplying: amount of rainfall in feet × square feet of surface area × impervious factor. There are 7.5 gallons per cubic foot.

[2] As specified in 40 CFR section 136.3.

[3] Pollutants that are likely to be present in storm water discharges in significant quantities shall be sampled. The pollutants shall be selected based upon the pollutant source assessment required in section VII of the SWPPP requirements contained in Attachment G, visual observations, and inspection records. If these pollutants are not detected in significant quantities after two consecutive sampling events, the Discharger may eliminate the pollutant from future analysis until the pollutant is likely to be present again. The Discharger shall select appropriate analytical test methods that indicate the presence of pollutants in storm water discharges in significant quantities.

[4] Field test with pre- and post-calibrated portable instrument, or lab sample in accordance with 40 CFR part 136.

[5] Sampling shall occur during qualifying storm events each semiannual calendar period (January – June, July – December) prior to release to receiving water. If there are no qualifying storm events during the semiannual period, then sampling shall occur as soon as possible.

[6] After four consecutive sample events where parameters are not detected or below the Annual NAL values, analysis for those parameters may be discontinued at any affected outfall.

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

Parameter	Unit	Sample Type	Minimum Frequency[7]	Required Analytical Test Method
Discharge Volume	gallons	Estimate[1]	Two storms per semiannual period.	Estimate
Conventional Pollutants				
Chemical Oxygen Demand	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Oil and Grease	mg/L	Grab	Two storms per semiannual period.	[2]
pH	pH Units	Grab	Two storms per semiannual period.	[5]
Total Suspended Solids	mg/L	Grab	Two storms per semiannual period.	[2]
Priority Pollutants				
Arsenic, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Cadmium, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Copper, Total Recoverable	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Mercury, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Nickel, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Selenium, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Silver, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Zinc, Total Recoverable	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Lead, Total Recoverable[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Non-Conventional Pollutants				
Aluminum, Total Recoverable[8]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Iron, Total Recoverable[8]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Magnesium, Total Recoverable[8]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]
Nitrate+Nitrite Nitrogen[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Phosphorus, Total[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Ammonia[8]	mg/L	Grab or Composite	Two storms per semiannual period.	[2]
Acute Toxicity[3]	Pass or Fail	Grab or Composite	Two storms per semiannual period.	[3]

Parameter	Unit	Sample Type	Minimum Frequency[7]	Required Analytical Test Method
Chronic Toxicity[3,6]	Pass or Fail	Grab or Composite	Two storms per semiannual period.	[3]
Other Pollutants[4]	µg/L	Grab or Composite	Two storms per semiannual period.	[2]

[1] The volume of storm water discharge can be estimated by multiplying: amount of rainfall in feet × square feet of surface area × impervious factor. There are 7.5 gallons per cubic foot.

[2] As specified in 40 CFR section 136.3.

[3] The presence of acute or 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 eliminate the pollutant from future analysis until the pollutant is likely to be present again. The Discharger shall select appropriate analytical test methods that indicate the presence of pollutants in storm water discharges in significant quantities.

[5] Field test with pre- and post-calibrated portable instrument, or lab sample in accordance with 40 CFR part 136.

[6] Chronic toxicity will be sampled at one representative high risk industrial storm water discharge location.

[7] Sampling shall occur during qualifying storm events, or if collected, prior to release to receiving water. If there are no qualifying storm events during the year, then sampling shall occur as soon as possible. If there are no qualifying storm events during the fifth year and conditions for administrative extension are met, then sampling shall occur as soon as possible.

[8] After four consecutive sample events where parameters are not detected or below the Annual NAL values, analysis for those parameters may be discontinued at any affected outfall.

g. Sampling Frequency Reduction Certification

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

a) Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs; and

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

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

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

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

5) A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the San Diego Water Board that: (1) the Sampling

Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the San Diego Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted by the Discharger.

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

5. Visual Observation and Sample Collection Exceptions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

b. Specific monitoring procedures for pollutants identified by the Discharger, with the goal of evaluating SWMP implementation throughout the Facility. Dry weather monitoring also has the goal of identifying and eliminating unauthorized non-storm water discharges.

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

d. A schedule for monitoring. Pollutant monitoring shall be performed a minimum of twice per year at the representative monitoring locations for storm water, and twice per year for dry-weather discharges, beginning 24 months after the effective date of this Order. Dry weather stations only need to be sampled if there is unauthorized non-storm water flowing at the time of sampling.

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

3. The Discharger shall implement the Small Military Base MS4 Monitoring Plan no later than 28 months after the effective date of this Order unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any conditions set by the San Diego Water Board including modification of proposed monitoring locations and constituents.

4. Monitoring results shall be submitted annually with the Storm Water Annual Report.

C. Storm Water Annual Report for Industrial High Risk Areas, Industrial Low Risk Areas, and Small Military Base MS4 Areas

The Discharger shall submit an Industrial Storm Water Annual Report by September 1 of each year to the San Diego Water Board. The report shall include the following:

1. Identification of any changes to “Industrial High Risk”, “Industrial Low Risk”, “Industrial No-Exposure”, and “Small Military Base MS4 Areas” at the Facility, as defined in section IV.B.1 of this Order;

2. A summary of visual observations and sampling and analysis results;

3. An evaluation of the visual observation and sampling and analysis results;

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

5. Laboratory reports; and

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

D. Spill and Illicit Discharge Log (within all industrial storm water risk areas)

This requirement for a Spill and Illicit Discharge log is designed to answer the following primary monitoring questions:

1. Are there more frequent and/or bigger spills at this Facility than at other similar facilities?

2. Are spills and illicit discharges properly addressed and are measures being taken or planned to reduce, eliminate, and prevent recurrence of them in the future?

The Discharger shall log and report all spills of significant quantities to surface waters and all illicit discharges of any quantity within the Facility including spills and illicit discharges from vessels that are at the Facility for service. The spill / illicit discharge reports shall identify the following:

a. The time and date of the spill or illicit discharge;
b. The cause of the spill or illicit discharge;
c. The materials or wastes involved in the spill or illicit discharge;
d. The estimated volume of the spill or illicit discharges;
e. The specific location where the spill or illicit discharge originated including storm water risk level;
f. The fate of the spill or illicit discharge (e.g., San Diego Bay, etc.);
g. The physical extent or size of the area(s) affected by the spill;
h. Whether the spill or illicit discharge contained pollutants;
i. The public agencies notified;
j. The corrective actions taken or planned; and
k. 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-8 of this MRP.

The Discharger shall include in its Annual Report a summary of the spills and illicit discharges that occurred in or on the Facility during the annual reporting period. The spill/illicit discharge summary report shall indicate the total number of spills and illicit discharges for the year, categorize the spills and illicit discharges, and provide the percentages of each type of spill or illicit discharge in a graphical representation. The summary report shall also indicate the efforts the Discharger used in during the annual reporting period to prevent or minimize spills.

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. The Discharger shall report all instances of noncompliance not reported under Attachment D, sections V.E, V.G, and V.H, of this Order at the time monitoring reports are submitted.

3. 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 in accordance with Table E-8.

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 quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with quarterly SMR
Daily	Permit effective date	(Midnight through 11:59PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	Submit with quarterly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	Submit with quarterly SMR

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
Annually	Permit effective date	July 1 through June 30	September 1
First Annual Storm Report	July 1, 2015 for Order R9-2009-0081 storm water sampling and the permit effective date for section VII.A.4.g of this MRP	July 1 through June 30	September 1, 2016
Annual Storm Water Report (section VII.C of this MRP)	July 1, 2016	July 1 through June 30	September 1

C. Reporting Protocols

1. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

2. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the Reporting Level (RL), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

3. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

4. Multiple Sample Data. When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

5. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

D. Discharge Monitoring Reports (DMRs)

1. The Discharger shall electronically submit DMRs 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 DMR submittal in the event there will be a planned service interruption for electronic submittal.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D).

E. Other Reports

1. **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-9. Reporting Requirements for Special Provisions Progress Reports

Report Name	Section No.	Report Due Date
Industrial Storm Water Monitoring Location Report	MRP section II.B.1	April 1, 2016
Toxicity Reduction Evaluation (TRE) Work Plan	MRP section IV.E.1	Within 30 days of a requirement to complete a TRE Work Plan
Water and Sediment Monitoring Plan	MRP section V.C	Within 12 months of the effective date of this Order
Annual Storm Water Risk Level Designation Report	Order section IV.B.2	Annually by September 1st
Revised Storm Water Pollution Prevention Plan	Order section IV.E.2.c	Within 1 year of the effective date of this Order
Small Military Base Municipal Separate Storm Sewer System (MS4) – Storm Water Management Program (SWMP)	Order section IV.D.2	Within 18 months of the effective date of this Order
Small Military Base MS4 Storm Water Monitoring Plan	MRP section VII.B.2	Within 24 months of the effective date of this Order
Future Development of Chronic Toxicity Effluent Limitations for Industrial High Risk Storm Water Areas	Order section VI.C.2.a	At Discharger's discretion
Revised Utility Vault Plan	Order section VI.C.3.a	Within 1 year of the effective date of this Order
BMP Plan for Industrial Process Wastewater Discharges	Order section VI.C.3.b	Within 1 year of the effective date of this Order
Pollution Prevention Plan (PPP) Work Plan and Time Schedule	Order section VI.C.3.c	Within 90 days of the effective date of this Order
PPP	Order section VI.C.3.c	Within 9 months of the effective date of this Order

ATTACHMENT F – FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this Fact Sheet as findings of the San Diego Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

A. The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	9 000000495
Discharger	United States Department of the Navy
Name of Facility	Naval Base Coronado (NBC)
Facility Address	937 N. Harbor Drive
	San Diego, CA 92132-0058
	San Diego County
Facility Contact, Title and Phone	Mr. Jason Golumbfskie~~Luis Perez~~, Installation Environmental Program Director for NBC, (619) 545-3429
Authorized Person to Sign and Submit Reports	Mr. Jason Golumbfskie~~Luis Perez~~, Installation Environmental Program Director for NBC, (619) 545-3429
Mailing Address	Same as Facility Address
Billing Address	Same as Facility Address
Type of Facility	Naval Base
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	Not Applicable
Facility Design Flow	Not Applicable
Watershed	Pacific Ocean, San Diego Bay, ~~and~~ Tijuana River Estuary (Hydrologic Areas 10.10 and 11.11), San Luis Rey River (Warner Hydrologic Subarea 3.31), Tijuana River (Canyon City Hydrologic Subarea 11.82), and Morena Reservoir (Hydrologic Area 11.50)
Receiving Water	Pacific Ocean ~~(storm water only)~~, San Diego Bay, ~~and~~ Tijuana River Estuary, tributary to San Luis Rey River, waters in the Canyon City Hydrologic Subarea 11.82, and Morena Reservoir
Receiving Water Type	Ocean, Enclosed Bay, Estuary, Inland Surface Water

B. The United States (U.S.) Department of the Navy (Navy or Discharger) is the owner and operator of Naval Base Coronado (Facility or NBC), a U.S. Naval Base. The Facility is comprised of eight installations which are described in section II and are hereinafter jointly referred to as the "Facility".

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

C. The Discharger was previously regulated by Order No. R9-2009-0081 as modified by Order No. R9-2010-0057, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109185, for wastewater discharges from multiple discharge points within the Facility to the Pacific Ocean, San Diego Bay, and the Tijuana River Estuary, a Water of the U.S. The regulated discharges included wastewater from the following sources/activities:

- Boat rinsing discharges;
- Diesel engine cooling water;
- Discharges associated with the housing of marine mammals within pens;
- Pier boom cleaning;
- Steam condensate;
- Product water for the reverse osmosis water purification unit;
- Utility vault and manhole dewatering; and
- Industrial storm water.

During the term of Order No. R9-2009-0081, discharges associated with boat rinsing, marine mammals, pier boom cleaning, and the operation of the reverse osmosis water purification unit were eliminated by the Discharger.

Order No. R9-2009-0081 was adopted on June 10, 2009, and expired on June 10, 2014. Order No. R9-2009-0081 was modified by Order No. R9-2010-0057, adopted September 8, 2010. The terms and conditions of the 2009 and 2010 orders were automatically continued and remained in effect until a new Waste Discharge Requirements (WDRs) and NPDES permit was adopted pursuant to this Order.

D. The Discharger filed a report of waste discharge (ROWD) dated December 12, 2013. A formal request for additional information deemed to be lacking in the initial submission was sent on February 23, 2014. An updated ROWD was filed February 27, 2014. The application was deemed complete on March 5, 2014. A site visit was conducted on May 22, 2015 to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

A. Installations

The Discharger manages three naval bases in the San Diego area under the Commander, Navy Region Southwest (CNRSW) command structure. These three major naval bases are Naval Base Point Loma (NBPL); Naval Base San Diego (NBSD); and Naval Base Coronado (NBC). NBC consists of the following eight installations:

- Naval Air Station, North Island (NASNI)
- Naval Amphibious Base, Coronado (NAB)
- Naval Outlying Landing Field, Imperial Beach (NOLF)
- Silver Strand Training Complex (SSTC), formerly known as the Naval Radio Receiving Facility (NRRF)
- Naval Auxiliary Landing Field, San Clemente Island (NALF)

- Remote Training Site Warner Springs, (RTSWS) formerly known as Survival, Evasion, Resistance, and Escape (SERE) Training School
- Camp Michael Monsoor formerly known as La Posta Mountain Warfare Training Center (La Posta MWTC)
- Camp Morena

Of the eight installations aligned under the Facility, only NASNI, NAB, NOLF, SSTC, and NALF have discharges subject to NPDES permitting. NALF is located in the Los Angeles Regional Water Quality Control Board jurisdictional area and, therefore, is not regulated by this Order.

1. Naval Air Station, North Island (NASNI)

NASNI is located on the northern end of the Coronado Peninsula west of the city of San Diego's downtown district and adjacent to the city of Coronado. San Diego Bay borders NASNI on the north and east, and the Pacific Ocean borders it on the west. The base consists of 2,803 acres (2,397 on land and 406 acres in water). NASNI is located within the Coronado Hydrologic Area (910.10) in the Otay Hydrologic Unit (910.00).

The mission of NASNI is to arm, repair, provision, service, and support the U.S. Pacific Fleet and other operating forces. It is the only aviation industrial complex on the west coast and the only naval air station in California with an airfield having 24-hour support capabilities. The installation houses the California Least Tern Preserve and Nesting area. NASNI is also the only military installation in southern California capable of berthing and maintaining a Nimitz Class aircraft carrier. The Discharger's largest Naval Aviation Depot and the Defense Distribution Center are located at NASNI. It is distinguished as headquarters for several major military flag staffs, including Commander, U.S. Naval Air Forces (CNAF); Commander, Strike Force Training Pacific (CSFTP); Commander, Carrier Strike Group Seven (CCSG7); and Commander, Naval Air Force Reserve. NASNI provides aviation support shore facilities, three aircraft carrier piers, industrial maintenance support, aircraft maintenance, bachelor quarters and dining facilities, training facilities and the attendant support infrastructure of utilities, roads and grounds. The airport at NASNI has two runways. One runway is 7,500 feet long the other runway is 8,000 feet long. Approximately 70 percent of the total area is impervious to storm water infiltration.

The three piers at NASNI are used to berth aircraft carriers, support vessels, and barges. The aircraft carriers, support vessels, and barges receive various ship support services such as supplies and minor maintenance when berthed. Ship support services on the three piers include loading supplies and equipment onto the ships. Berth-side ship maintenance (that is, maintenance while the vessel is docked at the pier) may include abrasive blasting, hydro-blasting, metal grinding, painting, tank cleaning, removal of bilge and ballast water, removal of anti-fouling paint, sheet metal work, electrical work, mechanical repair, engine repair, hull repair, and sewage disposal. Berth-side ship repair activities are generally less complex than the ship repair activities conducted at commercial shipyards or at the Navy's graving dock or floating dry-dock (not located at NBC). Berth-side maintenance may be conducted by naval personnel (ships' force), civil service personnel, or civilian contractors.

Ship maintenance activities may also be conducted on the piers. Boats, ship sections, or parts can be placed on the piers or adjacent lands for repairs. The ship maintenance activities may be conducted by naval personnel (ships' force), civil service personnel, or by civilian contractors. The breadth of work performed by the civilian contractors is typically greater than the work performed by ships' force. Some complex ship repair work is

conducted inside various support buildings near the piers. Typically, civilian contractors will store materials and supplies on the piers while working aboard the ships.

NASNI has an Industrial Wastewater Treatment Plant (IWTP) which discharges treated industrial wastewater to the San Diego Metropolitan Sewage System (SDMSS). The wastewater is from metal plating facilities, etc. The IWTP is permitted by the city of San Diego to discharge to the SDMSS up to 3,097 gallons per day (GPD).

NASNI also has an Oil Recovery Plant (ORP) which discharges treated oily wastewater to the SDMSSS. The oily wastewater is from the ships, ballast and bilge water, and other facilities at NASNI. The ORP is permitted by the City of San Diego to discharge to the sanitary sewer up to 26,100 GPD. The IWTP and ORP are located on the same facility plot. The storm water at the IWTP and ORP facility is collected and diverted to the SDMSS.

Point source discharges subject to NPDES permitting from NASNI are listed in Table F-2 below and are classified as discharges associated with steam condensate, diesel engine cooling water, utility vault and manhole dewatering, pier washing, and storm water.

Table F-2. Discharges from the Main NASNI

Types of Discharge	Discharge Point Nos.
Steam Condensate	SC-001 through SC-010
Diesel Engine Cooling Water	CW-001
Utility Vault and Manhole Dewatering	UV-001 through UV-010
Pier Washing	PW-001
Municipal Storm Water	[1]
Industrial Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

2. Naval Amphibious Base, Coronado (NAB)

NAB is located on a sand-spit strip known as the Silver Strand in the north-central section of the Coronado Peninsula, just west of the city of San Diego. NAB is within the city of Coronado. The Glorietta Bay area of San Diego Bay borders NAB on the north, San Diego Bay borders NAB on the east, and the Pacific Ocean borders it on the west. The base consists of 1,006 acres, including 257 beachfront acres leased from the State along the Pacific Ocean. NAB is located within the Coronado Hydrologic Area (910.10) in the Otay Hydrologic Unit (910.00).

NAB is a major shore command. The mission of NAB is to provide on-base facilities and services for the support of U.S. and allied forces engaged in amphibious, inshore, clandestine, unconventional and special warfare training operations. The primary land uses include the administrative areas, training beaches, California Least Tern Preserve, recreational marina, and housing. There are 21 piers at NAB. The piers are used to berth coastal patrol boats, MK-5 boats, Mike 8 boats, LCU boats, and ferry barges.

Point source discharges from NAB are classified as utility vault and manhole dewatering. These discharges are not sampled at NAB because they are substantially similar to utility vault and manhole dewatering discharges at NASNI, which are sampled. State Highway 75 separates NAB into two areas known as surfside (oceanside) and bayside. The bayside administrative area consists of over 170 buildings for housing, administration, operations, recreation, community support facilities, utilities, and maintenance facilities. The surfside administrative area houses the Naval Special Warfare Command. Approximately 60 percent of the total area is impervious to storm water infiltration.

Point source discharges from NAB are listed in Table F-3 and include discharges associated with utility vault and manhole dewatering, and storm water.

Table F-3. Discharges from NAB

Types of Discharge	Discharge Point Nos.
Utility Vault and Manhole Dewatering Water	UV-011 and UV-012
Municipal Storm Water	[1]
Industrial Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

3. Silver Strand Training Complex (SSTC)

SSTC, formerly known as the Naval Radio Receiving Facility (NRRF), is a training facility for U.S. Special Operations Forces. SSTC occupies approximately 450 acres on the southern tip of the Silver Strand. The city of Imperial Beach adjoins the SSTC on the southern end, while Silver Strand State Beach is adjacent on the north. State Highway 75 parallels the eastern end of the SSTC. There are a few structures on the SSTC, and only one, a maintenance shop, is in use on a daily basis. The Wullenweber antenna at SSTC is not working. The installation is primarily used for Naval Special Warfare training. SSTC is located within the Coronado Hydrologic Area (910.10) in the Otay Hydrologic Unit (910.00).

One point source discharge, a utility vault and manhole dewatering discharge, originates from SSTC. Storm water discharges from SSTC are considered non-industrial. South and southwest of the installation is Camp Surf, a Young Men's Christian Association (YMCA) aquatic activities and education camp for youth on land leased from the Navy. Camp Surf has a wetland that fills with storm water runoff during the rainy season. A concrete-lined swale drains the wetland area of excess rainwater to the ocean. This swale also brings storm water runoff from an Imperial Beach residential area south of Camp Surf. Because the wetland area and swale are below sea level, a water-level-controlled pump house is activated to pump the storm water to an ocean outfall at approximately 20 gallons per minute. The storm water outfall (SSTC-01) is located on the beach adjacent to Camp Surf as shown on the map in Attachment B to this Order.

Point source discharges subject to NPDES permitting from SSTC are listed in Table F-4 below and are classified as discharges associated with utility vault and manhole dewatering.

Table F-4. Discharges from SSTC

Types of Discharge	Discharge Point Nos.
Utility Vault and Manhole Dewatering	UV-013
Municipal Storm Water	SSTC-01[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

4. Naval Outlying Landing Field, Imperial Beach (NOLF)

NOLF is located 10 miles south of NASNI and 1.5 miles north of the U.S. - Mexican border, and is within the San Ysidro Hydrologic Subarea (911.11) of the Tijuana Valley Hydrologic Area (911.10) of the Tijuana Hydrologic Unit (911.00). NOLF contains approximately 1,295 acres in the Tijuana River Valley, south of the Silver Strand peninsula. Approximately 283 acres of NOLF is part of the Tijuana River National Estuarine Sanctuary Management

Authority. This area and certain adjoining lands of the Tijuana River Valley have been designated a National Natural Landmark.

The mission of NOLF, as an extension of NASNI, is to provide a practice field for helicopter operations and miscellaneous personnel support facilities that serve the military population in the Imperial Beach area. Naval helicopters from NASNI conduct daily landing practice and lift-training operations at NOLF. Helicopters are not stationed at NOLF. Approximately 30 percent of the total area is impervious to storm water infiltration.

Point source discharges subject to NPDES permitting from NOLF are listed in Table F-5 below and include storm water.

Table F-5. Discharges from NOLF

Types of Discharge	Discharge Point Nos.
Municipal Storm Water	[1]

[1] Various locations as discussed in section II.B.1 of this Fact Sheet.

5. Naval Auxiliary Landing Field, San Clemente Island (NALF)

NALF is located within the Los Angeles Regional Water Quality Control Board jurisdictional area, and therefore not regulated under this Order.

6. Remote Training Site Warner Springs~~,~~ (RTSWS) formerly known as Survival, Evasion, Resistance, and Escape (SERE) Training School

The RTSWS is located in Cleveland National Forest in northern, inland San Diego County, near the community of Warner Springs. The school teaches military personnel the skills to survive and evade capture, or if captured, to resist interrogation and plan their escape. The RTSWS is a remote facility with no industrial storm water or point source discharges. The RTSWS is located within the Warner Hydrologic Subarea (903.31) of the Warner Valley Hydrologic Area (903.30) of the San Luis Rey Hydrologic Unit (903.00). Storm water discharges from the RTSWS are considered to be non-industrial Small Military Base MS4 discharges. There are no identified point source discharges at the RTSWS. An onsite wastewater treatment system / advanced treatment unit produces up to 10,000 gallons per day of secondary treated effluent which is discharged to a spray field under Order R9-2015-0012.

7. Camp Michael Monsoor formerly known as La Posta Mountain Warfare Training Center (MWTC)

The ~~La Posta MWTC~~Camp Michael Monsoor is a Navy Special Warfare Command facility located on approximately 1,079 mountainous acres in eastern San Diego County. It is bordered by National Forest lands on the north, and Bureau of Land Management lands on the remaining three sides, with a small privately-held parcel to the southwest. The facility primarily supports training for SEAL teams and platoons, but is occasionally used by Explosive Ordnance Disposal Units, Marines, and the Army and California National Guard for training. Camp Michael Monsoor ~~La Posta MWTC~~ is a remote facility has only non-industrial Small Military Base MS4 storm water or point source discharges. Camp Michael Monsoor~~The La Posta MWTC~~ is located within the Canyon City Hydrologic Subarea (911.82) of the Campo Hydrologic Area (911.80) of the Tijuana Hydrologic Unit (911.00). Storm water discharges from Camp Michael Monsoor ~~the La Posta MWTC~~ are considered to

be non-industrial. There are no identified point source discharges at the Camp Michael MonsoorLa Posta MWTC.

8. Camp Morena

Camp Morena is located on approximately 62 acres in mountainous eastern San Diego County approximately 55 miles east of the city of San Diego. It is bordered by National Forest lands on the north and east. The Morena Reservoir high water line is across Morena Stokes Valley Road from the camp and the North Shore Camp of the San Diego County Lake Morena Regional Park borders the camp on the southwest side. The facility primarily supports training for military and homeland security personnel. Camp Morena is a remote facility with no industrial storm water or point source discharges. Camp Morena is located within the Morena Hydrologic Area (911.50) of the Tijuana Hydrologic Unit (911.00). Storm water discharges from Camp Morena are considered to be non-industrial Small Military Base MS4 discharges. There are no identified point source discharges at Camp Morena.

B. Description of Wastewater Discharges

During the term of Order No. R9-2009-0081, as modified by Order No. R9-2010-0057, discharges to receiving waters have been eliminated for boat rinsing, pier boom cleaning, swimmer rinsing, marine mammal enclosure cleaning, and product water from the reverse osmosis water purification unit. Wastewater discharges at NBC consist of the following:

1. Storm Water Discharges

A total of approximately 191 storm water discharge points drain storm water runoff from the Facility. In the ROWD submitted in February 2014, the Discharger indicated that there were industrial runoff points from three of the installations at the Facility. Three installations at the Facility have municipal storm water discharges.

