



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## Los Angeles Regional Water Quality Control Board

April 17, 2017

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
No. 7009 0820 0001 6812 2343

Mr. Dave Forster  
Vice President, Los Angeles Refinery  
Tesoro Refining & Marketing Company LLC  
2101 East Pacific Coast Highway  
Wilmington, CA 90744

Dear Mr. Forster:

**TRANSMITTAL OF THE WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR TESORO REFINING & MARKETING COMPANY LLC, LOS ANGELES REFINERY-WILMINGTON FACILITY, WILMINGTON, CALIFORNIA (NPDES NO. CA0003778, CI -5427)**

Our letter dated February 14, 2017, transmitted the tentative waste discharge requirements (WDRs) for the reissuance of a permit for your Facility to discharge storm water and commingled storm water and process wastewater to surface waters under the National Pollutant Discharge Elimination System (NPDES) Program.

Pursuant to Division 7 of the California Water Code, this Regional Water Board at a public hearing held on April 6, 2017, reviewed the tentative requirements, considered all factors in the case, and adopted Order No. R4-2017-0095. Order No. R4-2017-0095 serves as an NPDES permit, and expires on May 31, 2022. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge (ROWD) for a new permit must be