This Order establishes requirements for storm water discharges from industrial and non-industrial areas of the Facility (including Industrial High Risk Areas, Industrial Low Risk Areas, Industrial No Exposure Areas, and Small Military Base MS4 Areas).

a. Small Municipal Separate Storm Sewer System Areas (Small Military Base MS4s)

Section 402(p) of the Clean Water Act (CWA) establishes a framework for regulating storm water discharges under the NPDES Program. In 1990, the United States Environmental Protection Agency (USEPA) promulgated regulations for permitting storm water discharges from industrial sites and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, USEPA promulgated regulations, known as Phase II regulations, requiring permits for storm water discharges from Small MS4s.

As defined by 40 CFR section 122.26(b)(8), an MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a publicly owned treatment works (POTW).

A Small MS4 is an MS4 that is not permitted under the municipal Phase I regulations, but is permitted under the municipal Phase II regulations. A Small MS4 is owned or

operated by the U.S., a state, a city, a town, a borough, a county, a parish, a district, an association, or another public body having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes. Small MS4s include systems similar to separate storm sewer systems in large municipalities, such as systems at military bases. In this Order, Small Military Base MS4 is the non-industrial part of a Small MS4.

Storm water runoff from non-industrial portions of the Facility such as administrative buildings, roads, parking lots, and other municipal type discharges, are subject to regulation under Phase II MS4 requirements.

Discharges through the MS4 of material other than storm water to Waters of the U.S. are effectively prohibited except as allowed under the provisions of section IV.F of this Order or as otherwise authorized by a separate NPDES permit. A list of authorized non-storm water discharges is provided in section IV.F of this Order and includes diverted stream flows, rising groundwater, uncontaminated groundwater, springs, drinking fountain water, emergency eye wash/shower water, condensate, and several other categories of discharge. These discharges are authorized under this Order unless the Discharger or the San Diego Water Board identifies the discharges as a significant source of pollutants to Waters of the U.S. or physically interconnected MS4. If the discharges meet the conditions in section IV.F, the Discharger must ensure that steps are taken to prevent or reduce the contact of non-storm water discharges with significant materials or equipment; and minimize, to the extent practicable, the flow or volume of non-storm water discharges. The Discharger is required to prepare a Storm Water Management Plan (SWMP) with Best Management Practices (BMPs) for Small Military Base MS4 discharges including authorized non-storm water.

This Order establishes requirements for Small Military Base MS4 storm water discharges from the Facility based on Phase II MS4 requirements, similar to those established in the State Water Resources Control Board (State Water Board) General NPDES Permit for the Discharge of Storm Water From Small Municipal Separate Storm Sewer Systems (WQ Order No. 2013-0001-DWQ), adopted on February 5, 2013.

b. Industrial Storm Water

This Order establishes requirements for the discharge of storm water runoff from "Industrial High Risk Areas," which are defined in section IV.B.1 of this Order as *"All areas where wastes or pollutants of significant quantities ~~form~~ from ship construction, modification, repair, and maintenance activities (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substance, toxic pollutants, non-conventional pollutants, materials of petroleum origin, or other substances of water quality significance) are subject to precipitation, run-on, and/or runoff."*

This Order also establishes requirements for storm water runoff from industrial areas not associated with ship construction, modification, repair, or maintenance activities, and are designated as "Industrial Low Risk Areas," and from "Industrial No Exposure Areas," where all industrial materials and activities are protected from contact with storm water.

Section IV.B.1. of this Order defines Industrial No Exposure Areas, Industrial Low Risk Areas, and Industrial High Risk Areas. Section IV.B.2 of this Order requires that the risk level of storm water discharges shall be categorized annually by the Discharger based on the activities conducted in the drainage area for each outfall.

Pollutants that may be present in the discharge include pollutants that the storm water is likely to contact, including, but not limited to sediment, solids, oil and grease, and metals.

2. Steam Condensate

NBC currently uses a pressurized steam system for both shore and afloat operations. Within NBC, only NASNI has an on-base steam system. During the generation and distribution of steam at NASNI, condensate is formed. This condensate is discharged both on land and to San Diego Bay and the Pacific Ocean.

Currently, steam is produced at NASNI by an on-site cogeneration plant that is operated by Applied Energy, a Navy contractor. During the production of steam, one or more of the following chemical additives are injected to the steam to assist in controlling the pH in the steam system: Trident 3506 (into boiler feed water), Trident 2301 (into boiler feed water), Trident 1003 (into boiler), and Trident 1103 (into boiler). It is important to control the pH and the goal is to maintain the pH between 8.5 and 9 to avoid the creation of acids in the steam distribution system. Specific chemicals that may be present in steam condensate as a result of additives, as presented in prior annual reports, include: cyclohexylamine (20%), diethylaminoethanol, diethylhydroxylamine, hydroquinone, and morpholine.

After leaving the plant, the steam enters the distribution system, which consists of high- and low-pressure steam lines; pressure reducing valve stations; and expansion joints. The steam is provided to buildings and surface ships. The steam system has traps in the steam lines designed to discharge steam condensate to ensure the steam supplied to users meets quality assurance specifications and is free of condensate. When water collects in the steam lines it is essential for the system to remove the water as soon as possible.

The only steam condensate discharge at NBC to San Diego Bay is from NASNI. There were 66 steam discharge points during the term of Order No. R9-2009-0081, but only 10 remain. Fifty-six discharges were eliminated during the current permit term as a result of removal, change of status, or discharge to permeable ground surface. At most locations, the system releases steam condensate from traps in a cloud of steam that has a temperature in excess of 100 degrees Celsius. A portion of this steam discharge evaporates prior to forming a condensate and discharging to the land or to San Diego Bay. The pier discharge points, in addition to releasing steam, drip small amounts of water to the bay between steam discharges. The estimated discharge rate for the steam lines is one ounce per minute. Based on two years of self-monitoring report (SMR) data for discharge points SC-001 through SC-008, the discharge volume has been modified from 750 GPD to approximately 456 GPD. Out of the ten steam condensate discharges still active on NASNI, nine discharge to the San Diego Bay, and one discharges to the golf course pond and then to the Pacific Ocean.

A map of the steam condensate discharge locations is shown in Attachment B (Figure B-3). A line drawing for the steam condensate discharge is shown in Attachment C (Figure C-1).

3. Diesel Engine Cooling Water Discharges

NASNI has historically used diesel engines to supply water to the fire suppression system (sprinklers). These diesel engines discharge non-contact engine cooling water. Order No. R9-2009-0081 regulated four diesel engine cooling water systems, Discharge Points CW-001 through CW-004. Only one diesel engine cooling water system remains on NBC and is located at Building 812 on NASNI (Discharge Point CW-001). Discharge Points CW-002 through CW-004 have been eliminated and are no longer regulated by this Order.

The diesel engine at Discharge Point CW-001 has been out of service for more than a year and is not expected to be in use for another year or more. Moreover, the Navy is currently evaluating ways to eliminate the discharge from Building 812 in the future by directing the cooling water to the sanitary sewer or otherwise managing it to prevent a discharge. However, the Report of Waste Discharge includes information on the Diesel Engine Cooling Water discharge as it most recently occurred, in case it should continue.

When operational, the diesel engines must be tested regularly to ensure the operability of the fire sprinkler pump. During the pump tests, non-contact bay water will be used to cool the diesel engine that supplies water to the fire sprinkler pump. During an emergency, the pump will supply water to the fire sprinkler system in adjacent buildings. During non-emergency weekly tests, cooling water is discharged into the San Diego Bay. The fire sprinkler systems in adjacent buildings are not activated during these weekly tests.

If the pump becomes operational and the weekly pump tests are conducted, non-contact seawater will be pumped from San Diego Bay through a steel pipe that is approximately 48 feet long and 15 inches in diameter. The diesel engine will discharge non-contact cooling seawater through a 2- inch steel pipe that runs approximately 12 feet into a sump that channels into the San Diego Bay. The flow rate is expected to be 450 gallons per week (GPW). A pollution prevention plan has been developed and implemented to address potential chemical pollutants in the cooling water discharge of the diesel-engine-powered pump in Building 812.

A map of the diesel engine cooling discharge locations is shown in Attachment B (Figure B-4). A line drawing for the utility vault dewatering discharge is shown in Attachment C (Figure C-2).

4. Utility Vault and Manhole Dewatering

NBC has electrical and steam utility vaults and manholes that may discharge water to surface waters. The utility vaults and manholes are located at NASNI, NAB, and SSTC. Only NASNI has steam vaults. NAB and SSTC have only electrical switch or substation vaults. Utility companies or agencies, including NAVFAC SW, supply utility resources (excluding water), as necessary for day-to-day living and operations. This includes, but is not limited to, supplies of natural gas, electricity, and telephone service. Electrical and steam utilities are owned and maintained by NAVFAC SW. The utility vault discharges are short-term intermittent discharges of contained water from utility vaults and underground structures. Navy installations in San Diego require electrical power for both shore and afloat operations. The on-base electrical power is carried through an extensive underground conduit system. Electrical utility vaults and manholes contain high voltage electrical equipment, transformers, switchgear, and/or below ground cables.

The steam utility manholes can also accumulate steam condensate water. High-pressure steamlines are also located in underground conduit systems and are accessed through utility manholes. NAVFAC SW dewaters utility vaults and manholes as needed to protect equipment, or prior to performing repair, maintenance, or installation of equipment. Water collected in utility vaults or manholes is either automatically or manually pumped out for disposal. The volume of water pumped is dependent upon rainfall amounts and infiltration. The automatic sump pumps are used to dewater the utility electrical vaults and the water is discharged to landscaped areas, gutters, catch basins, or channels depending on the location of the vault. Only those vaults that use automatic pumping that discharge to receiving waters are subject to this permit. Vaults are not included in the permit where NBC

staff or contractors deliver or direct water removed from the vaults to the sanitary sewer or a pervious area where it will not discharge to receiving waters.

There are a total of 13 utility vaults located across the NBC installations that could potentially have point source discharges. Of the 13 vaults, 10 electrical vaults are located at NASNI. These vaults can accumulate groundwater and storm water and are dewatered using automatic sump pumps. Depending on the volume, these discharges may reach a storm drain inlet that drains to San Diego Bay.

There are two electrical switch or substation vaults located at NAB. These vaults are located inside buildings and are away from the quay walls and piers. These vaults can also accumulate groundwater and storm water and are dewatered using automatic sump pumps. Depending on the volume, these discharges may reach a storm drain inlet that drains to San Diego Bay or the Pacific Ocean. All 13 vaults have meters on the pumps and most record little to no discharge. The Navy is currently evaluating the actual discharge potential at these locations.

There is one electrical switch or substation vault at SSTC. This substation is located inside a building and has an automated sump pump to dewater the vaults of groundwater seepage and storm water. The sump pump prevents the water from contacting the electrical equipment. The sump discharges to the ground surface around the building. Depending on the volume, these discharges may reach a storm drain that drains to the Pacific Ocean.

Vaults without sump pumps and manholes at NBC are manually dewatered when necessary, using a portable pump or pump truck. NAVFAC SW has implemented procedures to eliminate dewatering discharges to surface waters from vaults without sump pumps and manholes, which can be found in the recently updated Pollution Prevention Plan (PPP) for Utility Vault and Manhole Dewatering Discharges at NBSD/NBC/NBPL (August 2013). NAVFAC SW either pumps the water into an adjacent utility manhole or transfers the water to the sanitary sewer system. However, there could be rare emergency situations that would require dewatering vaults without sump pumps or manholes onto the ground surface.

Prior to the adoption of Order No. R9-2003-0008 for the Facility, discharges from utility vaults and manholes were regulated by the statewide *General Order for Discharges from Utility Vaults and Underground Structures to Surface Waters* (Order No. 96-12-DWQ, NPDES No. CAG990002). At the time of adoption of Order No. R9-2003-0008, the State Water Board was awaiting USEPA approval of the re-issued General Order (Order No. 2001-11-DWQ). In order to regulate all of the discharges at the Facility under one Order, the San Diego Water Board incorporated the pertinent specifications, limitations, and monitoring requirements of Order No. 2001-11-DWQ into Order No. R9-2003-0008. Order No. R9-2009-0081 incorporated the pertinent specifications, limitations, and monitoring requirements of Order No. 2006-0008-DWQ, *General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters.* It is the practice of the San Diego Water Board to incorporate the provisions of the most current applicable permit. This Order incorporates the pertinent requirements from the State Water Board's *General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters* (Order No. 2014-0174-DWQ).

A map of the utility vault dewatering discharge locations is shown in Attachment B (Figures B-5 through B-7). A line drawing for the utility vault dewatering discharge is shown in Attachment C (Figure C-3).

5. Pier Washing Discharge

Bird feces are washed from the ammunition pier (Bravo Pier) at NASNI and discharged to San Diego Bay. No industrial activities are performed on the ammunition pier, only loading and unloading of ammunition and ordnance from ships. Bravo Pier is swept with a street sweeper prior to being washed. A pump located on the pier is used to supply potable water for washing. The pump is rated at 100 gpm, but the actual rate varies. Duration of pier washing varies from 45-90 minutes. The discharge volume is approximately 6,700 gallons for each washing event. Washing occurs 4 times per week during the seagull migration period and about 100 times per year depending on duration of the migration period which may start as early as late May and go through November. The wash water discharges to San Diego Bay from several drains located on the pier. Discharges from the Bravo Pier occur over the edge of the pier and through numerous rectangular drains located on the pier.

A map of the pier washing discharge locations is shown in Attachment B (Figure B-8). A line drawing for the pier washing discharge is shown in Attachment C (Figure C-4).

C. Discharge Points and Receiving Waters

1. The eight installations of the Facility are described in section II.A of this Fact Sheet and the four installations which are regulated by this Order are shown in Attachment B (Figure B-1).

   Wastewater is discharged into the San Diego Bay, Pacific Ocean, ~~and~~ Tijuana River Estuary, Morena Reservoir, tributaries to the San Luis Rey River, and waters in the Canyon City Hydrologic Area as summarized in Table F-6 below:

Table F-6. Discharge Locations

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Industrial Process Water Effluent Discharges				
SC-001	Steam Condensate	32° 42' 22" N	117° 11' 23.26	San Diego Bay
SC-002	Steam Condensate	32° 42' 22" N	117° 11' 22" W	San Diego Bay
SC-003	Steam Condensate	32° 42" 23" N	117° 11' 22" W	San Diego Bay
SC-004	Steam Condensate	32° 42' 21" N	117° 11' 20" W	San Diego Bay
SC-005	Steam Condensate	32° 42' 21" N	117° 11' 18" W	San Diego Bay
SC-006	Steam Condensate	32° 42' 20" N	117° 11' 16" W	San Diego Bay
SC-007	Steam Condensate	32° 42' 20" N	117° 11' 15" W	San Diego Bay
SC-008	Steam Condensate	32° 42' 19" N	117° 11' 13" W	San Diego Bay
SC-009	Steam Condensate	32° 42' 29" N	117° 11' 23" W	San Diego Bay
SC-010	Steam Condensate	32° 41' 46" N	117° 11' 59" W	Pacific Ocean
CW-001	Diesel Engine Cooling Water	32° 41' 43" N	117° 13' 36" W	San Diego Bay
UV-001	Utility Vault and Manhole Dewatering	32' 42° 8" N	117' 10° 57" W	San Diego Bay
UV-002	Utility Vault and Manhole Dewatering	32° 42' 17" N	117° 11' 11" W	San Diego Bay
UV-003	Utility Vault and Manhole Dewatering	32' 42° 20" N	117' 11° 27" W	San Diego Bay
UV-004	Utility Vault and Manhole	32° 42' 37" N	117° 11' 24" W	San Diego Bay

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
	Dewatering			
UV-005	Utility Vault and Manhole Dewatering	32° 42' 36" N	117° 11' 22" W	San Diego Bay
UV-006	Utility Vault and Manhole Dewatering	32' 42° 45" N	117, 11° 25" W	San Diego Bay
UV-007	Utility Vault and Manhole Dewatering	32° 42' 42" N	117° 12' 12" W	San Diego Bay
UV-008	Utility Vault and Manhole Dewatering	32° 42' 26" N	117° 11' 39" W	San Diego Bay
UV-009	Utility Vault and Manhole Dewatering	32° 42' 15" N	117° 11' 57" W	San Diego Bay
UV-010	Utility Vault and Manhole Dewatering	32° 42' 2" N	117° 11' 25" W	San Diego Bay
UV-011	Utility Vault and Manhole Dewatering	32° 40' 31" N	117° 9' 38" W	San Diego Bay
UV-012	Utility Vault and Manhole Dewatering	32° 40' 23" N	117° 10' 1" W	San Diego Bay
UV-013	Utility Vault and Manhole Dewatering	32° 35' 57" N	117° 7' 25" W	San Diego Bay
PW-001	Pier Washing	32º 41' 43" N	117º 13' 36" W	San Diego Bay
Small Military Base Municipal Separate Storm Sewer System (MS4) Discharges				
See Attachment M of this order	Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean, San Diego Bay, ~~or~~ Tijuana River Estuary, San Luis Rey River Watershed, Morena Reservoir, or Canyon City Hydrologic Area
Industrial No Exposure Area Storm Water Discharges				
See Attachment M of this order	Industrial No Exposure Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay
Industrial Low Risk Area Storm Water Discharges				
See Attachment M of this order	Industrial Low Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay

Discharge Point	Discharge Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Industrial High Risk Area Storm Water Dischargers				
See Attachment M of this order	Industrial High Risk Area Storm Water (wet weather) and Non-Storm Water (dry weather)	See Attachment M of this order	See Attachment M of this order	Pacific Ocean or San Diego Bay

D. Summary of Previous Requirements and Self-Monitoring Report (SMR) Data

1. Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 contained the following Discharge Prohibitions:

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

i. Paint chips;
ii. Blasting materials;
iii. Paint over spray;
iv. Paint spills;
v. Water contaminated with abrasive blast materials, paint, oils, fuels, lubricants, solvents, or petroleum;
vi. Hydro-blast water;
vii. Tank cleaning water such as to remove sludge and/or dirt;
viii. Clarified water from an oil and water separator, except for storm water discharges treated by an oil and water separator and having coverage under this Order;
ix. Steam cleaning water;
x. Pipe and tank hydrostatic test water, unless regulated by an NPDES permit;
xi. Saltbox water;
xii. Hydraulic oil leaks and spills;
xiii. Fuel leaks and spills;
xiv. Trash;
xv. Miscellaneous refuse and rubbish;
xvi. Fiberglass dust;
xvii. Swept materials;
xviii. Ship repair and maintenance activity debris;
xix. Demineralizer and reverse osmosis brine; and
xx. Oily bilge water.

b. Diesel engine cooling water discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited.

c. Boat rinsing discharges having a maximum temperature greater than 20°F above the natural temperature of the receiving water are prohibited.

d. The Discharger shall comply with all requirements of the Basin Plan Waste Discharge Prohibitions.

e. Discharges of waste not specifically authorized by this Order or in a manner or location not specifically described in this Order are prohibited unless regulated by applicable WDRs.

f. Except as allowed in [the Storm Water Pollution Prevention Plan], non-storm water discharges that discharge either directly or indirectly to Waters of the United States (U.S.) are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.

g. Industrial storm water discharges and authorized or permitted non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance as defined in CWC section 13050.

h. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.

i. The discharge of the first ¼ inch (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 demonstrate through testing that the discharge achieves compliance with the [applicable acute toxicity effluent limitations]. The discharge of the remainder of the storm water must also achieve compliance with the toxicity limitation specified in this Order but only needs to be demonstrated twice per year, unless under accelerated testing.

j. 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

2. Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 also established requirements for steam condensate, diesel engine cooling water, reverse osmosis product water, utility vault and manhole dewatering discharges, pier washing, pier boom cleaning, marine mammal enclosure cleaning, small boat rinsing, and miscellaneous discharges.

3. Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 established acute toxicity effluent limitations for the discharge of industrial storm water.

4. Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 established benchmark values for the discharge of storm water from any industrial activity for copper of 63.6 µg/L and zinc of 117 µg/L.

Table F-7. Storm Water Benchmark Exceedances

Reporting Period	No. of Outfall Discharge Events Exceeding Copper Benchmark	No. of Outfall Discharge Events Exceeding Zinc Benchmark
2011	55	83
2012	7	15
2013	11	82
2014	14	41

E. Compliance Summary

1. Review of the Facility's self-monitoring reports from June 2009 to March 2015 identified the following violations:

a. Industrial Storm Water Acute Toxicity effluent limitation in section IV.A.5 of Order No. R9-2009-0081 of Pass was reported as Fail 105 times from June 2009 to June 2014 which includes the 2013/2014 monitoring year. In the 2013/2014 monitoring year, 51 samples were tested for toxicity and 14 samples were reported as Fail. Using the effluent limitation in this Order, only one sample would be in violation.

b. The Discharger reported 23 discharges of unauthorized cooling water in violation of the prohibitions in section A of Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 from 9/10/2009 to 8/2/2011. This discharge was discontinued after August 2011.

2. The following effluent limitation violations were found in reviewing the Facility's self-monitoring reports from June 2009 to March 2015:

Table F-8. Effluent Limitation Violations

Discharge	Constituent	Number of Exceedances	Period	Effluent Limitation	Dates
Steam Condensate	Lead, Total Recoverable	3	Daily Maximum	15.5 µg/L	7/23/2012, 10/17/2013, & 8/4/2014
Steam Condensate	Lead, Total Recoverable	10	Monthly Average	6.3 µg/L	7/23/2012 to 3/3/2015
Steam Condensate	Copper, Total Recoverable	66	Daily Maximum	5.8 µg/L	6/2/2010 to 5/4/2014
Steam Condensate	Copper, Total Recoverable	116	Monthly Average	2.0 µg/L	6/10/2010 to 3/3/2015
Steam Condensate	Bis (2-Ethylhexyl) Phthalate	1	Daily Maximum	11.8 µg/L	12/22/2011
Steam Condensate	Bis (2-Ethylhexyl) Phthalate	4	Monthly Average	5.9 µg/L	12/22/2011 to 10/20/2014
Steam Condensate	pH	3	Instantaneous Maximum	9.0	9/10/2009 to 3/10/2010
Steam Condensate	pH	2	Instantaneous Minimum	7.0	10/20/2014
Diesel Engine Cooling Water	Turbidity	1	Monthly Average	75 NTU	12/9/2009
Diesel Engine Cooling Water	Zinc, Total Recoverable	1	Daily Maximum	150 µg/L	11/5/2009
Diesel Engine Cooling Water	Copper, Total Recoverable	6	Daily Maximum	97 µg/L	7/22/2009 to 12/9/2009

3. On 05/22/2015, the Facility was inspected by the San Diego Water Board to determine compliance with Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 and to verify the information contained in the ROWD. No violations were observed.

4. On 01/24/2013, the Facility was inspected by a USEPA contractor to determine compliance with Order No. R9-2009-0081 as modified by Order No. R9-2010-0057. No violations were observed.

F. Planned Changes

1. The steam cogeneration plant contract is due to expire in 2018, and NBC is currently pursuing efforts toward full decentralization of the system. The steam condensate

discharges are expected to be eliminated following conversion to the new systems which will include return systems for steam condensate. While the overall category of steam condensate discharges will remain in this Order, multiple individual steam condensate discharges have been eliminated since the previous permit.

2. The diesel engine sprinkler station at Building 812 on NASNI has been out of service for more than a year and is not expected to be in use for another year or more. The Discharger plans to direct the cooling water to the sanitary sewer or otherwise manage it to prevent discharge.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (Water Code or CWC; commencing with section 13370). This Order shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Basin* (Basin Plan) on September 8, 1994 which was last amended on April 4, 2011. The Basin Plan was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Requirements of this Order implement the Basin Plan. Beneficial uses applicable to the San Diego Bay, Pacific Ocean, ~~and~~ Tijuana River Estuary, Morena Reservoir, tributaries to the San Luis Rey River, and waters in the Canyon City Hydrologic Area are as follows:

Table F-9. Basin Plan Beneficial Uses.

Discharge Point	Receiving Water Name	Beneficial Use(s)
SC-001 through SC-009, CW-001, UV-001 through UV-013, PW-001, and storm water discharges as identified in Attachment M of this order.	San Diego Bay	Industrial service supply (IND); navigation (NAV); contact water recreation (REC1); non-contact water recreation (REC2); commercial and sport fishing (COMM); preservation of biological habitats of special significance (BIOL); estuarine habitat (EST); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and, shellfish harvesting (SHELL).
SC-010, and storm water discharges, as identified in Attachment M of this order.	Pacific Ocean	IND, REC1, REC2, NAV, COMM, aquaculture (AQUA), BIOL, WILD, RARE, MAR; MIGRA, SPWN, and SHELL.
Storm water discharges, as identified in Attachment M of this order.	Tijuana River Estuary	REC1, REC2, COMM, BIOL, EST, WILD, RARE, MAR, MIGR, SPWN, and SHELL.
Municipal storm water discharges from the Remote Training Site Warner Springs.	San Luis Rey River Watershed	Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), IND, Freshwater Replenishment (FRESH), Hydropower Generation (POW), REC1, REC2, Warm Freshwater Habitat (WARM), WILD
Municipal storm water discharges from Camp Morena	Morena Reservoir	MUN, AGR, IND, Industrial Process Supply (PROC), FRESH, REC1, REC2, WARM, Cold Freshwater Habitat (COLD), WILD, RARE
Municipal storm water discharges from Camp Michael Monsoor	Canyon City Hydrologic Area	REC1, REC2, WARM, WILD

2. **Thermal Plan**. The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal Plan contains temperature objectives for surface waters.

   The Thermal Plan defines elevated temperature waste as "*liquid, solid, or gaseous material including thermal waste discharged at a temperature higher than the natural temperature of receiving water*." The Thermal Plan also defines a new discharge as "*any discharge (a) which is not presently taking place unless waste discharge requirements have been established and construction as defined in Paragraph 10 has commenced prior to adoption of this plan or (b) which is presently taking place and for which a material change is proposed but no construction as defined in Paragraph 10 has commenced prior to adoption of this plan."*

   Thermal objectives for new discharges to an enclosed bay are applicable for diesel engine cooling water. This objective is:

   Thermal waste discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited.

   Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, and 2012. The State Water Board adopted the latest amendment on October 16, 2012, and it became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean Waters of the State to be protected as summarized below:

Table F-10. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
SC-010, and storm water discharges, as identified in Attachment M of this Order.	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Sediment Quality 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 Sediment Quality Plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement the sediment quality objectives of this Sediment Quality Plan.

5. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** Federal water quality criteria were adopted by USEPA through the NTR in 40 CFR section 131.36 (promulgated on December 22, 1992, amended on May 4, 1995 and November 9, 1999). About forty criteria in the NTR applied to California waters. On May 18, 2000, USEPA published the CTR in the Federal Register (65 Fed. Register 31682-31719), adding 40 CFR section 131.38. The CTR established new priority pollutant criteria for California waters and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These regulations contain federal water quality criteria for priority pollutants.

6. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the San Diego Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

7. **Antidegradation Policy.** Federal regulations at 40 CFR section 131.12 require that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68 16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, 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. **Atomic Energy Act.** Pursuant to the *Atomic Energy Act*, the San Diego Water Board does not have jurisdictional authority to regulate the discharge of radioactive wastes from United States naval nuclear propulsion plants and their support facilities. The U.S. Department of the Navy and the Department of Energy have jurisdiction for discharges of radioactive material. The Navy has a monitoring program for the discharge of radioactive wastes from naval vessels. Consistent with the Atomic Energy Act, this Order does not regulate the discharge of radioactive wastes and does not include monitoring for radioactivity.

11. **Uniform National Discharge Standards (UNDS).** In 1996, Congress passed legislation amending CWA section 312 to provide the Department Of Defense and the USEPA authority to jointly establish UNDS for incidental discharges from vessels of the Armed Forces in state waters and the contiguous zone. This comprehensive, three-phase, regulatory program applies to vessels of the Armed Forces including, but not limited to, the Navy, Military Sealift Command, Marine Corps, Army, Air Force, and Coast Guard. UNDS is designed to enhance environmental protection of coastal waters by creating protective standards to reduce environmental impacts associated with vessel discharges, stimulate the development of improved pollution control devices, and advance the development of environmentally sound ships by the Armed Forces. The Phase I final rule and preamble language, including a summary of the Phase I process and findings (64 Fed. Reg. 25126; 40 CFR part 1700), was published in the Federal Register on May 10, 1999. Phase I of UNDS determines the types of vessel discharges that require control by a Marine Pollution Control Device (MPCD) and those that do not require control, based on consideration of the anticipated environmental effects of the discharge and other factors listed in the CWA. In Phase I, the USEPA and the Department Of Defense identified 25 discharges to be controlled by MPCDs. Phase II of UNDS development focuses on promulgating MPCD

performance standards for those vessel discharges identified during Phase I as requiring an MPCD. In this Phase, Department Of Defense and USEPA are establishing discharge performance standards for different classes, types, and sizes of vessels. These standards are specific to existing vessels as well as future (new design) vessels and will be promulgated in batches for efficiency purposes. A draft rule establishing MPCD for the first batch of 11 discharges was promulgated on February 3, 2014. Phase III of UNDS development will focus on establishing requirements for the design, construction, installation, and use of MPCDs. After completion of Phase III, states will be prohibited from regulating these UNDS discharges. In anticipation of the completion of UNDS, this Order does not regulate vessel discharges with applicable MPCDs (as BMPs) identified in the draft UNDS rule.

D. Impaired Water Bodies on CWA 303(d) List

Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On October 11, 2011 USEPA gave final approval to California's 2010 section 303(d) List of Water Quality Limited Segments (303(d) list). 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. San Diego Bay adjacent to the Facility is listed as impaired for copper. Table F-10 below lists the San Diego Bay impairments near the Facility. ~~Total Maximum Daily Loads (TMDLs) have not been developed for waters adjacent to the Facility.~~

Table F-11. 303(d) Impairments near the Facility

Water Body	Location	Constituent	Installation
San Diego Bay	Whole Bay	Polychlorinated biphenyls (PCBs)	All
San Diego Bay	Shoreline, Glorietta Bay	Copper	Adjacent to NAB
San Diego Bay	San Diego Bay Shoreline, G Street Pier	Total Coliform	Near NASNI and NAB[1]
San Diego Bay	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Benthic Community Effects	Near NASNI and NAB[1]
San Diego Bay	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Sediment Toxicity	Near NASNI and NAB[1]
San Diego Bay	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Total Coliform	Near NASNI and NAB[1]
San Diego Bay	San Diego Bay Shoreline, Shelter Island Shoreline Park	Enterococcus, Fecal Coliform, and Total Coliform	Near NASNI and NAB[1]
San Diego Bay	San Diego Bay Shoreline, Tidelands Park	Enterococcus, Fecal Coliform, and Total Coliform	Near NASNI and NAB[1]
San Luis Rey River	East of Interstate 15	Total Nitrogen as N	Adjacent to RTSWS
San Luis Rey River	West of Interstate 15	Chloride, Enterococcus, Fecal Coliform, Phosphorus, Total Dissolved Solids, Total Nitrogen as N, and Toxicity	RTSWS is tributary
Pacific Ocean Shoreline	San Luis Rey River Mouth	Enterococcus and Total Coliform	RTSWS is tributary

Water Body	Location	Constituent	Installation
Morena Reservoir	Whole Reservoir	Ammonia as Nitrogen, Color, Manganese, Phosphorus, pH	Adjacent to Camp Morena
Tijuana River Estuary	1 Acre to 150 Acres	Eutrophic, Indicator Bacteria, Lead, Nickel, Dissolved Oxygen, Pesticides, Thallium, Trash, Turbidity	Adjacent to NOLF

[1] These impairments are not adjacent to the Facility but are near the Facility.

On February 10, 2010, the San Diego Water Board adopted Resolution No. R9-2010-0001, an Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate the Revised Total Maximum Daily Loads for Indicator Bacteria, Project I - Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek). This TMDL Basin Plan amendment was subsequently approved by the State Water Resources Control Board on December 14, 2010, the Office of Administrative Law (OAL) on April 4, 2011, and the United States Environmental Protection Agency (USEPA) on June 22, 2011. RTSWS is a Phase II MS4 discharger to a tributary to the San Luis Rey River. The TMDL establishes the following Waste Load Allocations (WLAs) and compliance schedule for Phase II MS4 dischargers. This Order establishes requirements to implement these WLAs in accordance with the TMDL.

Table F-12. WLAs for Phase II MS4s in the San Luis Rey HU

Watershed	Fecal Coliform WLA		Enterococcus WLA		Total Coliform WLA	
	Wet Weather Billion MPN/year	Dry Weather Billion MPN/Month	Wet Weather Billion MPN/year	Dry Weather Billion MPN/Month	Wet Weather Billion MPN/year	Dry Weather Billion MPN/Month
San Luis Rey HU (903.00)	914,026	1,058	1,300,235	185	14,373,954	5,289

Table F-13. Wet and Dry Weather Compliance Schedule and Reduction Milestones for Achieving Exceedance Frequency

Implementation Action	Responsible Party	Date
Submit annual progress reports or Update SWPPPs/SWMPS/LRPS in accordance with RB Accepted LRPs	Phase II Permittees	Upon Enrollment in Phase II MS4 Requirements
Meet Wet and Dry Weather Frequency Exceedance Milestones	All Phase I, Phase II MS4s, Caltrans	
50% Reductions[1] – Priority[2] 1		April 4, 2016
50% Reductions[1] – Priority[2] 2		April 4, 2017
50% Reductions[1] – Priority[2] 3		April 4, 2018
100% Reductions[1] – Priority[2] 1,2,3		April 2, 2021+

Notes:
[1] Wet: single sample maximum REC-1 WQOs Dry: 30-day geometric mean REC-1 WQOs. The percent reduction for each compliance year applies to the total number of samples taken that comply with Resolution No. R9-2010-0001. The maximum allowable percent exceedance frequency for the single sample maximum (wet weather days only) is 22% (Resolution No. R9-2010-0001, Finding 10). For dry weather days, there is no maximum allowable exceedance and it is set at 0%. The Compliance Year percent reductions are based on the total number of samples taken. For Example: If in Year 5 of the compliance schedule, 100 samples are taken, only 50% of those samples can exceed the single sample maximum for wet weather by 22% of the maximum allowable percent exceedance frequency for the single sample maximum. By Year 10+, no samples can exceed

the Exceedance Frequency. Baseline years for wet and dry days shall be as identified in Order No R9 2015-0001 Attachment E for the Bacteria I TMDL.
[2] Priorities are defined in Resolution No. R9-2010-0001, Attachment A, pg. 63-65.

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 and the Tijuana River Estuary:

      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 San Diego Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge. For the purpose of this policy, ballast waters and innocuous non-municipal wastewaters such as clear brines, washwater, and pool drains are not considered industrial process wastes, and may be allowed by the San Diego Water Board under discharge requirements that provide protection to the beneficial uses of the receiving water.

         The San Diego Water Board finds that the discharges of steam condensate, diesel engine cooling water, pier washing wastewater, other miscellaneous facility-related discharges identified in the Discharger's ROWD storm water, and utility vault dewatering wastewater discharged in compliance with the terms of this Order are innocuous non-municipal wastewaters and, as such, are not subject to the above prohibition.

      ii. The Bays and Estuaries Policy also prohibits the discharge or by-passing of untreated wastes. This Order prohibits the discharge and by-passing of untreated waste except for steam condensate, diesel engine cooling water, pier washing wastewater, other miscellaneous facility-related discharges identified in the Discharger's ROWD storm water, and utility vault dewatering wastewater.

   b. The following Principles for the Management of Water Quality in Enclosed Bays and Estuaries, as stated in the Bays and Estuaries Policy, apply to all of California's enclosed bays and estuaries including San Diego Bay and the Tijuana River Estuary:

      i. Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.

ii. Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.

iii. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.

iv. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.

v. Non-point sources of pollutants shall be controlled to the maximum practicable extent.

The San Diego Water Board has considered the Principles for the Management of Water Quality in Enclosed Bays in Estuaries, in adopting this Order. The terms and conditions of this Order are consistent with the Principles for the Management of Water Quality in Enclosed Bays and Estuaries.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the Waters of the U.S. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the CFR: 40 CFR section 122.44(a) requires that permits include applicable technology-based effluent limitations (TBELs) and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** Ship repair and maintenance activities may result in the discharge of pollutants and wastes to Waters of the U.S. Discharge Prohibition III.A prohibits the discharge of wastes associated with ship repair and maintenance activities. This prohibition is based on the requirements of the Enclosed Bays and Estuaries Policy. Water Code section 13260 requires filing an application and ROWD before a discharge can occur. Discharges not described in the application and ROWD, and subsequently in this Order, are prohibited.

2. **Discharge Prohibition III.B.** As discussed in section III.C.2 of this Fact Sheet, the discharges from diesel engine cooling water are considered a new discharge of thermal waste. The specific water quality objective for enclosed bays for new discharges contained in the Thermal Plan states that "thermal waste discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited." Discharge Prohibition III.B is based on the requirements of the Thermal Plan.

3. **Discharge Prohibitions III.C., III.D., III.E and III.F.** These prohibitions are based on the requirements of the Basin Plan.

4. **Discharge Prohibition III.G.** Waste discharges from ship repair and maintenance activities on ships, piers, and shoreside facilities can cause high concentrations of copper, zinc, other metals, and oil and grease in industrial storm water runoff. High concentrations of these

pollutants in the industrial storm water runoff can be toxic to aquatic organisms. Discharge Prohibition III.G is based on the toxicity requirements contained in the Basin Plan and prohibits the discharge of the first ¼ inch (first flush) of storm water runoff from High Risk areas unless the discharge can be demonstrated to meet the limits of this Order.

5. **Discharge Prohibition III.H.** This Prohibition is based on the requirements of the Bays and Estuaries Policy and is consistent with prohibitions established for similar facilities.

6. **Discharge Prohibition III.I.** This Order prohibits the discharge of hazardous substances equal to or in excess of reportable quantities listed in 40 CFR part 117 and/or 40 CFR part 302.

7. **Discharge Prohibition III.J.** This requirement prohibits the discharge of PCBs based on the 303(d) listing for these compounds for San Diego Bay.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards.

The CWA requires that TBELs be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including Biochemical Oxygen Demand 5-day @ 20 ºC (BOD), Total Suspended Solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA also requires USEPA to develop effluent limitations guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of Best Professional Judgment (BPJ) to derive TBELs on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the San Diego Water Board must consider specific factors outlined in 40 CFR section 125.3.

There are no applicable ELGs for the discharges in this Order. As such, the discharges authorized by this Order meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3.

2. Applicable TBELs

a. **Steam Condensate and Diesel Engine Cooling Water.** The Ocean Plan is applicable in its entirety to point source discharges to the ocean. Steam condensate from Discharge Point No. SC-010 discharges to the Pacific Ocean. As such, effluent limitations based on Table 2 of the Ocean Plan for grease and oil, settleable solids, turbidity, and pH have been established in this Order for discharges of steam condensate to the Pacific Ocean at Discharge Point No. SC-010.

Although the Ocean Plan is not directly applicable to enclosed bays such as San Diego Bay, Order No. R9-2009-0081 determined that the salinity and beneficial uses of San Diego Bay are similar to those of ocean Waters of the State, and used the Ocean Plan as a reference for developing discharge specifications, receiving water prohibitions, and narrative limitations to supplement the provisions contained in the CTR, the SIP, and the Bays and Estuaries Policy. As such, Order No. R9-2009-0081 established effluent limitations for steam condensate at Discharge Points SC-001 through SC-66 and diesel engine cooling water discharges at Discharge Points CW-001 through CW-004 to the San Diego Bay, consistent with Table 2 of the Ocean Plan for grease and oil, settleable solids, turbidity, and pH. Steam condensate discharges except SC-001 through SC-010 and diesel engine cooling water discharges except CW-001 have been eliminated. Consistent with federal and state anti-backsliding requirements, effluent limitations for grease and oil, settleable solids, turbidity, and pH have been carried over for discharges of steam condensate and diesel engine cooling water to the San Diego Bay.

Table F-~~12.~~14. Applicable Numeric Effluent Limitations from the Ocean Plan

Parameter	Units	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	--	--	[1]

[1] Within limits of 6.0 – 9.0 at all times

b. **Utility Vaults**. The State Water Board found in section V.B.1.b of the Fact Sheet to Order No. 2014-0174-DWQ that it is not feasible to establish numeric effluent limitations for pollutants in discharges from utility vaults and underground structures. Instead, the State Water Board included a provision in Order No. 2014-0174-DWQ requiring implementation of pollution prevention practices to control and abate the discharge of pollutants to surface waters, achieve compliance utilizing BAT and BCT requirements, and achieve compliance with applicable water quality standards. Federal Regulations at 40 CFR sections 122.44(k)(3) and (4) authorize the San Diego Water Board to require BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible and when the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. Consistent with the requirements of the Order No. 2014-0174-DWQ and Order No. R9-2009-0081 as modified by Order No. R9-2010-0057, this Order includes a provision requiring the Discharger to continue the implementation and maintenance of their BMPs and Pollution

Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan) which includes BMPs to reduce the discharge of pollutants from utility vault and manhole dewatering. In addition, this Order establishes Numeric Action Levels (NALs) for utility vault discharges consistent with NALs in Order No. 2014-0174-DWQ.

c. **Pier Washing**. Due to the nature of activities associated with discharges from pier washing, it is impractical to collect and treat the associated wastewaters prior to discharge. Therefore, the San Diego Water Board finds that it is not feasible to establish numeric effluent limitations for pollutants in discharges from pier washing. In accordance with 40 CFR sections 122.44(k)(3) and (4), the San Diego Water Board finds that the implementation of BMPs in lieu of numeric effluent limitations are appropriate. This Order includes a provision requiring the implementation of BMPs to control and abate the discharge of pollutants from pier washing.

d. **Small Military Base MS4.** In accordance with 40 CFR section 122.44(k), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits. The Discharger must implement BMPs that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. This Order requires the Discharger to develop and implement a SWMP that describes BMPs, measurable goals, and timetables for implementation in the six minimum control measures identified in 40 CFR section 122.34(b). This approach is consistent with the requirements of the current Naval Base San Diego Permit (Order No. R9-2013-0064) and Navy Base Point Loma Permit (Order No. R9-2014-0037) which include regulation of Phase II MS4 storm water discharges.

e. **Industrial Storm Water**. In accordance with 40 CFR section 122.44(k), Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 determined that the implementation of BMPs for the discharge of industrial storm water were appropriate. To carry out the purpose of the CWA, Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 required the Discharger to develop and implement a SWPPP, as authorized by CWA section 304(e) and section 402(p), for toxic pollutants and hazardous substances, and for the control of storm water discharges. The requirement to implement an appropriate SWPPP for areas associated with industrial activity is retained from Order No. R9-2009-0081 as modified by Order No. R9-2010-0057.

In addition to the retention of a SWPPP, this Order establishes ~~Numeric Action Levels (~~NALs~~)~~ for storm water from Industrial High Risk Areas and Industrial Low Risk Areas in lieu of benchmarks.

The statewide Industrial Storm Water General Permit was adopted on April 1, 2014, by the State Water Board and became effective on July 1, 2015. This statewide Industrial Storm Water General Permit contains NALs based on benchmarks in USEPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)* which became effective May 27, 2009. Consistent with the intent of the State Water Board, this Order establishes NALs with a tiered compliance strategy. The San Diego Water Board finds that the State Water Board's NALs serve as an appropriate set of technology-based, measureable criteria that demonstrate compliance with BAT/BCT.

f. **Non-storm water Discharges.** Non-storm water discharges as described in section IV.F of this Order include a wide variety of sources and may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections must be addressed through structural as well as non-

structural BMPs. The San Diego Water Board recognizes, however, that certain non-storm water discharges may be necessary for general operation. Therefore, this Order authorizes such discharges provided they meet certain conditions that will minimize the discharge of pollutants to the receiving waters.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Section 122.44(d)(1)(i) of 40 CFR mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels with the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but no numeric criterion or objective for the pollutant has been established, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state' s narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to ~~the~~ San Diego Bay, ~~and~~ the Tijuana River Estuary, a tributary to the San Luis Rey River watershed, Morena Reservoir, and waters in the Canyon City Hydrologic Area contained in the Basin Plan are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving waters.

b. 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 industrial process discharges to ~~the~~ San Diego Bay. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply: in accordance with 40 CFR section 131.38(c)(3), freshwater criteria apply to areas where salinities are at or below 1 part per thousand (ppt) 95 percent or more of the time. The San Diego Water Board has determined that because the discharges are to San Diego Bay, saltwater CTR criteria are applicable. The CTR criteria for saltwater aquatic life or human health for consumption of

organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of ~~the~~ San Diego Bay, a water of the U.S. in the vicinity of the discharges.

The SIP procedures for implementation of CTR and NTR criteria are not explicitly applicable to storm water discharges. However, the toxicity objectives contained in the Basin Plan and the Bays and Estuary Policy are applicable to the discharge of storm water from Facility to San Diego Bay, the Tijuana River Estuary, a tributary to the San Luis Rey River watershed, Morena Reservoir, and waters in the Canyon City Hydrologic Area~~the San Diego Bay~~. The applicable toxicity limitations are discussed in this section of the Fact Sheet.

The SIP procedures for implementation of CTR and NTR criteria are applicable to non-storm water discharges. The non-storm water discharges from the Facility to San Diego Bay include discharges associated with steam condensate, diesel engine cooling water, pier washing, and utility vault and manhole dewatering. A Reasonable Potential Analysis (RPA) was conducted for the non-storm water discharges to the San Diego Bay using all the available data. All data available for a type (e.g., steam condensate) was used to categorize the type of discharge and used for evaluating reasonable potential.

- Representative monitoring data for utility vault and manhole dewatering discharges was available from September 2009 through June 2015.
- Representative monitoring data for discharges of diesel generator cooling water was available from July 2009 through August 2011 when the discharge last occurred.
- Representative monitoring data for steam condensate was available from August 2009 through June 2015.
- Representative monitoring data for pier washing water was available from September 2009 through June 2015.
- Receiving water monitoring in the vicinity of the discharges was available from January 2011 through June 2015.

c. For all ocean Waters of the State, the Ocean Plan establishes the beneficial uses summarized in section III.C.3 of this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. Table 1 of the Ocean Plan establishes numeric water quality objectives that are applicable to all discharges within the jurisdiction of the Ocean Plan.

The Ocean Plan procedures for implementation of Table 1 criteria are applicable to non-storm water discharges. The non-storm water discharges from the Facility to San Diego Bay include the discharge of steam condensate at Discharge Point No. SC-010. A RPA was conducted for the non-storm water discharges to the Pacific Ocean. All data available for steam condensate was used to categorize the discharge and used for evaluating reasonable potential.

- Representative monitoring data for steam condensate was available from August 2009 through June 2015.
- Receiving water monitoring in the vicinity of the discharges was available from January 2011 through June 2015.

Tables F-13 and F-14 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent. These criteria were used in conducting the RPAs for this Order.

Table F-~~13.~~15. Applicable CTR/NTR Water Quality Criteria with Detectable Concentrations

Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
		Freshwater		Saltwater		Human Health for Consumption of:	
		Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms Only
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Antimony, Total Recoverable	4,300			--	--		4,300
Arsenic, Total Recoverable	36			69	36		--
Beryllium, Total Recoverable	No Criteria			--	--		--
Cadmium, Total Recoverable	9.36			42.25	9.36		--
Chromium (III), Total Recoverable	No Criteria			--	--		--
Chromium (VI), Total Recoverable	50			1,100	50		--
Copper, Total Recoverable	3.73			5.78	3.73		--
Cyanide, Total Recoverable	1			1	1		--
Lead, Total Recoverable	8.52			220.82	8.52		--
Mercury, Total Recoverable	0.051			--	--		0.051
Nickel, Total Recoverable	8.28			74.75	8.28	Not Applicable	4,600
Silver, Total Recoverable	2.24			2.24	--		--
Selenium, Total Recoverable	71			290	71		--
Thallium, Total Recoverable	6.3			--	--		6.3
Zinc, Total Recoverable	86			95.14	86		--
2,3,7,8-TCDD	$1.4x10^{-8}$			--	--		$1.4x10^{-8}$
Chlorodibromomethane	34			--	--		34
Methylene Chloride	1,600			--	--		1,600
4-Nitrophenol	14			--	--		14
Benzo(a)Anthracene	0.049			--	--		0.049
Benzo (a) Pyrene	0.049			--	--		0.049
Benzo (b) Fluoranthene	0.049			--	--		0.049
Bis (2-ethylhexyl) Phthalate	5.9			--	--		5.9
Butylbenzyl Phthalate	5,200			--	--		5,200
Chrysene	0.049			--	--		0.049
Diethyl Phthalate	120,000			--	--		120,000
Indeno(1,2,3-cd)Pyrene	0.049			--	--		0.049

Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
		Freshwater		Saltwater		Human Health for Consumption of:	
		Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms Only
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Pyrene	11,000			--	--		11,000
Aldrin	0.00014			--	--		0.00014
alpha-BHC	0.0130			--	--		0.0130
beta-BHC	0.046			--	--		0.046
gamma-BHC	0.063			--	--		0.063
delta-BHC	No Criteria			--	--		No Criteria
Chlordane	0.00059			--	--		0.00059
4,4-DDT	0.00059			--	--		0.00059
4,4-DDE	0.00059			--	--		0.00059
4,4-DDD	0.00084			--	--		0.00084
Dieldrin	0.00014			--	--		0.00014
alpha-Endosulfan	0.0087			--	--		0.0087
beta-Endosulfan	0.0087			--	--		0.0087
Endosulfan Sulfate	240			--	--		240
Endrin	0.0023			--	--		0.0023
Endrin Aldehyde	0.81			--	--		0.81
Heptachlor	0.00021			--	--		0.00021
Heptachlor Epoxide	0.00011			--	--		0.00011

Table F-~~14.~~16. Applicable Ocean Plan Water Quality Objectives with Detectable Concentrations

Constituent	Selected Criteria	Water Quality Objectives (µg/L)			
		6-Month Median	30-day Average	Daily Maximum	Instantaneous Maximum
Antimony, Total Recoverable	1,200	--	1,200	--	--
Arsenic, Total Recoverable	8	8	--	32	80
Copper, Total Recoverable	3	3	--	12	30
Lead, Total Recoverable	2	2	--	8	20
Nickel, Total Recoverable	5	5	20	--	50
Zinc, Total Recoverable	20	20	--	80	200
TCDD Equivalents	$3.9x10^{-9}$	--	$3.9x10^{-9}$	--	--
Bis(2-Ethylhexyl)Phthalate	3.5	--	3.5	--	--

b. **Dilution Credits.** Section 1.4.2 of the SIP establishes procedures for granting mixing zones and the assimilative capacity of the receiving water. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

In the absence of a dilution credit, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are applied end-of-pipe with no allowance for dilution within the receiving water. This Order uses a dilution of zero.

3. Determining the Need for WQBELs

Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an instream excursion above a narrative or numerical water quality standard.

The San Diego Water Board conducted the RPA for discharges to the San Diego Bay in accordance with section 1.3 of the SIP. The RPA for the discharge of steam condensate to the Pacific Ocean was conducted consistent with the requirements of Appendix VI of the Ocean Plan. A summary of the results for the parameters which demonstrated reasonable potential, for each applicable discharge, is provided in the tables below.

Table F-~~15.~~17. Summary of CTR/NTR RPA Results (Discharges to San Diego Bay)

Discharge Location No.	Parameter	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Reason[1,2]
Steam Condensate to San Diego Bay (SC-001 through SC-009)	Arsenic, Total Recoverable	2.9	99	36	B > C
	Copper, Total Recoverable	170	5.9	3.73	MEC > C
	Lead, Total Recoverable	15.6	2.45	8.5	MEC > C
	Nickel, Total Recoverable	2.2	23	8.3	B > C
	Selenium, Total Recoverable	0.35	330	71	B > C
	Zinc, Total Recoverable	1,100	27	86	MEC > C
	2,3,7,8-TCDD	0.00000114	<0.000000463	$1.4x10^{-8}$	MEC > C
	Bis(2-Ethylhexyl)Phthalate	16	1.2	5.9	MEC > C
	Aldrin	0.01	0.003	0.00014	MEC > C
	4,4'-DDT	0.009	0.02	0.00059	B > C
	4,4'-DDE	0.005	0.002	0.00059	B > C
	4,4'-DDD	0.004	0.002	0.00084	B > C
	Heptachlor	0.02	0.004	0.00021	MEC > C
	Heptachlor Epoxide	0.1	0.002	0.00011	MEC > C
Diesel Engine Cooling Water (CW-001)	Arsenic, Total Recoverable	84	63	36	MEC > C
	Chromium (VI), Total Recoverable	150	2.18	50	MEC > C
	Copper, Total Recoverable	280	9.75	3.73	MEC > C
	Lead, Total Recoverable	16	2.45	8.51	MEC > C
	Nickel, Total Recoverable	46	23	8.28	MEC > C
	Selenium, Total Recoverable	1.2	290	71.14	B > C, pollutant detected in

Discharge Location No.	Parameter	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Reason[1,2]
					effluent
	Zinc, Total Recoverable	380	<27	86	MEC > C
	4,4'-DDT	0.039	<0.002	0.00059	MEC > C
	4,4'-DDE (linked to DDT)	0.018	<0.0002	0.00059	MEC > C
	4,4'-DDD	0.021	<0.0007	0.00084	MEC > C
Utility Vault and Manhole Dewatering (UV-001 through UV-013)	Arsenic, Total Recoverable	47	99	36	B > C, pollutant detected in effluent
	Cadmium, Total Recoverable	9.89	<0.03	9.36	MEC > C
	Copper, Total Recoverable	910	5.9	3.73	MEC > C
	Lead, Total Recoverable	32	2.45	8.51	MEC > C
	Mercury, Total Recoverable	0.17	<0.03	0.051	MEC > C
	Nickel, Total Recoverable	35.3	23	8.28	MEC > C
	Selenium, Total Recoverable	31	330	71	B > C, pollutant detected in effluent
	Zinc, Total Recoverable	870	<27	86	MEC > C
	Benzo(a)Anthracene	2.7	0.02	0.049	MEC > C
	Benzo(a)Pyrene	0.11	<0.02	0.049	MEC > C
	Benzo(b)Fluoranthene	0.17	<0.03	0.049	MEC > C
	Bis(2-Ethylhexyl)Phthalate	240	1.2	5.9	MEC > C
	Chrysene	1.7	<0.02	0.049	MEC > C
	Indeno(1,2,3-cd)Pyrene	0.052	<0.06	0.049	MEC > C
	Aldrin	0.009	0.003	0.00014	MEC > C
	alpha-BHC	0.03	0.002	0.013	MEC > C
	beta-BHC	0.11	0.008	0.046	MEC > C
	Chlordane	0.009	<0.007	0.00059	MEC > C
	4,4'-DDT	0.3	0.02	0.00059	MEC>=C
	4,4'-DDE (linked to DDT)	0.009	0.002	0.00059	MEC>=C
	4,4'-DDD	0.19	0.002	0.00084	MEC>=C
	Dieldrin	0.01	0.002	0.00014	MEC > C
	alpha-Endosulfan	0.026	0.003	0.0087	MEC > C
	beta-Endosulfan	0.02	0.03	0.0087	MEC > C
	Endrin	0.05	0.003	0.0023	MEC > C
	Heptachlor	0.23	0.004	0.00021	MEC > C
	Heptachlor Epoxide	0.92	0.002	0.00011	MEC > C
	PCBs Sum	0.45	<3.43	0.00017	MEC > C
Pier Washing (PW-001)	Arsenic, Total Recoverable	21	99	36	B > C, pollutant detected in effluent
	Copper, Total Recoverable	55	5.9	3.7	MEC > C
	Lead, Total Recoverable	12	2.45	8.5	MEC > C
	Mercury, Total Recoverable	0.12	<0.03	0.051	MEC > C
	Nickel , Total Recoverable	8.4	23	8.3	MEC > C
	Selenium, Total Recoverable	3.3	330	71	B > C, pollutant detected in effluent
	Zinc, Total Recoverable	1,020	27	86	MEC > C
	Aldrin	0.04	0.003	0.00014	MEC > C
	alpha-BHC	0.1	0.002	0.013	MEC > C

Discharge Location No.	Parameter	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Reason[1,2]
	beta-BHC	0.3	0.008	0.046	MEC > C
	4,4'-DDT	0.02	0.02	0.00059	MEC > C
	4,4'-DDE (linked to DDT)	0.02	0.002	0.00059	MEC > C
	alpha-Endosulfan	0.026	0.003	0.0087	MEC > C
	beta-Endosulfan	0.03	0.03	0.0087	MEC > C
	Heptachlor	0.04	0.004	0.00021	MEC > C
	Heptachlor Epoxide	0.02	0.002	0.00011	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.

Table F-~~16.~~18. Summary of Ocean Plan RPA Results (Discharges to the Pacific Ocean)

Discharge Location No.	Parameter	Number of Samples	Maximum Effluent Concentration (MEC) (µg/L)	Background (B) (µg/L)	Criteria (C) (µg/L)	Endpoint[1]
Steam Condensate to the Pacific Ocean (SC-010)	Antimony, Total Recoverable	6	1.5	0	1,200	3
	Arsenic, Total Recoverable	6	2.9	3	8	3
	Copper, Total Recoverable	146	170	2	3	1
	Lead, Total Recoverable	146	15.6	0	2	1
	Nickel, Total Recoverable	6	2.2	0	5	3
	Zinc, Total Recoverable	6	1,100	8	20	1
	TCDD Equivalents	160	0.0000139	0	3.9×10^{-9}	1
	Bis(2-Ethylhexyl)Phthalate	147	16	0	3.5	1

[1] Endpoint1 = Reasonable potential exists, limit required, establish monitoring.
Endpoint3 = The RPA is inconclusive. Monitoring has been established for these parameters.

4. WQBEL Calculations

a. **Utility Vaults.** As shown in Table F-15, the San Diego Water Board finds that discharges from utility vault and manhole dewatering have the reasonable potential to exceed water quality criteria for several priority pollutants. However, section V.B.2 of the Fact Sheet to Order No. 2014-0174-DWQ finds that the State Water Board believes that it is infeasible to establish numeric effluent limitations for utility vault and underground structure discharges due, in part to: discharges occurring intermittently and for short durations; dewatering of utility vaults and underground structures provide essential public services needs to be conducted promptly to facilitate restoration of those services; the uncertainty of the volume and characteristics of the discharge from a utility vault or an underground structure; and the general lack of data and information to characterize discharges from utility vaults. Consistent with Order No. 2014-0174-DWQ and Order No. R9-2009-0081 as modified by Order No. R9-2010-0057, the San Diego Water Board is not establishing numeric effluent limitations for utility vaults and manholes in this Order. This Order includes a provision requiring the Discharger to continue the

implementation and maintenance of their Utility Vault Plan which includes BMPs to reduce the discharge of pollutants from utility vault and manhole dewatering.

b. **Discharges associated with pier washing**. Based on BPJ, the San Diego Water Board finds that discharges associated with pier washing exhibit reasonable potential to exceed water quality criteria for a number of priority pollutants. The minimal flow, duration, infrequent and disperse nature of this discharges precludes the implementation of practical treatment systems. Therefore, the San Diego Water Board finds that it is not feasible to establish numeric effluent limitations for pollutants in this discharge. In lieu of numeric effluent limitations, the San Diego Water Board finds that the implementation of BMPs is sufficient to adequately protect receiving waters. This Order includes a provision requiring the implementation of BMPs to control and abate the discharge of pollutants from pier washing.

c. **The Thermal Plan.** The Thermal Plan applies to steam condensate discharges and diesel engine cooling and was adopted by the State Water Board on May 18, 1972.

Steam condensate discharges are considered discharges of elevated temperature wastes and must comply with the following water quality objectives for enclosed bays and for coastal waters. The Discharger installed the steam condensate system prior to adoption of the Thermal Plan on May 18, 1972, so this steam condensate discharge is an existing discharge. A numeric effluent limitation is not provided for existing discharges. The following Thermal Plan water quality objectives have been applied as a narrative receiving water limitation. Due to the low discharge rate of steam condensate into the receiving water, the discharge is not expected to degrade beneficial uses due to elevated temperatures.

Thermal Plan water quality objective for existing discharges to enclosed bays:

> **"***Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses.*"

Thermal Plan water quality objective for existing discharges to coastal waters:

> "*Elevated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses and areas of special biological significance.*"

Diesel engine cooling water discharges are considered discharges of thermal waste. Because it commenced after the May 18, 1972, Thermal Plan adoption date, the discharge of diesel engine cooling water constitutes a new discharge of a thermal waste. The following Thermal Plan water quality objective for new thermal discharges to enclosed bays is implemented directly as a discharge prohibition:

> *"Thermal waste discharges having a maximum temperature greater than 4°F above the nature temperature of the receiving water are prohibited."*

d. **pH.** The WQBEL for pH for discharges to the San Diego Bay 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.*" This limitation has also been applied in this Order to discharges of steam condensate to the Pacific Ocean.

e. **SIP Effluent Limitation Calculations.** If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in

accordance with one or more of the three procedures contained in section 1.4 of the SIP where numeric effluent limitations are feasible. These procedures include:

i. If applicable and available, use the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the San Diego Water Board.

WQBELs are calculated following the procedures in section 1.4 of the SIP. Where an applicable primary MCL or secondary MCL is more stringent than a CTR/NTR parameter, the MCL has been used as the applicable human health criteria for CTR/NTR parameter.

WQBELs Calculation Example:

Using total recoverable copper for the discharge of steam condensate as an example, the following demonstrates how WQBELs were established for CTR/NTR parameters in this Order.

The process for developing these limitations and performance goals is consistent with section 1.4 of the SIP.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limitation, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C>B$, and

$ECA = C$ when $C \leq B$,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit, and

B = The ambient background concentration.

As discussed above, this Order does not allow for dilution (D=0); therefore, for copper:

$ECA_{acute} = 5.8$ µg/L

$ECA_{chronic} = 3.7$ µg/L

$ECA_{human\ health}$ = Not Applicable

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor

(multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA = ECA \times Multiplier_{99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. It the data set is greater than 10 samples, and at least 20 percent of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

For copper in steam condensate, over 10 samples were available and only 2 percent were non-detect. A CV of 2.08 was calculated by dividing the standard deviation by the mean of the data set. Thus, the CV shall be set equal to 2.08 for all CTR/NTR parameters.

For copper in steam condensate, the following data was used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals).

No. of Samples	CV	ECA Multiplier$_{acute}$	ECA Multiplier$_{chronic}$
147	1.81	0.13	0.22

$LTA_{acute} = 5.8\ \mu g/L \times 0.13 = 0.73\ \mu g/L$

$LTA_{chronic} = 3.7\ \mu g/L \times 0.22 = 0.81\ \mu g/L$

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For copper, the most limiting LTA is LTA_{acute}

$LTA_{copper} = LTA_{acute} = 0.73\ \mu g/L$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For copper, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	1.81	7.97	2.64

Copper

$AMEL_{aquatic\ life}$ = 0.73 µg/L x 2.64 = 1.92 µg/L

$MDEL_{aquatic\ life}$ = 0.73 µg/L x 7.97 = 5.78 µg/L

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health.}$ For copper, there is no applicable human health criteria. Thus, heptachlor in steam condensate has been used as an example for calculating applicable human health effluent limitations below.

Heptachlor

$AMEL_{human\ health}$ = $ECA_{human\ health}$= 0.00021 µg/L

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of $Multipler_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples. Heptachlor has a CV of 0.6 because there are fewer than 10 samples.

$MDEL_{human\ health}$ = $AMEL_{human\ health}$ x ($Multiplier_{MDEL}$/ $Multiplier_{AMEL}$)

For the default CV of 0.6:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.1	1.6	2.0

For heptachlor:

$MDEL_{human\ health}$ = 0.00021 µg/L x 2.0 = 0.00042 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order. In neither of the examples were both aquatic life and human health criteria applicable to both of the criteria, thus this step is not applicable for copper or heptachlor.

For discharges of steam condensate, the resulting effluent limitations are at least as stringent as those established in Order No. R9-2009-0081, with the exception of the MDEL for bis(2-ethylhexyl)phthalate. The MDEL of 13.7 µg/L would be less stringent than the MDEL of 11.8 µg/L established in the previous Order, thus the previous

MDEL has been carried over consistent with state and federal anti-backsliding requirements.

For discharges of diesel engine cooling water, the resulting effluent limitations are at least as stringent as those established in Order No. R9-2009-0081, with some exceptions. The resulting AMEL for lead of 6.3 µg/L is less stringent than the AMEL of 5.8 µg/L established in the previous Order, thus the previous AMEL has been carried over consistent with state and federal anti-backsliding requirements. Mercury did not demonstrate reasonable potential and the effluent limitation for mercury was removed consistent with state and federal anti-backsliding requirements.

A summary of the applicable CTR/NTR effluent limitations is provided below:

Table F-~~17.~~19. CTR-based Effluent Limitations

Parameters	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Steam Condensate				
Arsenic, Total Recoverable	µg/L	30	--	59
Copper, Total Recoverable	µg/L	1.9	--	5.8
Lead, Total Recoverable	µg/L	3.4	--	12
Nickel, Total Recoverable	µg/L	6.8	--	14
Selenium, Total Recoverable	µg/L	58	--	120
Zinc, Total Recoverable	µg/L	47	--	95
2,3,7,8-TCDD	µg/L	$1.4x10^{-8}$	--	$2.8x10^{-8}$
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	--	15 [1]
Aldrin	µg/L	0.00014	--	0.00028
4,4'-DDT	ug/L	0.00059	--	0.00118
4,4'-DDE	ug/L	0.00059	--	0.00118
4,4'-DDD	ug/L	0.00084	--	0.00169
Heptachlor	µg/L	0.00021	--	0.00042
Heptachlor Epoxide	µg/L	0.00011	--	0.00022
Diesel Engine Cooling Water				
Arsenic, Total Recoverable	µg/L	20	--	62
Chromium VI, Total Recoverable	µg/L	27	--	85
Copper, Total Recoverable	µg/L	2.0	--	5.8
Lead, Total Recoverable	µg/L	6.3[2]	--	15
Nickel, Total Recoverable	µg/L	5.7	--	15
Selenium, Total Recoverable	µg/L	58	--	120
Zinc, Total Recoverable	µg/L	37	--	95
4,4-DDT	µg/L	0.00059	--	0.0017
4,4-DDE	µg/L	0.00059	--	0.0012
4,4-DDD	µg/L	0.00084	--	0.0017

~~21~~ Current Order R9-2009-0081 has an effluent limitation of 12 µg/L for Bis(2-Ethylhexyl)Phthalate which is more stringent so this Order establishes an MDEL of 12 µg/L.

~~32~~ Current Order R9-2009-0081 has an effluent limitation of 5.8 µg/L for lead which is more stringent so this Order establishes an MDEL of 5.8 µg/L.

f. **Ocean Plan Effluent Limitation Calculations.** If a reasonable potential exists to exceed applicable water quality objectives, then a WQBEL must be established consistent with the requirements of the Ocean Plan.

Effluent limitations for water quality objectives listed in Table 1 of the Ocean Plan, with the exception of acute toxicity and radioactivity, are determined through the use of the following equation:

Equation 1: Ce = Co + Dm (Co - Cs)

where:

Ce = the effluent concentration limit, µg/L.

Co = the concentration (water quality objective) to be met at the completion of initial* dilution, µg/L.

Cs = background seawater concentration, µg/L. Background seawater concentrations are specified in Table 3 of the Ocean Plan for arsenic (3 µg/L), copper (2 µg/L), mercury (0.0005 µg/L), silver (0.16 µg/L), and zinc (8 µg/L). For all other Table 1 parameters, Cs = 0 µg/L.

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater. (There is no initial dilution for this discharge.)

Because there is no initial dilution for the discharge of steam condensate from Discharge Point No. SC-010, the effluent limitations will be equal to the objectives (i.e. Ce = Co).

In addition to concentration-based effluent limitations, section C.4.j of the Ocean Plan requires mass-based effluent limitations calculated based on the concentration-based effluent limitations and a maximum flow rate.

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

where: Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively. 8.34 is a conversion factor.

However, due to the type of discharge (steam condensate), and periodic and low flow, accurate flow measurement to evaluate compliance with a mass-based effluent limitation is not feasible. Further, due to the nature of the discharge, it is not possible for the effluent to be further diluted and large fluctuations in flow are not expected to occur. Consistent with the previous Order, this Order establishes concentration-based effluent limitations for discharges to the Pacific Ocean. Concentration-based effluent limitations are anticipated to be protective of water quality.

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

Table F-~~18.~~20. Summary Applicable WQBELs for Steam Condensate to the Pacific Ocean

Parameter	Units	Effluent Limitations			
		6-Month Median	30-Day Average	Maximum Daily	Instantaneous Maximum
Copper, Total Recoverable	µg/L	3	--	12[1]	30
Lead, Total Recoverable	µg/L	2	--	8	20
Zinc, Total Recoverable	µg/L	20	--	80	200
TCDD Equivalents	µg/L	--	$3.9x10^{-9}$	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	--	3.5	--	--

[1] Current Order R9-2009-0081 has an effluent limitation of 5.8 µg/L which is more stringent so this Order establishes an MDEL of 5.8 µg/L.

5. Whole Effluent Toxicity (WET)

a. Background and Rationale

The Basin Plan defines toxicity as the adverse response of organisms to chemicals or physical agents.

The Basin Plan establishes a narrative water quality objective for toxicity:

"All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

WET testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration.

Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 established acute toxicity effluent limitations for storm water discharges. The Discharger reported 105 failed acute toxicity tests from June 2009 to June 2014 which includes the 2013/2014 monitoring year, indicating the presence and reasonable potential for toxicity in the discharge of storm water from the Facility. Further, the presence of numerous priority pollutants present in the industrial wastewaters indicate reasonable potential for toxicity within those discharges as well.

In discussions with USEPA Region 9, USEPA has informed San Diego Water Board staff that the application of chronic toxicity monitoring and effluent limitations 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 organism mortality. Chronic effects, such as detrimental physiological responses (affecting fertilization, growth, reproduction, etc.) may be present, even when acute effects such as the death of an organism are not apparent. The use of chronic toxicity allows for a more accurate determination of the narrative water quality objective, which specifies *"detrimental physiological responses"*. Many detrimental physiological responses are not addressed when the test is limited to simply percent survival.

Based on the USEPA Region 9 guidance, chronic toxicity monitoring and effluent limitations are established in this Order for the discharge of industrial process waters (steam condensate and diesel engine cooling water) at the Facility. Because chronic

toxicity is considered to be a more conservative indicator of toxicity, and the monitoring of all industrial process wastewater sample locations for both acute and chronic toxicity would be costly and redundant, the monitoring requirements and effluent limitations for acute toxicity have been removed for industrial process water based on the application of the more conservative chronic toxicity requirements. If the Discharger complies with effluent limitations for chronic toxicity, they will achieve water quality greater than that necessary to achieve compliance with acute toxicity effluent limitations.

The State Water Board has not adopted a policy or plan for regulating toxicity in storm water discharges. NBC currently has acute toxicity effluent limitations for industrial storm water discharges which they have not been able to achieve. An acute toxicity effluent limitation from Order R9-2009-0081 as modified by Order No. R9-2010-0057 has been carried over to this Order for industrial storm water and incorporates USEPA's guidance on the Test of Significant Toxicity (TST) approach. This Order also allows the Navy to conduct a study on chronic toxicity in industrial storm water discharges to evaluate appropriate instream waste concentration (IWC) for discharges to San Diego Bay. Because there is no established policy and the potential effects on receiving waters from chronic toxicity in industrial storm water discharges are not well understood, this Order maintains the acute toxicity effluent limitation for Industrial High Risk Areas storm water discharges. The San Diego Water Board may choose to establish end-of-pipe chronic toxicity effluent limitations for Industrial High Risk Areas storm water discharges in the future. In developing such a limitation, an IWC of 100 percent will be assumed unless mixing zones or dilution credits are authorized by the San Diego Water Board.

Navy Acute Toxicity Effluent Limitation Challenge

During the previous renewal of the Discharger's NPDES permits for NBPL and NBC in 2002 and 2003, the Discharger challenged the acute toxicity limitation, asserting that the acute toxicity limitation is not based on scientific data, that it is overly stringent for protecting water quality, and that diversion of all storm water runoff to the sanitary sewer is the only effective BAT/BCT for meeting the effluent limitation. The Discharger's challenge to the acute toxicity effluent limitation is addressed below because this Order establishes acute toxicity effluent limitations for storm water and chronic toxicity effluent limitations for applicable industrial wastewaters.

The acute toxicity effluent limitation established in Order No. R9-2009-0081 was established to implement the Basin Plan water quality objective for toxicity in receiving waters. The effluent limitation was derived from, and is essentially the same as, the acute toxicity discharge standard contained in the Bays and Estuaries Policy.

The Discharger's NPDES permits contained provisions which allowed the Discharger to recommend, after conducting a required study, alternative scientifically valid survival rates for acute exposure to discharges of storm water from industrial areas at the Discharger's facilities. The Discharger conducted a study to develop a scientifically defensible, and appropriate, toxicity limitation for industrial storm water discharges from Naval facilities to San Diego Bay. The results of the study were summarized in a Final Report, *Storm Water Toxicity Evaluation Conducted at: Naval Station San Diego, Naval Submarine Base San Diego, Naval Amphibious Base Coronado, and Naval Air Station North Island*, dated May 2006.

The Discharger's final recommendations included in the report are summarized below:

- The use of appropriate USEPA WET test methods and data evaluation when declaring a test result as toxic.
- Acknowledge WET method variability and the minimum significant difference that laboratory testing can provide in declaring a toxic result.
- Consideration of realistic exposure conditions when using WET testing to infer toxicity in the receiving water.

In addition, the Discharger submitted comments regarding the current acute toxicity requirements. Comments of significant importance are summarized below:

- The Discharger requested that the existing storm water toxicity testing language be revised to require a statistical comparison of discharge toxicity results with control sample toxicity results using a student t-test, to determine whether a discharge is toxic or not.
- The Discharger requested that the existing storm water toxicity testing language be revised to require the use of percent minimum significant difference, using the 10^{th} and 75^{th} percentiles as lower and upper bounds, respectively, to account for inherent variability of toxicity testing procedures to determine whether a discharge is toxic or not.
- The Discharger requested that the existing storm water toxicity discharge specification language be revised according to two proposed alternatives that presumably consider realistic exposure conditions to infer toxicity in the receiving water.

San Diego Water Board staff stated in a memorandum to the Executive Officer dated August 22, 2006 that the Discharger's proposed toxicity alternatives should not be adopted in their entirety and, "*Toxicity in storm water discharges should not be ignored just because the causative agent is diluted in bay water. Testing times should not be shortened to ensure that the variability inherent to storm water discharges is not causing low level toxicity that may be missed in an acute test.*" However, Order R9-2009-0081 established acute toxicity effluent limitations basted on comparison of the discharge and a control using a statistical analysis.

Toxicity Rationale

The San Diego Water Board has considered the following information in developing toxicity monitoring and effluent limitations:

- The May 2006 storm water toxicity study performed by the Discharger;
- Comments received from the Discharger;
- Discussions with USEPA Region 9;
- USEPA's June 2010 guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, An Additional Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data (*EPA 833-R-10-003*);*
- USEPA's June 2010 guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document, An Additional*

Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data (EPA 833-R-10-004);

- The narrative water quality for objective for toxicity contained in the Water Quality Control Plan for the San Diego Basin (Basin Plan); and
- An interpretation of applicable state and federal regulations.

The implementation of toxicity monitoring requirements and effluent limitations for discharges to San Diego Bay and Pacific Ocean are based on a new statistical approach developed by USEPA that assesses the whole effluent toxicity measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce called the TST. This new approach is a statistical method that uses hypothesis testing techniques based on research and peer-reviewed publications. The approach examines whether an effluent at the critical concentration and a control within a whole effluent toxicity test differ by an unacceptable amount (the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive).

Organism response to the effluent and control are unlikely to be exactly the same, even if no toxicity is present. They might differ by such a small amount that even if statistically significant, it would be considered negligible biologically. A more useful approach could be to rephrase the null hypothesis, "Is the mean response in the effluent less than a defined biological amount?" The Food and Drug Administration has successfully used that approach for many years to evaluate drugs, as have many researchers in other biological fields. In that approach, the null hypothesis is stated as the organism response in the effluent is less than or equal to a fixed fraction (*b*) of the control response (e.g., 0.75 of the control mean response):

$$\text{Null hypothesis: Treatment mean} \leq b * \text{Control mean}$$

To reject the null hypothesis above means the effluent is considered non-toxic. To accept the null hypothesis means the effluent is toxic.

Before the TST null hypothesis expression could be recommended by USEPA, certain Regulatory Management Decisions (RMDs) were needed, including what effect level in the effluent is considered unacceptably toxic and the desired frequency of declaring a truly negligible effect within a test non-toxic.

In the TST approach, the *b* value in the null hypothesis represents the threshold for unacceptable toxicity. For chronic toxicity, the USEPA made the RMD that the *b* value is set at 0.75, which means that a 25 percent effect (or more) at the IWC is considered evidence of unacceptable chronic toxicity. For acute toxicity, the *b* value is set at 0.80.

USEPA's RMDs for the TST method are intended to identify unacceptable toxicity most of the time when it occurs, while also minimizing the probability that the IWC is declared toxic when in fact it is truly acceptable. Additional RMDs by USEPA to achieve this objective were made regarding acceptable maximum false positive (β using a TST approach) and false negative rates (α using a TST approach).

In the TST approach, the RMDs are defined as follows:

1. Declare a sample toxic between 75 – 95 percent of the time ($0.05 \leq \alpha \leq 0.25$) when there is unacceptable toxicity.

2. Declare an effluent non-toxic no more than 5 percent of the time ($\beta \leq 0.05$) when the effluent effect at the critical effluent concentration is 10 percent.

USEPA used valid toxicity data from approximately 2,000 WET tests to develop and evaluate the TST approach. The TST approach was tested using nine different whole effluent toxicity test methods comprising twelve biological endpoints and representing most of the different types of whole effluent toxicity test designs in use. More than one million computer simulations were used to select appropriate alpha error rates for each test method that also achieved USEPA's other RMDs for the TST approach.

Effluent limitations are established using the TST "pass" "fail" approach as well as a percent effect.

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

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

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

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

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

A Maximum Daily Effluent Limitation (MDEL) and Median Monthly Effluent Limitation (MMEL) for chronic toxicity are established for applicable industrial process wastewaters (steam condensate and diesel engine cooling water). The MDEL is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in a "fail" in accordance with the TST approach and the percent effect relative to a control is greater than or equal to ~~0.~~50~~%~~. The MMEL is exceeded when the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST, (i.e. two out of three) is a "fail".

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

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

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

A MDEL for acute toxicity is established for Industrial High Risk Areas storm water discharges and is exceeded when a toxicity test during routine monitoring results in a "fail" in accordance with the TST approach and the percent effect relative to a control is greater than or equal to ~~0.~~40~~%~~.

In June 2010, USEPA published a guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*

(EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. USEPA's *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)*, recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine EPA WET test methods.

USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present. Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2.). In 2000, EPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25s) were calculated appropriately (EPA 821-B-00-004).

Appropriate interpretation of the measurement result from USEPA's TST statistical approach (pass/fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of EPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures—including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation)—described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The Regional Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t-test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or Percent Minimum

Significant Difference (PMSDs) must be submitted for review by the Regional Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and are not used to interpret TST results.

A percent effect of 50% for chronic toxicity and 40% for acute toxicity has been incorporated into the MDEL. The decision to conduct a Toxicity Identification Evaluation (TIE) is based upon consideration of multiple factors such as the magnitude and persistence of toxicity. The magnitude of toxicity present in effluent is an important consideration because a moderate to high level of toxicity typically yield more successful results. Usually, TIEs can be successfully conducted on samples producing at least 50 percent effect (e.g., >50% mortality or reduction in reproduction), and this value is recommended for general use in selecting samples for TIEs. Effective TIEs can also be conducted with less toxic samples (e.g., >25% effect), but there is a greater chance of the TIE being inconclusive due to changes in toxicity with storage or variability in response (Norberg-King et al. 2005). A percent effect of 50% for chronic toxicity and 40% for acute toxicity has been incorporated into the MDEL based on recommendations from USEPA and to facilitate a successful TIE.

The IWC for these discharges are established at 100% effluent. Because the San Diego Water Board has no documentation to support a different IWC, the IWC is defined as 100 percent effluent (undiluted). This IWC is consistent with other San Diego Water Board's NPDES permitted discharges to San Diego Bay which do not allow dilution. This Order allows further study on the appropriate IWC for chronic toxicity observed in industrial storm water discharges to San Diego Bay.

The San Diego Water Board finds that the application of USEPA's TST method with the 50% effect for chronic toxicity and 40% effect for acute toxicity is scientifically defendable and appropriate for the determination of compliance with the Basin Plan's narrative objective for toxicity and an acceptable alternative to the Ocean Plan's toxicity objective for discharges to the Pacific Ocean. As such, toxicity monitoring requirements, analysis, and effluent limitations are established in this Order based on USEPA's TST method and a 50% effect for chronic toxicity and 40% effect for acute toxicity. Taken together, these refinements of using chronic toxicity instead of acute toxicity for industrial process wastewater and using the TST approach with the appropriate percent effect clarifies the requirements for toxicity analyses, provide the Discharger with the positive incentive to generate high quality data, and affords greater protection of aquatic life.

b. Acute Toxicity

Acute toxicity effluent limitations have been maintained for industrial high risk storm water discharges and have been updated to use the USEPA's TST method with a percent effect of 40%.

c. Chronic Toxicity

As previously discussed, chronic toxicity monitoring requirements and effluent limitations have been established for industrial process wastewater discharges demonstrated to

have toxic pollutants in toxic concentrations, consistent with the State Water Board's draft Toxicity Policy and USEPA's TST approach.

This Order also requires the Discharger to implement BMPs to prevent or eliminate toxicity, investigate the causes of any toxicity, and identify and implement corrective actions to reduce or eliminate effluent toxicity.

D. Final Effluent Limitations

Industrial process wastewater discharges regulated under this order include pier washing, utility vault and manhole dewatering, pier boom cleaning, boat rinsing, steam condensate, and diesel engine cooling water.

1. BMP Regulated Industrial Process Wastewater. The discharge of pier washing wastewater at Discharge Point No. PW-001 and Utility Vault and Manhole Dewatering at Discharge Point No. UV-001 through UV-013 in Table 4 is regulated using a narrative effluent limitation BMP approach under section VI.C.3 of this Order. Pier boom cleaning and boat rinsing have no discharge to surface waters require BMPs under section VI.C.3 of this Order to prevent discharges.

Table F-~~19.~~21. Industrial Process Wastewaters Regulated with BMPs

Type of Discharge	Discharge Point Nos.
Pier Washing Wastewater	PW-001
Utility Vault and Manhole Dewatering	UV-001 through UV-013
Pier Boom Cleaning	No Discharge
Boat Rinsing	No Discharge

2. Steam Condensate Discharges. Effluent Limitations for Steam Condensate – Discharge Point Nos. SC-001 through SC-010

a. Applicable TBELs and WQBELs for pH have been applied in this Order. Both TBELs and WQBELs are applicable to discharges to San Diego Bay (6.0 – 9.0 standard units and 7.0 – 9.0 standard units, respectively). To ensure the protection of water quality, the more stringent lower and upper limitations for pH (7.0 to 9.0) have been applied as final effluent limitations for discharges to San Diego Bay in this Order. These limits have also been applied as final effluent limitations for discharges of steam condensate to the Ocean (SC-10) to maintain the pH limitations from the current permit.

b. Order No. R9-2009-0081 has a maximum daily effluent limitation of 11.8 µg/L for Bis(2-Ethylhexyl)Phthalate in steam condensate discharges to San Diego Bay which is more stringent than the 14 µg/L maximum daily effluent limitation calculated above. The more stringent effluent limitation rounded to two significant figures has been applied in this Order.

c. Order No. R9-2009-0081 established effluent limitations for steam condensate discharges to San Diego Bay. New limitations have been calculated for steam condensate discharges from Discharge Point SC-010 to the Pacific Ocean based on the Ocean Plan except the maximum daily effluent limitation for copper of 5.8 µg/L has been retained from the current permit because it is more stringent than the 12 µg/L calculated above.

d. The Discharger shall maintain compliance with the following effluent limitations in Tables F-20 and F-21 at Discharge Point Nos. SC-001 through SC-010 with compliance

measured at Monitoring Locations SC-001 through SC-010 as described in the Monitoring and Reporting Program (MRP), Attachment E of this Order.

Table F-~~20.~~22. Effluent Limitations for Steam Condensate Discharges to San Diego Bay – Discharge Point Nos. SC-001 through SC-009

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Arsenic, Total Recoverable	µg/L	30	--	59	--
Copper, Total Recoverable	µg/L	1.9	--	5.8	--
Lead, Total Recoverable	µg/L	3.4	--	12	--
Nickel, Total Recoverable	µg/L	6.8	--	14	--
Selenium, Total Recoverable	µg/L	58	--	120	--
Zinc, Total Recoverable	µg/L	47	--	95	--
2,3,7,8-TCDD	µg/L	$1.4x10^{-8}$	--	$2.8x10^{-8}$	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	--	12	--
Aldrin	µg/L	0.00014	--	0.00028	--
4,4'-DDT	ug/L	0.00059	--	0.00118	--
4,4'-DDE	ug/L	0.00059	--	0.00118	--
4,4'-DDD	ug/L	0.00084	--	0.00169	--
Heptachlor	µg/L	0.00021	--	0.00042	--
Heptachlor Epoxide	µg/L	0.00011	--	0.00022	--
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	--	--	[1]	[1]
Chronic Toxicity	Pass/Fail	[2]	--	[2]	--

[1] Within limits of 7.0 – 9.0 standard units at all times.
[2] As defined in section VII.J of the Order.

Table F-~~21.~~23. Effluent Limitations for Steam Condensate Discharges to the Pacific Ocean – Discharge Point No. SC-010

Parameter	Units	Effluent Limitations				
		6-Month Median	Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Copper, Total Recoverable	µg/L	3	--	--	5.8	30
Lead, Total Recoverable	µg/L	2	--	--	8	20
Zinc, Total Recoverable	µg/L	20	--	--	80	200
TCDD Equivalents	µg/L	--	$3.9x10^{-9}$	--	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	--	3.5	--	--	--
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	--	--	--	[1]	[1]

Chronic Toxicity	Pass/Fail	--	[2]	--	[2]	--

[1] Within limits of 7.0 – 9.0 standard units at all times.
[2] As defined in section VII.J of the Order.

3. **Diesel Engine Cooling Water Discharges.** Final Effluent Limitations for Diesel Engine Cooling Water – Discharge Point No. CW-001

   a. The Discharger shall maintain compliance with the following effluent limitations in Table F-22 at Discharge Point No. CW-001 with compliance measured at Monitoring Location CW-001 as described in the MRP, Attachment E of this Order.

Table F-~~22.~~24. Effluent Limitations for Diesel Engine Cooling Water

Parameter	Units	Effluent Limitations			
		Average Monthly	Weekly Average	Maximum Daily	Instantaneous Maximum
Arsenic, Total Recoverable	µg/L	20	--	62	--
Chromium VI, Total Recoverable	µg/L	27	--	85	--
Copper, Total Recoverable	µg/L	2.0	--	5.8	--
Lead, Total Recoverable	µg/L	5.8	--	15	--
Nickel, Total Recoverable	µg/L	5.7	--	15	--
Selenium, Total Recoverable	µg/L	58	--	120	--
Zinc, Total Recoverable	µg/L	37	--	95	--
4,4-DDT	µg/L	0.00059	--	0.0017	--
4,4-DDE	µg/L	0.00059	--	0.0012	--
4,4-DDD	µg/L	0.00084	--	0.0017	--
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	--	--	--	[1]
Chronic Toxicity	Pass/Fail	[2]	--	[2]	--

[1] Within the limit of 7.0 – 9.0 standard units at all times.
[2] As defined in section VII.J of the Order.

   b. Order No. R9-2009-0081 has an average monthly effluent limitation of 5.8 µg/L for lead in cooling water discharges to San Diego to San Diego Bay which is more stringent than the 6.3 µg/L effluent limitation calculated above. The more stringent effluent limitation has been applied in this Order.

4. The previous Order required the Discharger to develop and implement a SWPPP for storm water discharges throughout the Facility, as authorized by CWA section 304(e) and section 402(p). The requirements to update and implement a SWPPP are carried over from the previous Order.

5. Discharges of pollutants in storm water discharges, from areas designated under section IV.B.1 of this Order as Industrial High Risk Areas, to Waters of the U.S. from Discharge Points specified in Attachment M of this Order shall maintain compliance with the MDEL for acute toxicity. The MDEL is based on the outcome of the TST approach and the resulting

percent effect at the IWC in accordance with Compliance Determination, section VII. of this Order.

E. Satisfaction of Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 and meet state and federal anti-backsliding requirements. Effluent limitations for reverse osmosis product water have been removed because the Discharger no longer discharges this category of effluent. Further, effluent limitations for previous discharge points not authorized by this Order for steam condensate and diesel engine cooling water have been removed and discharges from these locations are prohibited.

F. Satisfaction of Antidegradation Policy

WDRs for the Discharger must conform with federal and state antidegradation policies provided at 40 CFR section 131.12 and in State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or is consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting*.

The discharge of steam condensate at 66 discharge points to San Diego Bay was previously authorized in Order No. R9-2009-0081, however, some of these discharges were to the Pacific Ocean not San Diego Bay. This Order authorizes the discharge of steam condensate from Discharge Points SC-001 through SC-009 to San Diego Bay and Discharge Point SC-010 to the Pacific Ocean. Discharge Point SC-010 is in the same discharge location as Discharge Point SC-061 authorized in Order No. R9-2009-0081. The receiving water for SC-061 was mischaracterized in Order No. R9-2009-0081 as a discharge to ~~the~~ San Diego Bay. Discharges from Discharge Point SC-010 (previously SC-061) are expected to be low volume and infrequent, and the Discharger has removed 62 discharge points for steam condensate, many of which are also anticipated to have been mischaracterized as discharges to ~~the~~ San Diego Bay, and significantly reduced the total discharge flow. WQBELs have been established that are protective of water quality and are at least as stringent as in Order No. R9-2009-0081. The correction of this receiving water error is not anticipated to result in a lowering of water quality within the receiving water and is consistent with state and federal antidegradation requirements.

The limitations and requirements of this Order are more stringent than established in Order No. R9-2009-0081 as modified by Order No. R9-2010-0057. The permitted discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

G. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs applied in the Order consist of restrictions on oil and grease, settleable solids, turbidity, and pH as specified in Table 2 of the Ocean Plan; a requirement to continue to implement a BMP and PPP for utility vault and manhole dewatering discharges; a requirement to develop and maintain a BMP Plan to prevent discharges from pier boom, fender, and mooring cleaning; and a requirement to continue to implement a SWPPP for toxic pollutants and hazardous substances in storm water runoff. These restrictions and requirements are discussed in section IV.B.2. of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

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. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP. WQBELs were also derived from the Ocean Plan using scientific procedures established in the Ocean Plan. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30,2000, but not approved by USEPA 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.

H. Storm Water Risk Level Designations

This Order addresses storm water discharges from various locations throughout the Facility, with varying degrees of industrial activity and potential to impact water quality. As such, a tiered approach has been applied in this Order to control storm water discharges, including MS4 requirements, industrial storm water requirements, and effluent limitations. To apply the appropriate controls for storm water, the Discharger is required to identify all storm water outfalls located at the Facility, and designate the outfalls as Industrial High Risk Areas, Industrial Low Risk Areas, Industrial No Exposure Areas, or Small Military Base MS4 Areas.

Because operations at the Facility are subject to change, annual site surveys are necessary to account for any operational changes that may occur at the Facility to ensure that appropriate regulatory mechanisms are being applied. In addition, the Discharger shall conduct periodic inspections throughout the year to ensure that storm water risk level designations remain applicable.

I. Small Military Base MS4 Discharge Specification

The San Diego Water Board finds that Phase II MS4 requirements are applicable to storm water discharges from non-industrial portions of the Facility. As such, applicable requirements of the Phase II MS4 program, consistent with the requirements 40 CFR section 122.44(k) and the 6 minimum control measures identified in 40 CFR section 122.34(b) have been applied to ensure discharges of storm water from non-industrial areas meet the minimum requirement of MEP. Specific requirements have been established where necessary to increase the tracking and enforceability of the Discharger's SWMP. This approach is consistent with the requirements of

the current Naval Base San Diego Permit (Order No. R9-2013-0064) and Naval Base Point Loma Permit (R9-2014-0037) which include regulation of Phase II MS4 storm water discharges.

J. Industrial Storm Water Discharge Specifications

a. Pollutant Reduction to BAT/BCT. NPDES Permits for storm water discharges must meet all applicable provisions of sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

b. Storm Water Pollution Prevention Plan (SWPPP) for Industrial Areas. Prior to the adoption of Order No. 2002-0002, the storm water discharges at the Facility were regulated by the State Water Board's *General Order for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (Order No. 97-03-DWQ, NPDES No. CAG000001). To carry out the purpose and intent of the CWA, Order No. 97-03-DWQ and subsequently Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 required the Discharger to develop and implement a SWPPP, as authorized by CWA section 304(e) and section 402(p), for toxic pollutants and hazardous substances, and for the control of storm water discharges. Consistent with Order No. 97-03-DWQ and Order No. R9-2009-0081 as modified by Order No. R9-2010-0057, 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 and in Attachment G.

c. Numeric Action Levels (NALs). Consistent with the direction of the State Water Board, this Order establishes NALs based on USEPA's benchmarks with a tiered compliance strategy of establishing industrial storm water risk levels. This risk level strategy is explained in more detail in section IV.B. of this Order.

K. Non-Storm Water Discharge Specifications

Discharge specifications for the discharge of exempted non-storm water discharges as specified in section IV.F of this Order are based on the requirements of 40 CFR section 122.26(d). These discharge specifications exempt the discharge of certain wastes from prohibition that are not currently expected to be a significant source of pollutants to the receiving waters.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water limitations in this Order are derived from the water quality objectives for bays and estuaries established by the Basin Plan (1994), the Bays and Estuaries Policy (1974), the CTR (2000), the State Implementation Policy (2005), the Ocean Plan (2012) and the State Water Board's Sediment Quality Plan (2008). San Diego Bay is listed as impaired for copper, PCBs, sediment toxicity, and benthic community effects in the area near the Facility. This 303(d) impairment and elevated effluent concentrations for these parameters demonstrates that there is reasonable potential to cause or contribute to an exceedance of the sediment quality objectives which have been included as receiving water limitations.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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 Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Industrial Storm Water Monitoring Location Study and Annual Report

In order to determine compliance with effluent limitations, action levels, and evaluate the effectiveness of BMPs specified in the SWPPP, this order establishes monitoring requirements for industrial storm water. The San Diego Water Board recognizes that establishing monitoring requirements at all discharge locations would be redundant and an inefficient use of resources. Monitoring is only necessary at representative discharge locations for industrial storm water. This directive requires the discharger to identify representative monitoring locations for these discharges, and verify these monitoring locations annually. Monitoring includes visual as well as sample collection.

B. Core Monitoring Requirements

1. Influent Monitoring – Not Applicable

2. Industrial Wastewater 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, and to assess the impacts of the discharge on the receiving water. Effluent monitoring is necessary to address the following primary questions:

- Does the effluent meet permit effluent limitations based on water quality standards for the receiving water?
- What is the mass discharged annually of each constituent monitored?
- How much pier washing occurs?
- Is the discharge a major source of pollutants?

1. Steam Condensate (Monitoring Locations SC-001 through SC-010)

a. Quarterly effluent flow monitoring has been established to determine the volume of condensate being discharged from the Facility into the receiving waters.

b. Quarterly monitoring has been established to evaluate compliance with applicable WQBELs for pollutants that the discharge has reasonable potential to exceed or contribute to an exceedance of water quality.

c. Quarterly monitoring has been established for antimony, arsenic, and nickel which had inconclusive reasonable potential analysis.

d. Quarterly monitoring has been established to evaluate compliance with effluent limitations for oil and grease, turbidity, pH, and settleable solids.

e. Annual monitoring has been established to evaluate compliance with the WET limitation.

f. Monitoring the remaining priority pollutants has been established annually so that reasonable potential for all priority pollutants can be evaluated during the next permit renewal.

2. Diesel Engine Cooling Water (Monitoring Location CW-001)

a. Quarterly effluent flow monitoring has been established to determine the volume of condensate being discharged from the Facility into the receiving waters.

b. Quarterly monitoring has been established to evaluate compliance with applicable WQBELs for pollutants that the discharge has reasonable potential to exceed or contribute to an exceedance of water quality.

c. Quarterly monitoring has been established to evaluate compliance with effluent limitations for oil and grease, turbidity, pH, temperature, and settleable solids.

d. Annual monitoring has been established to evaluate compliance with the WET limitation.

e. Monitoring the remaining priority pollutants has been established annually so that reasonable potential for all priority pollutants can be evaluated during the next permit renewal.

3. Pier Washing Monitoring (Monitoring Location PW-001)

An annual log of pier washing activities has been established to track this discharge. Monitoring requirements have been reduced to just those necessary to evaluate compliance with applicable NPDES permit requirements and are BMP focused.

4. Utility Vaults and Manhole Dewatering Monitoring (Monitoring Locations UV-001 through UV-013)

a. Annual effluent flow monitoring has been established to determine the volume of effluent being discharged from the Facility into the San Diego Bay.

b. Annual effluent monitoring of total petroleum hydrocarbons-diesel range organics, total petroleum hydrocarbons- gasoline range organics, oil and grease, pH, and total suspended solids has been established to characterize the discharge of utility vault and manhole dewatering from the Facility into the San Diego Bay for these pollutants of concern for this category of effluent.

c. In order to evaluate BMP implementation and characterize utility vault activities, this Order requires the Discharger to submit a log of the utility vault and manhole dewatering discharges annually.

C. Whole Effluent Toxicity (WET) Testing Requirements

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

- Does the effluent meet permit effluent limitations for toxicity based on water quality standards for the receiving water?

  If not:

  - Are unmeasured pollutants causing risk to aquatic life?
  - Are pollutants in combination causing risk to aquatic life?
- Does the storm water runoff meet receiving water limitations for toxicity in the receiving water?
- Are conditions in receiving water getting better or worse with regard to toxicity?
- What is the relative storm water runoff contribution to the receiving water toxicity?
- What are the causes of the toxicity and the sources of the constituents responsible?

As discussed above in section IV.C.5 of this Fact Sheet, chronic and acute toxicity effluent limitations established in this Order are based on USEPA's TST and percent effect. Chronic toxicity effluent limitations have been established for industrial process water discharges established in Order No. R9-2009-0081 as modified by Order No. R9-2010-0057. Acute toxicity effluent limitations and monitoring are maintained for industrial storm water. Chronic toxicity monitoring is also required for industrial storm water.

Past sampling of storm water at the Facility shows the presence and reasonable potential for toxicity in the discharge of industrial storm water from the Facility (96 exceedances from December 7, 2009 through May 6, 2013). This Order requires the Discharger to conduct additional toxicity testing for exceedances of the toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) Workplan in accordance with USEPA guidance which shall include: further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharge will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. This provision also includes requirements to initiate the TRE/Toxicity Identification Evaluation (TIE) process if the results of toxicity testing exceed the effluent limitation for toxicity.

D. Receiving Water Monitoring

Receiving water and sediment monitoring shall be designed and conducted to address the following primary questions:

(1) Does the receiving water meet water quality standards listed in section V of this Order, Receiving Water Limitations?

(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?

1. Water and Sediment Monitoring Plan

The Discharger is required to submit a Water and Sediment Monitoring Plan within 12 months of the effective date of this Order. The Water and Sediment Monitoring Plan has all the elements required by the State Water Board's Sediment Quality Plan, which became effective on August 25, 2009, to be implemented for both water and sediment for

consistency. A conceptual model, existing data, and ongoing monitoring must be considered in the development of the Water and Sediment Monitoring Plan.

2. 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, applicable beneficial uses, and aquatic life.

b. Monitoring locations will be determined in the Water and Sediment Monitoring Plan.

c. Annual monitoring of arsenic, copper, lead, nickel, and zinc in the Pacific Ocean and the San Diego Bay has been established to determine compliance with receiving water limitations and to help determine reasonable potential, as specified in section 1.3 of the SIP, for future permitting efforts. These constituents are required based on the RPA for the steam condensate and diesel engine cooling water, storm water benchmark exceedances, and BPJ.

d. Semiannual temperature monitoring has been established in order to determine compliance with Prohibition III.B for the temperature effluent limitation for discharges of steam condensate.

e. Semiannual chronic toxicity monitoring has been added to assess the impacts of storm water discharges on the receiving water. The Discharger is required to monitor chronic toxicity twice per year concurrently with the end of pipe high risk industrial storm water discharge monitoring required in Table E-8 of this MRP. The receiving water chronic toxicity sample is to be collected in the receiving water adjacent to the storm drain outfall sampled in Table E-8 during the storm event. The results of the chronic toxicity testing in the receiving water shall be included in the Annual Storm Water Report.

f. Annual monitoring of other pollutants identified by the Discharger has been added for pollutants identified by the Discharger during routine monitoring of industrial process water or storm water.

3. Sediment Monitoring

a. This Order establishes monitoring and analysis requirements consistent with the State Water Board's 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 State Water Board's Sediment Quality Plan.

4. Monitoring Coalitions

To achieve maximum efficiency and economy of resources, the San Diego Water Board encourages and may require San Diego Bay dischargers to establish or join a San Diego Bay water body monitoring coalition. Monitoring coalitions enable the sharing of technical resources, trained personnel, and associated costs and create an integrated water and sediment monitoring program within each water body. Focusing resources on water body issues and developing a broader understanding of pollutants effects in these water bodies

enables the development of more rapid and efficient response strategies and facilitates better management of water and sediment quality.

5. Water Column and Sediment Monitoring Report

The Discharger or water body monitoring coalition is required to submit a Water and Sediment Monitoring Report at least twice during a permit cycle in accordance with the schedule contained in the Water and Sediment Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. Receiving water sampling will be done annually and sediment sampling will be done at least twice during the term of this Order, so two reports during a permit cycle will allow more samples to be collected and reported in one report.

E. Other Monitoring Requirements

1. The discharge of industrial contact storm water to the San Diego Bay or the Pacific Ocean may contain pollutants from the surrounding area which could contribute to the exceedance of the water quality criteria/objectives of the receiving waters. Industrial storm water monitoring requirements have been established to determine the effects of storm water discharges on the receiving water and monitor the effectiveness of the SWPPP to meet applicable NALs and receiving water limits. Order No. R9-2009-0081 as modified by Order No. R9-2010-0057 required monitoring of industrial storm water for oil and grease, total suspended solids (TSS), pH, copper, zinc, acute toxicity, electrical conductivity, settleable solids, total organic carbon, total petroleum hydrocarbons, and other pollutants identified by the Discharger as likely to be present, at two storms per year. The Discharger was also required to monitor for remaining priority pollutants for two storm events for the first and last year of the permit term.

Under this Order, industrial areas on NBC have been divided into three categories: Industrial No-Exposure, Industrial Low Risk, and Industrial High Risk. Each category has different monitoring requirements. Industrial storm water monitoring has been retained for copper, zinc, acute toxicity, oil and grease pH, TSS, and other parameters identified by the Discharger as likely to be present within storm water discharges from highly industrial areas. Additional monitoring has been established for metals (arsenic, cadmium, mercury, nickel, selenium, and silver) that are either bioaccumulative and a greater risk to the receiving water, or are often found in the discharge of storm water from highly industrial areas. Additionally, monitoring for nutrients has been added to evaluate potential eutrophication impacts on the receiving waters. There is limited information on pollutants in storm water from the Facility. Because of this limited information, the Discharger is required to monitor industrial high risk areas for all of the NAL pollutants in Table G-1 of Attachment G to this Order. Monitoring of these additional pollutants can be discontinued after four consecutive sample events where the parameter is not detected or is below the Annual NAL values in Table G-1 of Attachment G to this Order.

Industrial storm water monitoring frequency has been increased to two storms per semiannual period in conformance with the statewide Industrial Storm Water General Permit.

Chronic toxicity monitoring has been established in addition to acute toxicity for discharges from “Industrial High Risk Areas” to determine reasonable potential. The industrial storm water monitoring program is designed to address the following primary questions:

- Does the runoff meet permit effluent limitations for toxicity thereby ensuring water quality standards are achieved in the receiving water?
- Does the runoff meet the NALs?
- Is the SWPPP being properly implemented?
- Is the Facility achieving standards of BAT and BCT?

2. The Discharger is required to submit a sampling plan for Small Military Base MS4 storm water discharges within 24 months of the effective date of this Order. A minimum subset of three representative monitoring locations for storm water and dry-weather discharges within the Small Military Base MS4 Areas of the Facility. These monitoring locations shall be sampled for pollutants identified by the Discharger. Sampling and analysis is required twice per year for storm water and twice per year for dry-weather. The Small Military Base MS4 monitoring program shall be designed to address the following primary questions:

- Is the SWMP being properly implemented?
- Is the Facility achieving the standard of reducing pollutants in MS4 discharges to the MEP?

3. Monitoring requirements for spill and illicit discharges are in this Order to help determine the effectiveness of the BMP Plan and ensure that appropriate BMPs are properly implemented. This log is designed to answer the following primary monitoring questions:

- Are there more frequent and/or bigger spills at this Facility than at other similar facilities?
- Are spills and illicit discharges properly addressed and are measures being taken or planned to reduce, eliminate, and prevent them in the future?

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR section 122.42.

Section 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in this Order. 40 CFR section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Monitoring and Reporting Program (MRP) Requirements

Language in this section requires the Discharger to properly implement and submit self-monitoring reports (SMRs) to the San Diego Water Board and Discharger Monitoring Reports (DMRs) for USEPA to the State Water Board. Telephone and fax numbers are also provided. The San Diego Water Board office may be relocated. Dischargers will be notified of new contact information.

C. Special Provisions

1. Reopener Provisions

This Order includes a list of circumstances when this Order may be reopened.

2. Special Studies and Additional Monitoring Requirements

Requirements for a TRE/TIE have been incorporated in the MRP. This section discusses a study on the future development of chronic toxicity effluent limitations for industrial high risk areas.

3. Best Management Practices and Pollution Prevention

a. Best Management Practices and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan). As discussed in sections IV.B.2.b and IV.C.4.a of this Fact Sheet, the San Diego Water Board finds that numerical effluent limitations are not feasible for discharges from utility vault and manhole dewatering discharges. Federal Regulations at 40 CFR sections 122.44(k)(3) and (4) authorize the San Diego Water Board to require BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible and when the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

The development of pollution prevention practices (PPP) provides the flexibility necessary to establish controls which can appropriately address the various utility vault and manhole dewatering discharges. The pollution prevention practices have two major objectives:

i. To identify situations which allow water to collect in the vault or underground structure and lead to a discharge; and

ii. To describe and ensure the implementation of practices that will reduce pollutants in the discharge from normal operations of utility companies.

Similar to BMPs, pollution prevention practices are designed to prevent or control the discharge of pollutants. They may include a schedule of activities, prohibition of practices, maintenance procedures, or other management practices. The Best Management Practices and Pollution Prevention Practices Plan for Utility and Manhole Dewatering Discharges (Utility Vault Plan) is a written document that describes the operator's activities to comply with the requirements of this Order. The Utility Vault Plan is intended to evaluate potential pollutant sources at the site and select and implement appropriate measures designed to prevent or control the discharge of pollutants. Order No. R9-2003-0008 incorporated the pertinent requirements of Order No. 2001-11-DWQ, including the requirement to develop and implement a Utility Vault Plan that included

BMPs to achieve BAT and BCT. According to the *Case Study for Utility Vault and Manhole Dewatering Discharges at Naval Base Point Loma, Naval Base San Diego, and Naval Base Coronado* submitted by the Discharger in May 2007, the Discharger has maintained and implemented the *Pollution Prevention Plan for Utility Vault Dewatering Discharges*, which describes the types of discharges, prohibited discharges, pollution prevention practices and BMPs, and monitoring and inspections of utility vault and manhole discharges. Additionally, the case study states that the Discharger has implemented procedures to eliminate manhole dewatering discharges to surface waters and either pumps the water into an adjacent utility manhole or transfers the water to the sanitary sewer system. However, the Discharger acknowledges the potential for rare emergency situations that would require dewatering of a utility vault or manhole onto the ground surface.

Order No. 2014-0174-DWQ, replacing Order No. 2001-011-DWQ, includes additional specifications for pollution prevention practices for Utility Vault and Manhole Dewatering Discharges for dischargers of utility and manhole dewatering discharges. This Order incorporates the additional specifications from Order No. 2014-0174-DWQ. The Discharger is required to maintain and implement their Utility Vault Plan in accordance with the requirements of Provision VI.C.3.a of this Order. For assistance in developing the Utility Vault Plan, the Discharger may refer to the *California Stormwater BMP Handbook – Industrial/Commercial (January 2003 Edition),* published by the California Stormwater Quality Association, which includes references the Discharger may find useful.

b. BMP Plan for Industrial Process Water Discharges. Due to the nature of activities associated with discharges of pier washing, collecting and treating the associated wastewaters prior to discharge is impractical. Therefore, the San Diego Water Board finds that establishing numeric effluent limitations for pollutants in the specified discharges is not feasible. In accordance with 40 CFR sections 122.44(k)(3) and (4), the San Diego Water Board finds that the implementation of BMPs in lieu of numeric effluent limitations are appropriate. This Order requires the Discharger to develop and implement a BMP Plan that includes, at a minimum, the requirements contained in Attachment I to prevent, or minimize the potential for, the release of pollutants to Waters of the State and Waters of the U.S.

c. CWC section 13263.3(d)(2) Pollution Prevention Plans. Section 13263.3 of the California Water Code states that pollution prevention should be the first step in the hierarchy for reducing pollution and managing wastes. Further, section 13263.3 (d)(1)(D) states that the San Diego Water Board may require a Discharger to complete and implement a pollution prevention plan the San Diego Water Board determines that pollution prevention is necessary to achieve a water quality objective. Based on storm water monitoring results discussed in section II.E.1 of this Fact Sheet, the Discharger has reasonable potential to exceed the water quality objectives for acute toxicity in industrial storm water. Based on storm water monitoring results discussed in section II.D.4 of this Fact Sheet, the Discharger has regularly exceed the benchmarks for copper and zinc in industrial storm water. Pollution prevention is necessary to achieve water quality objectives for these constituents. The Discharger shall develop and implement a Pollution Prevention Plan for acute toxicity, copper, and zinc in industrial storm water, which at a minimum, meets the requirements outlined in CWC section 13263.3(d)(2), for each applicable discharge.

The Pollution Prevention Plan shall, at a minimum, meet the requirements outlined in

CWC section 13263.3(d)(2) and in this Order, for each applicable discharge. The minimum requirements for the pollution prevention plans include the following:

i. An analysis of one or more of the pollutants, as directed by the State Water Board, San Diego Water Board, or a POTW, that the Facility discharges into Waters of the State or introduces into POTWs, a description of the sources of the pollutants, and a comprehensive review of the processes used by the discharger that result in the generation and discharge of the pollutants.

ii. An analysis of the potential for pollution prevention to reduce the generation of the pollutants, including the application of innovative and alternative technologies and any adverse environmental impacts resulting from the use of those methods.

iii. A detailed description of the tasks and time schedules required to investigate and implement various elements of pollution prevention techniques.

iv. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action.

v. A description of the Discharger's existing pollution prevention methods.

vi. A statement that the Discharger's existing and planned pollution prevention strategies do not constitute cross media pollution transfers unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board, the San Diego Water Board, or the POTW, and information that supports that statement.

vii. Proof of compliance with the Hazardous Waste Source Reduction and Management Review Act of 1989 (Article 11.9 (commencing with section 25244.12) of Chapter 6.5 of Division 20 of the Health and Safety Code) if the Discharger is also subject to that act.

viii. An analysis, to the extent feasible, of the relative costs and benefits of the possible pollution prevention activities.

ix. A specification of, and rationale for, the technically feasible and economically practicable pollution prevention measures selected by the Discharger for implementation.

4. Flood and Runoff Protection Requirements

The construction, operation, and maintenance specifications have been retained from Order No. R9-2009-0081 as modified by Order No. R9-2010-0057.

5. Other Special Provisions – Not Applicable

VIII. PUBLIC PARTICIPATION

The San Diego Water Board has considered the issuance of WDRs to serve as an NPDES permit for the U.S. Department of the Navy, Naval Base Coronado. As a step in the WDR adoption process, the San Diego Water Board developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided an opportunity to submit written comments and recommendations. Notification was provided through the following: Published in the San Diego Union-Tribune on September 11, 2015, posted on the San Diego Water Board website on September 11, 2015, and sent by e-mail on September 11, 2015.

The public had access to the agenda and any changes in dates and locations through the San Diego Water Board website at http://www.waterboards.ca.gov/rwqcb9/.

B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs. Comments were due either in person or by mail to the Executive Office at the San Diego Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the San Diego Water Board, written comments were due at the San Diego Water Board offices by 5:00 p.m. on October 12, 2015.

C. Public Hearing

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

Date:	**November 18, 2015**
Time:	**9:00 a.m.**
Location:	**California Regional Water Quality Control Board, San Diego Region** **Board Meeting Room** **2375 North Side Drive, Suite 100** **San Diego, CA 92108**

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

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and CCR title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m. 30 days after the adoption date of this Order at the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Copies of the law and regulations applicable to filing petitions may be found on the internet at: ·

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

E. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the San Diego Water Board address below at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. To request a file review please contact the San Diego Water Board receptionist at (619) 516-1990, or email rb9_records@waterboards.ca.gov, or fax (619) 516-1994 or mail requests to:

California Regional Water Quality Control Board
San Diego Region
Attention: File Review Request
2375 Northside Drive, Suite 100
San Diego, CA 92108

The office is closed on weekends and on all state holidays.

Before making a request to view public records in the San Diego Water Board office interested persons may wish to determine if the information is already available on the San Diego Water Board's website at http://www.waterboards.ca.gov/sandiego or the State Water Board's website at http://www.waterboards.ca.gov. New and updated information is constantly being added to these websites. For example the San Diego Water Board's website alphabetical index and the State Water Board's Website alphabetical index provide links to many volumes of key documents on the State and Regional Water Board's water quality programs.

The following is a partial list of the documents available:

- Board Meeting Agendas
- Board Meeting Minutes
- Adopted Orders
- Tentative Orders
- Basin Plan
- Ocean Plan

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order should contact the San Diego Water Board, reference this facility, and provide a name, address, and phone number. If possible, email address is preferred.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Kristin Schwall at (619) 521-3368 or kschwall@waterboards.ca.gov.

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS FOR INDUSTRIAL AREAS

I. IMPLEMENTATION SCHEDULE

The Discharger shall continue to implement the existing storm water pollution prevention plan (SWPPP) for all storm water outfalls from the Facility regulated by Order No. R9-2009-0081 until the Discharger has fully completed the implementation of the Storm Water Management Program Requirements specified in section IV.~~E~~D.2 of the Order. Following full compliance with section IV.~~E~~D.2 of the Order, the Discharger may phase out coverage of areas designated as "Small Military Base MS4 Area", as defined in section IV.B.1 of the Order, that are adequately addressed under the Storm Water Management Program (SWMP). All storm water outfalls from the Facility are subject to either the SWPPP or the SWMP.

The Discharger shall implement any necessary revisions to its SWPPP to comply with the requirements of this Order within 1 year of the effective date of this Order.

II. SWPPP OBJECTIVES

A. The Discharger's SWPPP shall be prepared and maintained to achieve the following objectives:

1. To reduce or prevent the discharge of pollutants from industrial activities to the technology-based standards of best available technology economically achievable (BAT) for toxic and non-conventional pollutants, and best conventional pollutant control technology (BCT) for conventional pollutants;

2. To achieve compliance with the Receiving Water Limitations in section V of this Order;

3. To identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of the Facility's industrial storm water discharges and authorized non-storm water discharges;

4. To identify, describe, and implement site-specific Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;

5. To identify and implement timely revisions and/or updates to the SWPPP.

B. To achieve the SWPPP objectives, the Discharger shall prepare a written Facility-specific SWPPP in accordance with all applicable SWPPP requirements of this attachment. The SWPPP shall include all required maps, descriptions, schedules, checklists, and relevant copies or specific references to other documents that satisfy the requirements of this attachment. The typical development and implementation steps necessary to achieve the described objectives are summarized in Item A-2, located at the end of this attachment.

III. PLANNING AND ORGANIZATION

A. SWPPP Checklist

The SWPPP shall include a SWPPP Checklist (Example checklist is included as Item A-1 below) located at the end of this section. For each requirement listed, the Discharger shall identify the page number where the requirement is located in the SWPPP (or the title, page number, and location of any reference documents), the implementation date or last revision date, and any SWPPP requirements that may not be applicable to the Facility.

B. Pollution Prevention Team

1. The SWPPP shall identify specific individuals and their positions within the Facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the Facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Order.

2. The SWPPP shall clearly identify the responsibilities, duties, and activities of each team member.

3. The SWPPP shall identify, as appropriate, alternative individuals to perform the required SWPPP and monitoring program activities when team members are temporarily unavailable (due to vacation, illness, out of town meetings, etc.).

C. Review Other Requirements and Existing Facility Plans

1. The SWPPP shall be developed, implemented, and revised as necessary to be consistent with any applicable municipal, state, or federal requirement that pertains to the requirements of this Order.

2. The SWPPP may incorporate or reference the elements of the Discharger's existing plans, procedures, or regulatory compliance documents that contain storm water pollution control practices or otherwise relate to the requirements of this Order. For example, facilities subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials, or facilities subject to regional air quality emission controls may already have evaluated industrial activities that emit dust or particulate pollutants.

IV. SITE MAP

The SWPPP shall include a site map. The site map shall be provided on an 8 ½ x 11 inch or larger sheet and include notes, legends, north arrow, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, the Discharger may provide the required information on multiple site maps. The following information shall be included on the site map:

A. Boundaries and Drainage Areas. Outlines of the Facility boundary, storm water drainage areas within the Facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area; on-site surface water bodies; areas of soil erosion; and location(s) of near-by water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the Facility's storm water

discharges and authorized non-storm water discharges.

B. Storm Water Collection and Conveyance System. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

C. Impervious Areas. The outline of all impervious areas of the Facility, including paved areas, buildings, covered storage areas, or other roofed structures.

D. Materials, Spills, and Leaks Locations. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks, identified in accordance with section VI.A.4 below, have occurred.

E. Areas of Industrial Activity. Identify all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and reusing areas, and other areas of industrial activity which are potential pollutant sources.

F. Storm Water Risk Level Boundaries. Identify the boundaries of the Industrial High Risk areas, Industrial Low Risk areas, Industrial No-Exposure areas, and Small Military Base MS4 areas, as defined in section IV.B.1 of the Order.

V. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, the locations where the material is stored, received, shipped, and handled, as well as the typical quantities and frequencies, shall be described. The materials list shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

A. For each area identified in section IV.E of this Attachment, the SWPPP shall include a narrative description of the Facility's industrial activities, potential pollutant sources, and potential pollutants that could be exposed to storm water or authorized non-storm water discharges. At a minimum, the following industrial activities shall be described as applicable:

1. **Industrial Processes**. Describe each industrial process including the manufacturing, cleaning, maintenance, recycling, disposal, or other activities related to the process. Include the type, characteristics, and approximate quantity of significant materials used in or resulting from the process. Areas protected by containment structures and the corresponding containment capacity shall be identified and described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area including the type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Areas protected by a containment structure and the corresponding

containment capacity shall be identified and described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the Facility's boundaries. Include their discharge locations and the type, characteristics, and quality of dust and particulate pollutants that may be deposited within the Facility's boundaries. Identify the primary areas of the Facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Identify and describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges. Include toxic chemicals (listed in 40 CFR Part 302) that have been discharged to storm water as reported in USEPA Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR Parts 110, 117, and 302).

   The description shall include the location, characteristics, and approximate quantity of the materials spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges; and the preventative measures taken to ensure spills or leaks of the material do no reoccur.

5. **Non-Storm Water Discharges.** The Discharger shall inspect the Facility to identify all non-storm water discharges, sources, and drainage areas. All drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-storm water discharges shall be described. The description shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area and shall identify whether the discharge is an authorized or unauthorized non-storm water discharge in accordance with section IV.F of the Order. Examples of unauthorized non-storm water discharges include but are not limited to rinse and wash water (whether detergents are used or not), contact and non-contact cooling water, and boiler blow-down.

6. **Soil Erosion.** Describe the Facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in accordance with section VI of this Attachment. To determine the likelihood that significant materials will be exposed to storm water or authorized non-storm water discharges, the assessment shall include consideration of the quantity, characteristics, and locations of each significant material handled, produced, stored, recycled, or disposed; the direct and indirect pathways that significant materials may be exposed to storm water or authorized non-storm water discharges; history of spills or leaks; non-storm water discharges; prior sampling; visual observation, and inspection records; discharges from adjoining areas; and the effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. At a minimum, the Discharger shall consider:

1. The quantity, physical characteristics (liquid, powder, solid, etc.), and locations of each significant material handled, produced, stored, recycled, or disposed.

2. The degree pollutants associated with those materials are exposed to and mobilized by contact with storm water.

3. The direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

4. Sampling, visual monitoring, and inspection records.

5. Effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

B. Based upon the assessment above, the SWPPP shall identify any areas of industrial activity and corresponding pollutant sources where significant materials are likely to be exposed to storm water or authorized non-storm water discharges and where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

VIII. STORM WATER BEST MANAGEMENT PRACTICES

A. The SWPPP shall include a narrative description of BMPs implemented at the Facility. The BMPs, when developed and implemented, shall be effective in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

The BMPs narrative description shall include:

1. The type of pollutants the BMPs are designed to reduce or prevent.

2. The frequency, time(s) of day, or conditions when the BMPs are scheduled for implementation.

3. The locations within each area of industrial activity or pollutant source where the BMPs shall be implemented.

4. Identification of the person and/or position responsible for implementing the BMPs.

5. The procedures, including maintenance procedures, and/or instructions to implement the BMPs.

6. The equipment and tools necessary to implement the BMPs.

B. The Discharger shall consider non-structural BMPs for implementation at the Facility. Non-structural BMPs generally consist of processes, prohibitions, procedures, training, schedule of activities, etc., that prevent pollutants associated with industrial activity from contact with storm water discharges and authorized non-storm water discharges. Below is a list of non-structural BMPs that shall be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

2. **Preventative Maintenance.** Preventative maintenance includes regular inspection and maintenance of storm water structural controls (i.e., catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure to significant materials to storm water and authorized non-storm water discharges.

5. **Employee Training Program.** This includes the development of a program to train personnel responsible for implementing the various compliance activities of this Order including BMP implementation, inspections and evaluations, monitoring activities, and storm water compliance management. The training program shall include:

   a. A description of the training program and any training manuals or training materials.

   b. A discussion of the appropriate training frequency.

   c. A discussion of the appropriate personnel to receive training.

   d. A training schedule.

   e. Documentation of all completed training classes and the personnel who received training.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste or recyclable materials.

7. **Record Keeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary to the appropriate Facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices.

9. **Inspections.** Periodic visual inspections of the Facility are necessary to ensure that the SWPPP addresses any significant changes to the Facility's operations or BMP implementation procedures.

   a. A minimum of four quarterly visual inspections of all areas of industrial activity and associated potential pollutant sources shall be completed each reporting year. The annual comprehensive site compliance evaluation described in section IX of this Attachment may substitute for one of the quarterly inspections.

   b. Tracking and follow-up procedures shall be described to ensure appropriate corrective actions and/or SWPPP revisions are implemented.

c. A summary of the corrective actions and SWPPP revisions resulting from quarterly inspections shall be reported in the annual report.

d. Dischargers shall certify in the annual report that each quarterly visual inspection was completed.

e. All corrective actions and SWPPP revisions shall be implemented in accordance with sections XII.D and XII.E of this Attachment.

10. Quality Assurance. This includes the management procedures to ensure that the appropriate staff adequately implements all elements of the SWPPP and Monitoring Program.

C. Structural BMPs. Where non-structural BMPs identified in section VIII.B above are not effective, structural BMPs shall be considered. Structural BMPs typically consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that shall be considered:

1. **Overhead Coverage**. This includes structures that protect materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

2. **Retention Ponds**. This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the Facility.

3. **Control Devices**. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures**. This includes containment structures around storage tanks and other areas that collect any leaks or spills.

5. **Treatment**. This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., which reduce the pollutants in storm water discharges and authorized non-storm water discharges.

D. The SWPPP shall include a summary identifying each area of industrial activity and associated pollutant sources, pollutants, and BMPs in a table similar to Item A-3 at the end of this Attachment.

IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Discharger shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1 – June 30). Evaluations shall be conducted no less than 8 months from each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system. A visual inspection of

equipment needed to implement the SWPPP.

C. A review and evaluation of all BMPs, both structural and non-structural, for each area of industrial activity and associated potential pollutant sources to determine whether the BMPs are properly designed, implemented, and effective in reducing and preventing pollutants in storm water discharges and authorized non-storm water discharges.

D. An evaluation report that includes:

1. Identification of personnel performing the evaluation,

2. Date(s) of the evaluation,

3. Summary and implementation dates of all significant corrective actions and SWPPP revisions for the reporting year

4. Schedule for implementing any incomplete corrective actions and SWPPP revisions,

5. Any incidents of non-compliance and the corrective actions taken, and

6. A certification that the Discharger has completed the quarterly inspections specified in section VIII.B.9, above and that the Discharger is complying with this Order.

7. The evaluation report shall be submitted as part of the annual report, retained for at least 5 years, and signed and certified in accordance with Standard Provision V.B of Attachment D of this Order.

X. NUMERIC ACTION LEVELS (NALS) AND NUMERIC EFFLUENT LIMITATIONS (NELS)

A. Numeric Action Levels (NALs) for all storm water discharges are appropriate numeric thresholds that allow a discharger to take corrective action when the Instantaneous Maximum or Annual Average NAL are exceeded. Exceedances of NAL values are not a violation of the Order. Dischargers that exceed one of the NAL values shall take the appropriate corrective action as set forth in section IV.E.3. of the Order.

NALs are specified as follows:

Table G-1. NALs for Storm Water

PARAMETER	TEST METHOD[1]	REPORTING UNITS	ANNUAL NAL VALUE	INSTANTANEOUS MAXIMUM NAL
pH	Field test with calibrated portable instrument, or lab sample in accordance with 40 CFR § 136.	pH units	N/A	6.0-9.0
Suspended Solids (TSS), Total	SM2540-D	mg/L	100	400
Oil & Grease (TOG), Total	EPA 1664A	mg/L	15	25

PARAMETER	TEST METHOD[1]	REPORTING UNITS	ANNUAL NAL VALUE	INSTANTANEOUS MAXIMUM NAL
Zinc, Total (H)	EPA 200.8	mg/L	0.26 [2]	-
Copper, Total (H)	EPA 200.8	mg/L	0.0332 [2]	-
Cyanide, Total	SM 4500-CN C, D, or E	mg/L	0.022	-
Lead, Total (H)	EPA 200.8	mg/L	0.262 [2]	-
Chemical Oxygen Demand	SM 5220C	mg/L	120	-
Aluminum, Total (pH 6.5-9.0)	EPA 200.8	mg/L	0.75	-
Iron, Total	EPA200.8	mg/L	1.0	-
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	-
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	-
Ammonia	SM 4500-NH3 B+ C or E	mg/L	2.14	-
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 d.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,

f. If an alternative design storm standard for treatment control BMPs in lieu of the design storm standard for treatment control BMPs in section IV.E.4 of the Order will achieve compliance with the effluent limitations of the Order, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.

2. Non-Industrial Pollutant Source Demonstration. This shall include:

a. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

b. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance; and,

c. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance that are or may be discharged;

d. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;

e. A summary of all existing BMPs for that parameter; and,

f. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.

3. **Natural Background Pollutant Source Demonstration.** The Natural Background Pollutant Source Demonstration Technical Report shall at a minimum, include the following:

a. A statement that the Discharger has determined that the NAL exceedance of the NAL is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);

b. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;

c. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Demonstration;

d. A map showing the reference site location in relation to facility along with available land cover information;

e. Reference site and test site elevation;

f. Available geology and soil information for reference and test sites;

g. Photographs showing site vegetation;

h. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and

i. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

XI. MONITORING REQUIREMENTS

Monitoring shall be conducted as specified in the MRP. The SWPPP shall include a description of the following items:

A. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

B. Sampling locations and sample collection procedures. This shall include procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained.

C. Identification of the analytical methods and related method detection limits (if applicable) used to detect pollutants in storm water discharges, including a justification that the method detection limits are adequate.

XII. SWPPP GENERAL REQUIREMENTS

A. The SWPPP shall be retained at the Facility and made available upon request of a representative of the San Diego Water Board.

B. Upon notification by the San Diego Water Board or USEPA that the SWPPP does not meet one or more of the minimum requirements of this Attachment, the Discharger shall revise the SWPPP and implement additional BMPs that are effective in reducing and eliminating pollutants in storm water discharges and authorized non-storm water discharges. As requested, the Discharger shall provide an implementation schedule and/or completion certification to the San Diego Water Board or USEPA.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities, which;

1. May significantly increase the quantities of pollutants in storm water discharges; or

2. Cause a new area of industrial activity at the Facility to be exposed to storm water; or

3. Begin an industrial activity that would introduce a new pollutant source at the Facility.

D. The Discharger shall revise the SWPPP and implement the appropriate BMPs in a timely manner and in no case more than 90 days after a Discharger determines that the SWPPP is in violation of any Order requirement.

E. When any part of the SWPPP is infeasible to implement by the deadlines specified above due to proposed significant structural changes, the Discharger shall:

1. Submit a report to the San Diego Water Board that:

a. Identifies the portion of the SWPPP that is infeasible to implement by the deadline;

b. Provides justification for a time extension, and a schedule for completing and implementing that portion of the SWPPP; and

c. Describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

2. Comply with any request by the San Diego Water Board to modify the report required in Subsection VII.E.1 above, or provide certification that the SWPPP revisions have been implemented.

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

XIII. AUTHORIZED NON-STORM WATER DISCHARGES SPECIAL REQUIREMENTS

A. The SWPPP shall address authorized non-storm water discharges and incorporate the requirements of section IV.F of this Order.

ITEM A-1

STORM WATER POLLUTION PREVENTION PLAN
EXAMPLE CHECKLIST

Facility Name _____

WDID# _____

FACILITY CONTACT
Name _____
Title _____
Company _____
Street _____
Address
City, State _____
ZIP _____

CONSULTANT CONTACT
Name _____
Title _____
Company _____
Street _____
Address
City, State _____
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			
For the NBC, High Risk area			
List of Significant Materials			

Storm Water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
For each material listed:			
Storage location			
Receiving and shipping location			
Handling location			
Quantity			
Frequency			
Description of Potential Pollution Sources			
Industrial Processes			
Material handling and storage areas			
Dust and particulate generating activities			
Significant spills and leaks			
Non-storm water discharges			
Soil Erosion			
Assessment of Potential Pollutant Sources			
Areas likely to be sources of pollutants			
Pollutants likely to be present			
Storm Water Best Management Practices			
Non-Structural BMPs			
Good Housekeeping			
Preventative Maintenance			
Spill Response			
Material Handling and Storage			
Employee Training			
Waste Handling / Waste Recycling			
Recordkeeping and Internal Reporting			
Erosion Control and Site Stabilization			
Inspections			
Quality Assurance			
Structural BMPs			
Overhead Coverage			
Retention Ponds			
Control Devices			
Secondary Containment Structures			
Treatment			
Industrial Activity BMPs/Pollutant Summary			
Annual Comprehensive Site Compliance Evaluation			
Review of visual observations, inspections, and sampling analysis			
Visual inspection of potential pollution sources			
Review and evaluation of BMPs			
Evaluation Report			

ITEM A-2

FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

*Form Pollution Prevention Team
*Review other plans

ASSESSMENT PHASE

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify non-storm water discharges
*Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

*Non-structural BMPs
*Structural BMPs
*Select activity and site-specific BMPs

IMPLEMENTATION PHASE

*Train employees
*Implement BMPs
*Collect and review records

EVALUATION/MONITORING

*Conduct annual site evaluation
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

ITEM A-3
EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to prevent tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques
		Spills caused by topping off fuel tanks	fuel oil	
		Hosing or washing down fuel area	fuel oil	
		Leaking storage tanks	fuel oil	
		Rainfall running off fuel area, and rainfall running onto and off fueling area	fuel oil	

ATTACHMENT H – BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION PLAN FOR UTILITY VAULT AND MANHOLE DEWATERING DISCHARGES (UTILITY VAULT PLAN)

I. IMPLEMENTATION

The Discharger shall develop and implement a Best Management Practices and Pollution Prevention Plan for Utility Vault and Manhole Dewatering Discharges (Utility Vault Plan) which achieves the objectives and the specific requirements listed below. The existing Utility Vault Plan shall continue to be implemented. The revised Utility Vault Plan shall be implemented as soon as possible but no later than 1 year from the effective date of this Order.

II. OBJECTIVE

Through implementation of the Utility Vault Plan, the Discharger shall prevent or minimize the generation and the potential for the release of pollutants from the Facility to the Waters of the United States through normal operations and ancillary activities. The Utility Vault Plan shall be designed to comply with BAT/BCT and to ensure compliance with water quality standards.

III. The Utility Vault Plan shall include, to the extent possible, at least the following items:

A. Utility Vault Plan Administration

1. **Pollution Prevention Team.** The Utility Vault Plan shall identify a specific individual or individuals as members of a Pollution Prevention Team that are responsible for developing the Utility Vault Plan and assisting in its implementation, maintenance, and revision. The Utility Vault Plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the Utility Vault Plan.

2. **Employee Training.** The Discharger shall implement a training program to ensure that all utility personnel that are responsible for implementing the Utility Vault Plan are trained in the proper execution of the procedures and BMPs identified in the Utility Vault Plan to minimize the potential for the release of pollutants in utility vault and underground structure discharges. The training shall address topics such as spill response, good housekeeping, pollution control procedures, and material management practices. In addition, staff who dewater utility vaults or underground structures shall be trained to use a dewatering checklist or dewatering procedures to facilitate evaluation of the quality of the water prior to a planned (non-emergency or non-automated critical) discharge from a utility vault or underground structure. The Utility Vault Plan shall identify who is responsible for the training and how often training will take place. Training shall be held at intervals frequent enough to assure adequate understanding of the Utility Vault Plan goals, objectives, and procedures.

B. Identification of Potential Pollutant Source

1. **Description of Potential Pollutant Sources.** The Utility Vault Plan shall provide a description of potential sources that may add pollutants to discharges. The Utility Vault Plan shall identify all activities and significant materials that may potentially be a source of pollutants. The Utility Vault Plan shall include a description of the types of utility materials handled at the site that potentially may be exposed to vault water either within the vault or underground structure or during discharge operations.

2. **Drainage Map.** Provide a map showing the essential features of the distribution system for the service area boundary and showing the corresponding surface waters to which water may be discharged.

3. **Pollution Assessment**

   a. Using the information identified in section III.B and procedures and pollution control measures developed in sections III.C and III.D below, analyze and discuss the pollution sources which have been identified to potentially cause or contribute to an exceedance of water quality objectives. The analysis shall identify potential sources of pollutants and, for each potential source, any corresponding pollutant or pollutant parameter (e.g., oil and grease) of concern. For each pollutant of concern, identify specific control measures which utility company personnel may use to control the discharge of the pollutant.

   b. If existing discharge data are available, use these data to identify sites or categories of sites which present an increased risk of discharging utility vault water with elevated pollutant levels. Identify potential sources of the elevated pollutant levels and identify specific control measures which will be used to control pollutant levels in the discharges at these sites.

C. Procedures for Discharges from Utility Vaults and Underground Structures

The Discharger shall develop and use a checklist or series of procedures to evaluate the quality of the water prior to a planned (nonemergency or non-automated critical) discharge from a utility vault or underground structure. These procedures shall be included in the Utility Vault Plan. The checklist or series of procedures are intended to allow the Discharger to make a preliminary determination of the quality of water to be disposed and indicate to the Discharger which pollution control measures should be used when discharging the water. The procedures shall include, at a minimum, visual inspection for evidence of, or the potential for, pollutants to be present in the discharge.

The Discharger's Utility Vault Plan shall also include the procedures that will be used for discharges that occur during emergency situations where it is recognized that utility vault or underground structure dewatering may need to occur as soon as possible to avoid endangerment to human health, public safety, or the environment or to reestablish essential public services. Further, the Utility Vault Plan shall address the procedures to be used for automated critical discharges. Automated critical discharges are necessary to protect equipment that is vulnerable to damage by water infiltration or seepage, to minimize outage delays and maintain reliability of essential public services, and for safety purposes. The Discharger shall describe the feasible procedures that may be implemented during emergency situations and for automated critical discharges to minimize the release of pollutants to the environment. The Discharger's staff responsible for dewatering utility vaults or underground structures shall use a checklist or procedures during dewatering activities to facilitate evaluation of the quality of the water prior to a planned (non-emergency or non-automated critical) discharge from a utility vault or underground structure.

D. Pollution Control Measures

The Discharger shall develop a description of BMPs appropriate for their site(s) and operations and implement such BMPs. The appropriateness and priorities of BMPs in a Utility Vault Plan must reflect identified potential sources of pollutants described in section III.B above. In addition, the Discharger should discuss the advantages and limitations of each BMP. If relevant,

include a flow diagram describing the conditions under which specific pollution control measures and/or BMPs will be deployed. The description of pollution control measures and/or BMPs shall address the following minimum components:

1. **Good Housekeeping.** The Discharger shall identify and discuss good housekeeping BMPs which can be adopted to prevent or control the discharge of pollutants. Examples of best practices that should be considered by The Discharger include, but are not limited to, the following:

   a. Maintain areas surrounding the utility vault and underground structure so that they are kept clean and orderly prior to dewatering activities so as to minimize the presence of pollutants in discharges.

   b. If applicable, store and contain liquid materials in such a manner that if the container is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.

   c. Prior to dewatering a utility vault or underground structure, when feasible and safe, maintain the cleanliness and orderliness of all areas that may be impacted by the discharge including the discharge area (e.g., street, roadway, storm drain inlet) which should be clear of debris and sediment prior to discharging.

   d. Use an absorbent material (e.g., absorbent pads, rags) on the utility vault's or underground structure's water surface prior to dewatering and discharge when an oil sheen has been observed.

2. **Discharge Procedures.** The Utility Vault Plan shall include, at a minimum, provisions and procedures which will be implemented during the discharge from utility vaults and underground structures to minimize the introduction of pollutants and protect receiving water quality. For example, best practices that should be considered to control erosion and minimize the discharge of sediment include, but are not limited to, the following:

   a. When feasible and safe, sweep/clear the area surrounding the discharge point to prevent washing sediment and debris into storm drains.

   b. Use straw wattles to reduce erosion.

   c. Use a filter sock or bag to reduce oil and sediment discharge.

3. **Pollution Control and Waste Disposal Procedures**. Instances may arise where utility personnel determine that a utility vault or underground structure discharge may have a reasonable potential to cause or contribute to an exceedance of water quality objectives for the receiving water and that BMPs and procedures implemented in accordance with sections III.D.1. a and b above will be insufficient to adequately control pollutants in the discharge. In these instances, the Utility Vault Plan shall include provisions and procedures to be implemented to capture, treat, and/or dispose of the discharge in a manner that is protective of receiving water quality (e.g., hauling the utility vault or underground structure water to a wastewater treatment plant or a disposal site). Any potential discharge for which it is determined that the discharge from the utility vault or underground structure will cause or contribute to an exceedance in the receiving water of applicable water quality objectives is not authorized under this Order. The determination of the potential to cause water quality

impacts shall be based on field observations prior to dewatering as well as the results of the Identification of Potential Pollutant Source required in section III.B above.

E. Annual Plan Evaluation Requirements

The Discharger shall conduct an overall evaluation of the effectiveness of its Utility Vault Plan in controlling the discharge of pollutants during a discharge event and revise or replace the Utility Vault Plan as necessary to address procedures and BMPs found to not be effective in minimizing the discharge of pollutants.

1. Plan Evaluation Requirements

At least once per year, the Discharger shall conduct an evaluation of the effectiveness of their Utility Vault Plan in controlling the discharge of pollutants during a discharge event. At a minimum, the Utility Vault Plan evaluation shall include the following:

a. Evaluate the Utility Vault Plan measures to reduce pollutant loadings to determine whether they are adequate and properly implemented in accordance with the terms of this Order or whether additional control measures are needed. Ensure that utility source control measures, sediment and erosion control measures, and other structural BMPs identified in the Utility Vault Plan are operating correctly. Perform an evaluation of equipment needed to implement the Utility Vault Plan.

b. If the results of the monitoring at any of the representative sites required in the MRP (Attachment E) exceed of one or more of the Numeric Action Levels (NALs) listed in Table H-1 below, then a Discharger shall prepare a Discharge Characterization Study to evaluate the potential cause(s) of the NAL exceedance(s). At a minimum, this evaluation shall include an assessment of the potential source(s) of the pollutant and whether the procedures and BMPs contained in the Utility Vault Plan need to be revised to address the identified source(s) in future discharges. Additional NALs may be added in the future based on the results of the Discharge Characterization Study.

Table H-1. Numeric Action Levels for Utility Vault and Manhole Dewatering

Parameter	Numeric Action Levels		
	Unit	Minimum Daily	Maximum Daily
Oil and Grease	mg/L	---	25
pH	Standard Units	6.0	9.0
Total Petroleum Hydrocarbons-Diesel Range Organics	mg/L	---	2
Total Petroleum Hydrocarbons-Gasoline Range Organics	µg/L	---	5
Total Suspended Solids	mg/L	---	400

2. Plan Revisions

If Utility Vault Plan revisions are necessary based on the Utility Vault Plan evaluation required in section III.E.1 above, the Discharger shall develop a revised Plan with new or revised BMPs to prevent future exceedance(s) of NALs. The Discharger shall implement

such BMPs and document the progress of their implementation and effectiveness in the Annual Report to the Regional Water Board Executive Officer.

If it is determined that the cause(s) of an exceedance of an NAL were beyond the control of the Discharger and not a result of inadequate Utility Vault Plan implementation, procedures, or BMPs, then revisions to the Utility Vault Plan are not required. The Discharger shall provide as part of the Annual Report an explanation detailing when this situation occurs.

The Discharger shall amend the Utility Vault Plan whenever there is a change in construction, operation, or maintenance, when such amendment is necessary to ensure compliance with BAT/BCT and receiving water limitations. The Utility Vault Plan shall also be amended if it is in violation of any conditions of this Order or has not achieved the general objective of controlling pollutants in discharges to surface waters. The Discharger shall submit the amended the Utility Vault Plan to the San Diego Water Board.

3. Annual Plan Evaluation and Revision Reporting

a. The Discharger shall provide the results of the annual Utility Vault Plan evaluation and any revisions to the Utility Vault Plan as part of the Annual Report required in section VII.E. of the MRP (Attachment E).

b. The Discharger shall retain for five years records summarizing the scope of the annual Utility Vault Plan evaluation, personnel making the evaluation, the date(s) of the evaluation(s), significant observations relating to the implementation of the Utility Vault Plan, and actions taken to revise the Utility Vault Plan.

F. Other Special Provisions

1. The Dischargers shall dispose of solids removed from liquid wastes in accordance with applicable federal, state and local laws, regulations, and ordinances.

2. If the Discharger determines that its utility vault or underground structure is causing or contributing to vector problems, it shall coordinate with a vector control agency to address the vector problems.

ATTACHMENT I – BEST MANAGEMENT PRACTICES PLAN FOR APPLICABLE INDUSTRIAL WASTEWATERS

I. Implementation

The Discharger shall develop and implement a Best Management Practices (BMP) Plan which achieves the objectives and the specific requirements listed below for the activities of pier washing, pier boom cleaning, and boat rinsing activities. Existing BMP Plans for these activities shall continue to be implemented. The revised BMP Plan for these activities shall be implemented as soon as possible but no later than 1 year from the effective date of this Order.

II. Purpose

Through implementation of the BMP Plan, the Discharger shall prevent or minimize the generation and the potential for the release of pollutants from the Facility to the Waters of the United States (U.S.) through normal operations and ancillary activities. The BMP Plan shall address at a minimum pier washing, pier boom cleaning, and boat rinsing activities. Pier boom cleaning and boat rinsing discharges have been eliminated and BMPs are necessary to ensure that there is no discharge from these activities.

III. Objectives

The Discharger shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants:

A. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the Facility shall be minimized by the Discharger to the extent feasible by managing each waste stream in the most appropriate manner.

B. The Discharger shall ensure proper operation and maintenance of the Facility. Standard Operating Procedures (SOPs) may be included in the BMP Plan or referenced.

C. The Discharger shall evaluate each component or system for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to Waters of the U.S. due to equipment failure, improper operation, and natural phenomena such as rain or snowfall, or other emergency situation. The evaluation shall include all normal operations and ancillary activities at a minimum related to pier washing and any other activities which have the potential to discharge pollutants. The Discharger shall have a plan to address any emergency situation which would result in a significant release of pollutants to Waters of the U.S. including those identified in this evaluation.

IV. Requirements

A. The BMP Plan shall be consistent with the objectives in section III above and the general guidance contained in the publication entitled *Guidance Manual for Developing Best Management Practices (BMPs)* (USEPA, 1993) or any subsequent revisions to the guidance document.

B. The BMP Plan shall 1) be documented in narrative form, 2) include any necessary plot plans, drawings or maps, and 3) be developed in accordance with good engineering practices.

C. The BMP Plan shall be organized and written with the following elements:

1. Purpose and objectives of the BMP Plan

2. Name and location of the activity with specific BMPs.

3. Specific management practices and standard operating procedures to achieve the above objectives, including, but not limited to, the following:

a. Modification of equipment, facilities, technology, processes, and procedures,

b. Reformulation or redesign of products,

c. Substitution of materials,

d. Improvement in management, inventory control, materials handling or general operational phases of the facility, and

e. Materials compatibility.

4. Good housekeeping.

5. Preventative maintenance.

6. Risk identification and assessment.

7. Reporting of BMP incidents and spills.

8. Inspections and records.

9. Employee training.

D. The BMP Plan shall establish specific BMPs to meet the objectives identified in section III of this Attachment, addressing each component or system capable of generating or causing a release of significant amounts of pollutants, and identifying specific preventative or remedial measures to be implemented.

E. The BMP Plan shall establish specific BMPs or other measures which ensure that the discharge of pollutants including, but not limited to, arsenic, copper, lead, nickel, selenium, zinc, aldrin, alpha-BHC, beta-BHC, 4,4'-DDE (linked to DDT), alpha-endosulfan, beta-endosulfan, heptachlor, and heptachlor epoxide from pier washing is reduced to levels that do not exceed water quality objectives. (RPA)

F. The BMP Plan shall include a statement this BMP Plan fulfills the requirements of this Order and shall be signed and certified in accordance with the signatory requirements of Standard Provision V.B. of Attachment D.

V. Documentation

The Discharger shall maintain a copy of the BMP Plan at the Facility and shall make it available to the San Diego Water Board upon request. All offices of the Discharger which are required to maintain a copy of the NPDES permit shall also maintain a copy of the BMP Plan.

VI. BMP Plan Modification

The Discharger shall amend the BMP Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to the receiving waters. The Discharger shall also amend the BMP Plan, as appropriate, when operations covered by the BMP Plan change. Any such changes to the BMP Plan shall be consistent with the objectives and specific requirements listed above. All changes in the BMP Plan shall be reported to the San Diego Water Board in writing.

VII. Modification for Ineffectiveness

At any time, if the BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or the specific requirements above, the Order and/or the BMP Plan shall be subject to modification to incorporate revised BMP requirements.

ATTACHMENT J – DISCHARGE PROHIBITIONS CONTAINED IN THE BASIN PLAN

I. Basin Plan Discharge Prohibitions

A. The discharge of waste to Waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

B. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.

C. The discharge of pollutants or dredged or fill material to Waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.

D. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues an NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

E. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

F. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

G. The dumping, deposition, or discharge of waste directly into Waters of the State, or adjacent to such waters in any manner which may permit it being transported into the waters, is prohibited unless authorized by the San Diego Water Board.

H. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

I. The unauthorized discharge of treated or untreated sewage to Waters of the State or to a storm water conveyance system is prohibited.

J. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.

K. The discharge of radioactive wastes amenable to alternative methods of disposal into the Waters of the State is prohibited.

L. The discharge of any radiological, chemical, or biological warfare agent into Waters of the State is prohibited.

M. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

N. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in Waters of the State or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

O. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

P. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

Q. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at MLLW is prohibited.

R. The discharge of treated sewage from vessels, which do not have a properly functioning USCG certified Type 1 or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

ATTACHMENT K – SEDIMENT CHEMISTRY ANALYTES

All samples shall be tested for the analytes specified in Table K-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 State Water Board's Sediment Quality Plan cannot be used in the exposure assessment in section V of the State Water Board's Sediment Quality Plan; however the data can be used to conduct more effective stressor identification studies as described in section VII.F of the State Water Board's Sediment Quality Plan.

Table K-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

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

Chemical Name	Chemical Group
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'-Hexachlorobiphenyl[1]	PCB 128 - congener
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
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

[1] From Attachment A of the State Water Board's Sediment Quality Plan

ATTACHMENT L – ELEMENTS FOR SMALL MILITARY BASE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) – STORM WATER MANAGEMENT PROGRAM (SWMP)

I. SIX MINIMUM CONTROL MEASURES. The SWMP shall describe BMPs, and associated measurable goals, that fulfill the requirements of the following six Minimum Control Measures:

A. Public Education and Outreach on Storm Water Impacts. The SWMP shall contain a written plan to distribute educational materials to the target audiences identified below, or conduct equivalent outreach activities about the effects of storm water discharges on water bodies and the steps that the target audiences can take to reduce pollutants in storm water runoff

The SWMP shall contain a list of target audience groups consisting of civilian, contactor, retailers military personnel (including dependents) that are present on the Facility and may be conducting activities that could have potential adverse effect(s) to water quality.

B. Public Involvement/Participation Program. The SWMP shall contain a written Public Involvement/Participation Program to:

1. Regularly encourage public participation in the development and implementation of the SWMP*;*

2. Establish a platform for the public and target audiences to provide input into the development and implementation of the SWMP;

3. Solicit public reporting of suspected illicit discharges via telephone and writing; and

4. Implement procedures for the receipt and consideration of verbal or written public inquires, concerns, and information submitted by the public.

C. Illicit Discharge Detection and Elimination. The SWMP shall contain a written Illicit Discharge Detection and Elimination Program containing the following elements:

1. A written program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2)) into the storm water drainage systems;

2. A storm sewer system map, showing the location of all storm water drainage systems, outfalls and the names and locations of all Waters of the U.S. that receive discharges from those outfalls;

3. A prohibition against non-storm water discharges into the storm water drainage system except as allowed under Non-Storm Water Specifications IV.F of this Order;

4. A plan to detect and address non-storm water discharges, including illegal dumping, to the MS4 system that are not authorized by a separate NPDES permit;

5. A plan to inform the target audiences of the hazards that are generally associated with illegal discharges and improper disposal of waste; and

6. A plan to address the categories of non-storm water discharges or flows as specified in Non-Storm Water Specification IV.F of this Order (i.e., authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the storm water collection system.

D. Construction Site Storm Water Runoff Control. The SWMP shall contain a written *Construction Site Storm Water Runoff Control* program to reduce pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must, at a minimum, include the development and implementation of:

1. Mechanisms to require erosion and sediment controls, as well as enforcement mechanisms, to ensure compliance;

2. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;

3. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

4. Procedures for site plan review which incorporate consideration of potential water quality impacts;

5. Procedures for receipt and consideration of information submitted by the public. The Discharger shall demonstrate acknowledgement and consideration of the information submitted, whether submitted verbally or in writing; and

6. Procedures for site inspection and enforcement of control measures.

7. Procedures for verifying that the site has existing coverage under California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities (hereinafter General Construction Permit).

E. Post-Construction Storm Water Management in New Development and Redevelopment. The SWMP shall contain a written Post-Construction Storm Water Management Program to:

1. Address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development, that discharge into the storm water drainage system by ensuring that controls are in place that would prevent or minimize water quality impacts, and that are designed to maintain pre-project runoff condition

2. Develop and implement water quality strategies, which include a combination of structural and/or non-structural BMPs appropriate for the Facility;

3. Develop or use a mechanism to address post-construction runoff from new development and redevelopment projects.

4. Ensure adequate long-term operation and maintenance of water quality BMPs.

5. Maintain and regularly update an inventory of BMPs installed pursuant to the SWMP. The inventory shall include, at a minimum:

a. Exact location of BMP(s);

b. Contact information for the individual or entity responsible for long term BMP operation and maintenance;

c. A description of the BMP and the year it was installed;

d. Maintenance required;

e. Actual inspection/maintenance activities that occurred during the reporting year; and

f. An assessment by the Discharger if proper operation and maintenance occurred during the year, and if not, what actions the Discharger has taken, or will take, to address the deficiencies.

F. Pollution Prevention/Good Housekeeping. The SWMP shall contain a written *Pollution Prevention/Good Housekeeping Program* that is sufficient to minimize pollutant runoff from on-site operations. The Discharger may incorporate by reference, other plans implemented at the Facility (i.e., SWPPP and BMP Plan) that address similar goals. The Discharger shall :

1. Develop *and* implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from Facility operations: and

2. Using training materials that are available from USEPA, the state, or other organizations, include target audience training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

II. MEASUREABLE GOALS. The SWMP must identify the measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

III. SWMP ANNUAL REVIEW. The SWMP shall be reviewed annually and revised as necessary. A summary of each annual review, the identified inadequacies, and any planned efforts to address the identified inadequacies shall be maintained as an attachment to the SWMP for a minimum of 5 years.

ATTACHMENT M – STORM WATER RISK LEVEL DESIGNATION TABLES

Listing of NBC Municipal Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-001	NASNI-50	32° 42' 31" N	117° 13' 11" W	Municipal	San Diego Bay
NBC-002	NASNI-CVN1	32° 42' 52" N	117° 11' 41" W	Municipal	San Diego Bay
NBC-003	NASNI-CVN2	32° 42' 52" N	117° 11' 37" W	Municipal	San Diego Bay
NBC-004	NASNI-CVN4	32° 42' 51" N	117° 11' 37" W	Municipal	San Diego Bay
NBC-005	NASNI-CVN12	32° 42' 52" N	117° 11' 43" W	Municipal	San Diego Bay
NBC-006	NASNI-CVN17-IN	32° 42' 46" N	117° 11' 25" W	Municipal	San Diego Bay
NBC-007	NASNI-CVN17-EF	32° 42' 47" N	117° 11' 25" W	Municipal	San Diego Bay
NBC-008	NASNI-CVN18-IN	32° 42' 45" N	117° 11' 23" W	Municipal	San Diego Bay
NBC-009	NASNI-CVN18-EF	32° 42' 46" N	117° 11' 23" W	Municipal	San Diego Bay
NBC-010	NASNI-CVN11	32° 42' 25" N	117° 11' 26" W	Municipal	San Diego Bay
NBC-011	NASNI-18	32° 42' 53" N	117° 11' 49" W	Municipal	San Diego Bay
NBC-012	NASNI-61	32° 42' 53" N	117° 12' 1" W	Municipal	San Diego Bay
NBC-013	NASNI-60	32° 42' 53" N	117° 12' 2" W	Municipal	San Diego Bay
NBC-014	NASNI-58	32° 42' 53" N	117° 12' 17" W	Municipal	San Diego Bay
NBC-015	NASNI-57	32° 42' 49" N	117° 12' 34" W	Municipal	San Diego Bay
NBC-016	NASNI-56	32° 42' 48" N	117° 12' 34" W	Municipal	San Diego Bay
NBC-017	NASNI-55	32° 42' 45" N	117° 12' 41" W	Municipal	San Diego Bay
NBC-018	NASNI-54	32° 42' 43" N	117° 12' 48" W	Municipal	San Diego Bay
NBC-019	NASNI-52	32° 42' 41" N	117° 12' 53" W	Municipal	San Diego Bay
NBC-020	NASNI-48	32° 42' 5" N	117° 13' 30" W	Municipal	San Diego Bay
NBC-021	NASNI-47	32° 41' 44" N	117° 13' 40" W	Municipal	San Diego Bay
NBC-022	NASNI-1	32° 41' 38" N	117° 11' 27" W	Municipal	Pacific Ocean
NBC-023	NASNI-2	32° 41' 26" N	117° 11' 31" W	Municipal	Pacific Ocean
NBC-024	NASNI-41	32° 41' 23" N	117° 12' 10" W	Municipal	Pacific Ocean
NBC-025	NASNI-42	32° 41' 23" N	117° 12' 16" W	Municipal	Pacific Ocean
NBC-026	NASNI-45	32° 41' 28" N	117° 13' 37" W	Municipal	San Diego Bay
NBC-027	NASNI-44	32° 41' 26" N	117° 13' 36" W	Municipal	San Diego Bay
NBC-028	NASNI-CVN10	32° 42' 27" N	117° 11' 25" W	Municipal	San Diego Bay
NBC-029	NASNI-19	32° 42' 53" N	117° 11' 46" W	Municipal	San Diego Bay
NBC-030	NASNI-13	32° 42' 28" N	117° 13' 10" W	Municipal	San Diego Bay
NBC-031	NASNI-40	32° 42' 11" N	117° 10' 51" W	Municipal	San Diego Bay
NBC-032	NASNI-CVN19	32° 42' 46" N	117° 11' 22" W	Municipal	San Diego Bay
NBC-033	NAB-2	32° 40' 30" N	117° 09' 58" W	Municipal	San Diego Bay
NBC-034	NAB-7	32° 40' 49" N	117° 09' 28" W	Municipal	San Diego Bay
NBC-035	NAB-8	32° 40' 42" N	117° 9' 18" W	Municipal	San Diego Bay
NBC-036	NAB-18	32° 40' 30" N	117° 10' 01" W	Municipal	San Diego Bay
NBC-037	NAB-31	32° 40' 36" N	117° 09' 45" W	Municipal	San Diego Bay
NBC-038	NAB-40	32° 40' 45" N	117° 9' 32" W	Municipal	San Diego Bay
NBC-039	NAB-41	32° 40' 30" N	117° 09' 56" W	Municipal	San Diego Bay
NBC-040	NAB-51	32° 40' 49" N	117° 09' 26" W	Municipal	San Diego Bay
NBC-041	NAB-52	32° 40' 49" N	117° 09' 26" W	Municipal	San Diego Bay
NBC-042	NAB-53	32° 40' 47" N	117° 09' 24" W	Municipal	San Diego Bay
NBC-043	NAB-54	32° 40' 45" N	117° 09' 21" W	Municipal	San Diego Bay

Listing of NBC Municipal Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-044	NAB-57	32° 40' 47" N	117° 09' 31" W	Municipal	San Diego Bay
NBC-045	NAB-108	32° 40' 43" N	117° 09' 35" W	Municipal	San Diego Bay
NBC-046	NAB-110	32° 40' 30" N	117° 9' 23" W	Municipal	San Diego Bay
NBC-047	NAB-112	32° 40' 24" N	117° 9' 31" W	Municipal	San Diego Bay
NBC-048	NAB-OLF 11	32° 40' 33" N	117° 09' 49" W	Municipal	San Diego Bay
NBC-049	NAB-OLF 12	32° 40' 34" N	117° 09' 47" W	Municipal	San Diego Bay
NBC-050	NAB-OLF15	32° 40' 37" W N	117° 09' 43" W	Municipal	San Diego Bay
NBC-051	NAB-OLF16	32° 40' 38" N	117° 09' 42" W	Municipal	San Diego Bay
NBC-052	NAB-OLF19	32° 40' 43" N	117° 09' 36" W	Municipal	San Diego Bay
NBC-053	NAB-OLF37	32° 40' 29" N	117° 09' 55" W	Municipal	San Diego Bay
NBC-054	NAB-OLF44	32° 40' 49" N	117° 09' 27" W	Municipal	San Diego Bay
NBC-055	NAB-OLF45	32° 40' 47" N	117° 09' 31" W	Municipal	San Diego Bay
NBC-056	NAB-OLF12	32° 40' 34" N	117° 9' 47" W	Municipal	San Diego Bay
NBC-057	NAB-5	32° 40' 42" N	117° 9' 37" W	Municipal	San Diego Bay
NBC-058	NAB-13	32° 40' 29" N	117° 9' 26" W	Municipal	San Diego Bay
NBC-059	NAB-14	32° 40' 27" N	117° 9' 28" W	Municipal	San Diego Bay
NBC-060	NAB-50	32° 40' 45" N	117° 9' 33" W	Municipal	San Diego Bay
NBC-061	NAB-109	32° 40' 46" N	117° 9' 32" W	Municipal	San Diego Bay
NBC-062	NAB-56	32° 40' 46" N	117° 9' 32" W	Municipal	San Diego Bay
NBC-063	NAB-1	32° 40' 30" N	117° 10' 3" W	Municipal	San Diego Bay
NBC-064	NAB-29	32° 40' 7" N	117° 9' 50" W	Municipal	Pacific Ocean
NBC-065	NAB-43	32° 40' 5" N	117° 9' 52" W	Municipal	Pacific Ocean
NBC-066	NAB-27	32° 40' 7" N	117° 9' 54" W	Municipal	Pacific Ocean
NBC-067	NAB-28	32° 40' 6" N	117° 9' 53" W	Municipal	Pacific Ocean
NBC-068	NAB-26	32° 40' 8" N	117° 9' 55" W	Municipal	Pacific Ocean
NBC-069	NAB-39	32° 40' 12" N	117° 9' 59" W	Municipal	Pacific Ocean
NBC-070	NAB-24	32° 40' 12" N	117° 9' 60" W	Municipal	Pacific Ocean
NBC-071	NAB-23	32° 40' 15" N	117° 10' 3" W	Municipal	Pacific Ocean
NBC-072	NAB-35	32° 40' 22" N	117° 10' 10" W	Municipal	Pacific Ocean
NBC-073	NAB-37	32° 40' 21" N	117° 10' 10" W	Municipal	Pacific Ocean
NBC-074	NAB-38	32° 40' 22" N	117° 10' 9" W	Municipal	Pacific Ocean
NBC-075	NAB-36	32° 40' 21" N	117° 10' 10" W	Municipal	Pacific Ocean
NBC-076	NAB-55	32° 40' 6" N	117° 9' 39" W	Municipal	San Diego Bay
NBC-077	NAB-25	32° 40' 9" N	117° 9' 57" W	Municipal	Pacific Ocean
NBC-078	NAB-15	32° 40' 25" N	117° 9' 31" W	Municipal	San Diego Bay
NBC-079	NAB-OLF41	32° 40' 5" N	117° 9' 51" W	Municipal	Pacific Ocean
NBC-080	NAB-16	32° 40' 20" N	117° 9' 36" W	Municipal	San Diego Bay
NBC-081	NAB-OLF40	32° 40' 25" N	117° 10' 13" W	Municipal	Pacific Ocean
NBC-082	NAB-OLF14	32° 40' 35" N	117° 9' 45" W	Municipal	San Diego Bay
NBC-083	NAB-OLF17	32° 40' 39" N	117° 9' 41" W	Municipal	San Diego Bay
NBC-084	NAB-12	32° 40' 32" N	117° 9' 22" W	Municipal	San Diego Bay
NBC-085	NAB-22	32° 40' 20" N	117° 10' 7" W	Municipal	Pacific Ocean
NBC-086	NAB-OLF11	32° 40' 33" N	117° 9' 48" W	Municipal	San Diego Bay
NBC-087	NAB-29A	32° 40' 6" N	117° 9' 52" W	Municipal	Pacific Ocean
NBC-088	NOLF-4	32° 33' 51" N	117° 06' 21" W	Municipal	Tijuana Estuary

Listing of NBC Municipal Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-089	NOLF-1	32° 34' 9" N	117° 7' 12" W	Municipal	Tijuana Estuary
NBC-090	NOLF-105	32° 33' 33" N	117° 7' 14" W	Municipal	Tijuana Estuary
NBC-091	NOLF-104	32° 33' 35" N	117° 6' 60" W	Municipal	Tijuana Estuary
NBC-092	NOLF-103	32° 33' 46" N	117° 6' 38" W	Municipal	Tijuana Estuary
NBC-093	NOLF-102	32° 33' 53" N	117° 6' 14" W	Municipal	Tijuana Estuary
NBC-094	NOLF-101	32° 33' 53" N	117° 6' 7" W	Municipal	Tijuana Estuary
NBC-095	NOLF-6	32° 33' 53" N	117° 6' 5" W	Municipal	Tijuana Estuary
NBC-096	NOLF-5	32° 34' 9" N	117° 6' 8" W	Municipal	Tijuana Estuary
NBC-097	NOLF-OLF2A	32° 33' 40" N	117° 6' 52" W	Municipal	Tijuana Estuary
NBC-098	NOLF-OLF2B	32° 33' 40" N	117° 6' 52" W	Municipal	Tijuana Estuary
NBC-099	NOLF-OLF2	32° 33' 46" N	117° 6' 39" W	Municipal	Tijuana Estuary
NBC-100	NOLF-OLF4	32° 33' 42" N	117° 6' 44" W	Municipal	Tijuana Estuary
SSTC-01	SSTC-01	32° 35' 15" N	117° 7' 57" W	Municipal	Pacific Ocean
Remote Training Site Warner Springs		No identified point source discharges.		Municipal	Tributary to San Luis Rey River
Camp Michael Monsoor		No identified point source discharges.		Municipal	Waters in the Canyon City HSA 11.82
Camp Morena		No identified point source discharges.		Municipal	Morena Reservoir

Listing of NBC Industrial Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-101	~~NANSI~~NASNI-3	32° 41' 15" N	117° 11' 53" W	Industrial Low Risk	Pacific Ocean
NBC-102	~~NANSI~~NASNI-5	32° 41' 16" N	117° 12' 47" W	Industrial Low Risk	Pacific Ocean
NBC-103	~~NANSI~~NASNI-6	32° 41' 11" N	117° 13' 01" W	Industrial Low Risk	Pacific Ocean
NBC-104	~~NANSI~~NASNI-7	32° 41' 07" N	117° 13' 12" W	Industrial Low Risk	Pacific Ocean
NBC-105	~~NANSI~~NASNI-8	32° 41' 46" N	117° 13' 37" W	Industrial Low Risk	San Diego Bay
NBC-106	~~NANSI~~NASNI-9	32° 42' 09" N	117° 13' 27" W	Industrial Low Risk	San Diego Bay
NBC-107	~~NANSI~~NASNI-10	32° 42' 18" N	117° 13' 22" W	Industrial Low Risk	San Diego Bay
NBC-108	~~NANSI~~NASNI-11	32° 42' 24" N	117° 13' 16" W	Industrial Low Risk	San Diego Bay
NBC-109	~~NANSI~~NASNI-12	32° 42' 30" N	117° 13' 10" W	Industrial Low Risk	San Diego Bay
NBC-110	~~NANSI~~NASNI-14	32° 42' 46" N	117° 12' 38" W	Industrial Low Risk	San Diego Bay
NBC-111	~~NANSI~~NASNI-15	32° 42' 48" N	117° 12' 35" W	Industrial Low Risk	San Diego Bay
NBC-112	~~NANSI~~NASNI-16	32° 42' 50" N	117° 12' 25" W	Industrial Low Risk	San Diego Bay
NBC-113	~~NANSI~~NASNI-17	32° 42' 53" N	117° 12' 06" W	Industrial Low Risk	San Diego Bay
NBC-114	~~NANSI~~NASNI-21	32° 42' 38" N	117° 11' 20" W	Industrial High Risk	San Diego Bay
NBC-115	~~NANSI~~NASNI-22A	32° 42' 35" N	117° 11' 22" W	Industrial High Risk	San Diego Bay
NBC-116	~~NANSI~~NASNI-22B	32° 42' 35" N	117° 11' 21" W	Industrial High Risk	San Diego Bay
NBC-117	~~NANSI~~NASNI-23A	32° 42' 32" N	117° 11' 23" W	Industrial High Risk	San Diego Bay
NBC-118	~~NANSI~~NASNI-23B	32° 42' 34" N	117° 11' 26" W	Industrial Low Risk	San Diego Bay
NBC-119	~~NANSI~~NASNI-24	32° 42' 30" N	117° 11' 23" W	Industrial High Risk	San Diego Bay
NBC-120	~~NANSI~~NASNI-25	32° 42' 25" N	117° 11' 26" W	Industrial Low Risk	San Diego Bay
NBC-121	~~NANSI~~NASNI-26	32° 42' 24" N	117° 11' 26" W	Industrial High Risk	San Diego Bay
NBC-122	~~NANSI~~NASNI-27	32° 42' 23" N	117° 11' 25" W	Industrial High Risk	San Diego Bay
NBC-123	~~NANSI~~NASNI-28	32° 42' 23" N	117° 11' 24" W	Industrial High Risk	San Diego Bay

Listing of NBC Industrial Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-124	~~NANSI~~NASNI-29	32° 42' 22" N	117° 11' 19" W	Industrial High Risk	San Diego Bay
NBC-125	~~NANSI~~NASNI-30	32° 42' 21" N	117° 11' 17" W	Industrial High Risk	San Diego Bay
NBC-126	~~NANSI~~NASNI-31	32° 42' 21" N	117° 11' 16" W	Industrial High Risk	San Diego Bay
NBC-127	~~NANSI~~NASNI-31A	32° 42' 20" N	117° 11' 15" W	Industrial High Risk	San Diego Bay
NBC-128	~~NANSI~~NASNI-32	32° 42' 20" N	117° 11' 14" W	Industrial High Risk	San Diego Bay
NBC-129	~~NANSI~~NASNI-33	32° 42' 19" N	117° 11' 11" W	Industrial High Risk	San Diego Bay
NBC-130	~~NANSI~~NASNI-34	32° 42' 18" N	117° 11' 07" W	Industrial High Risk	San Diego Bay
NBC-131	~~NANSI~~NASNI-35	32° 42' 17" N	117° 11' 04" W	Industrial High Risk	San Diego Bay
NBC-132	~~NANSI~~NASNI-36	32° 42' 16" N	117° 11' 00" W	Industrial High Risk	San Diego Bay
NBC-133	~~NANSI~~NASNI-37	32° 42' 15" N	117° 10' 57" W	Industrial High Risk	San Diego Bay
NBC-134	~~NANSI~~NASNI-38	32° 42' 14" N	117° 10' 54" W	Industrial High Risk	San Diego Bay
NBC-135	~~NANSI~~NASNI-39	32° 42' 13" N	117° 10' 52" W	Industrial High Risk	San Diego Bay
NBC-136	~~NANSI~~NASNI-43	32° 41' 24" N	117° 12' 24" W	Industrial Low Risk	Pacific Ocean
NBC-137	~~NANSI~~NASNI-46	32° 41' 43" N	117° 13' 37" W	Industrial Low Risk	San Diego Bay
NBC-138	~~NANSI~~NASNI-53	32° 42' 41" N	117° 12' 53" W	Industrial Low Risk	San Diego Bay
NBC-139	~~NANSI~~NASNI-59	32° 42' 53" N	117° 12' 10" W	Industrial Low Risk	San Diego Bay
NBC-140	~~NANSI~~NASNI-62	32° 42' 53" N	117° 11' 56" W	Industrial Low Risk	San Diego Bay
NBC-141	~~NANSI~~NASNI-CVN5	32° 42' 49" N	117° 11' 33" W	Industrial Low Risk	San Diego Bay
NBC-142	~~NANSI~~NASNI-CVN6	32° 42' 49" N	117° 11' 29" W	Industrial Low Risk	San Diego Bay
NBC-143	~~NANSI~~NASNI-CVN8	32° 42' 41" N	117° 11' 18" W	Industrial High Risk	San Diego Bay
NBC-144	~~NANSI~~NASNI-CVN9	32° 42' 36" N	117° 11' 20" W	Industrial High Risk	San Diego Bay
NBC-145	~~NANSI~~NASNI-CVN13A	32° 42' 39" N	117° 11' 19" W	Industrial High Risk	San Diego Bay
NBC-146	~~NANSI~~NASNI-CVN13B	32° 42' 33" N	117° 11' 22" W	Industrial High Risk	San Diego Bay
NBC-147	~~NANSI~~NASNI-CVN14	32° 42' 40" N	117° 11' 18" W	Industrial High Risk	San Diego Bay
NBC-148	~~NANSI~~NASNI-CVN15	32° 42' 49" N	117° 11' 29" W	Industrial High Risk	San Diego Bay
NBC-149	~~NANSI~~NASNI-CVN16	32° 42' 48" N	117° 11' 27" W	Industrial High Risk	San Diego Bay
NBC-150	~~NANSI~~NASNI-CVN17	32° 42' 47" N	117° 11' 25" W	Industrial High Risk	San Diego Bay
NBC-151	~~NANSI~~NASNI-CVN18	32° 42' 46" N	117° 11' 23" W	Industrial High Risk	San Diego Bay
NBC-152	~~NANSI~~NASNI-CVN20	32° 42' 45" N	117° 11' 22" W	Industrial High Risk	San Diego Bay
NBC-153	~~NANSI~~NASNI-CVN21	32° 42' 43" N	117° 11' 18" W	Industrial High Risk	San Diego Bay
NBC-154	NAB-3	32° 40' 30" N	117° 09' 54" W	Industrial Low Risk	San Diego Bay
NBC-155	NAB-4	32° 40' 31" N	117° 09' 52" W	Industrial Low Risk	San Diego Bay
NBC-156	NAB-6	32° 40' 47" N	117° 09' 31" W	Industrial High Risk	San Diego Bay
NBC-157	NAB-9	32° 40' 33" N	117° 09' 18" W	Industrial High Risk	San Diego Bay
NBC-158	NAB-10	32° 40' 32" N	117° 09' 19" W	Industrial High Risk	San Diego Bay
NBC-159	NAB-11	32° 40' 32" N	117° 09' 20" W	Industrial High Risk	San Diego Bay
NBC-160	NAB-17	32° 40' 16" N	117° 09' 37" W	Industrial Low Risk	San Diego Bay

Listing of NBC Industrial Storm Water Discharge Locations					
Discharge Point	**Navy ID Number**	**Latitude**	**Longitude**	**Outfall Risk Level**	**Receiving Water**
NBC-161	NAB-30	32° 40' 34" N	117° 09' 47" W	Industrial Low Risk	San Diego Bay
NBC-162	NAB-32	32° 40' 36" N	117° 9' 43" W	Industrial Low Risk	San Diego Bay
NBC-163	NAB-33	32° 40' 40" N	117° 09' 39" W	Industrial High Risk	San Diego Bay
NBC-164	NAB-34	32° 40' 41" N	117° 09' 38" W	Industrial High Risk	San Diego Bay
NBC-165	NAB-111	32° 40' 36" N	117° 9' 14" W	Industrial High Risk	San Diego Bay
NBC-166	NAB-OLF4	32° 40' 32" N	117° 9' 52" W	Industrial Low Risk	San Diego Bay
NBC-167	NAB-OLF9	32° 40' 31" N	117° 09' 18" W	Industrial Low Risk	San Diego Bay
NBC-168	NAB-OLF10	32° 40' 37" N	117° 9' 14" W	Industrial High Risk	San Diego Bay
NBC-169	NAB-OLF13	32° 40' 35" N	117° 09' 46" W	Industrial Low Risk	San Diego Bay
NBC-170	NAB-OLF18	32° 40' 39" N	117° 09' 40" W	Industrial High Risk	San Diego Bay
NBC-171	NAB-OLF20	32° 40' 44" N	117° 09' 35" W	Industrial Low Risk	San Diego Bay
NBC-172	NAB-OLF21	32° 40' 37" N	117° 09' 51" W	Industrial Low Risk	San Diego Bay
NBC-173	NAB-OLF22	32° 40' 38" N	117° 09' 50" W	Industrial Low Risk	San Diego Bay
NBC-174	NAB-OLF23	32° 40' 38" N	117° 09' 48" W	Industrial Low Risk	San Diego Bay
NBC-175	NAB-OLF24	32° 40' 39" N	117° 09' 47" W	Industrial Low Risk	San Diego Bay
NBC-176	NAB-OLF25	32° 40' 39" N	117° 09' 46" W	Industrial Low Risk	San Diego Bay
NBC-177	NAB-OLF26	32° 40' 40" N	117° 09' 45" W	Industrial Low Risk	San Diego Bay
NBC-178	NAB-OLF27	32° 40' 41" N	117° 09' 45" W	Industrial Low Risk	San Diego Bay
NBC-179	NAB-OLF28	32° 40' 42" N	117° 09' 44" W	Industrial Low Risk	San Diego Bay
NBC-180	NAB-OLF29	32° 40' 42" N	117° 09' 43" W	Industrial Low Risk	San Diego Bay
NBC-181	NAB-OLF30	32° 40' 43" N	117° 09' 42" W	Industrial Low Risk	San Diego Bay
NBC-182	NAB-OLF31	32° 40' 44" N	117° 09' 41" W	Industrial Low Risk	San Diego Bay
NBC-183	NAB-OLF33	32° 40' 45" N	117° 09' 40" W	Industrial Low Risk	San Diego Bay
NBC-184	NAB-OLF34	32° 40' 45" N	117° 09' 39" W	Industrial Low Risk	San Diego Bay
NBC-185	NAB-OLF35	32° 40' 46" N	117° 09' 38" W	Industrial Low Risk	San Diego Bay
NBC-186	NAB-OLF36	32° 40' 44" N	117° 09' 34" W	Industrial Low Risk	San Diego Bay
NBC-187	NAB-OLF39	32° 40' 32" N	117° 09' 50" W	Industrial Low Risk	San Diego Bay
NBC-188	NAB-OLF42	32° 40' 30" N	117° 09' 23" W	Industrial High Risk	San Diego Bay
NBC-189	NAB-OLF43	32° 40' 49" N	117° 09' 36" W	Industrial Low Risk	San Diego Bay
NBC-190	NOLF-2	32° 33' 50" N	117° 06' 28" W	Industrial Low Risk	Tijuana Estuary
NBC-191	NOLF-3	32° 33' 50" N	117° 06' 25" W	Industrial Low Risk	Tijuana Estuary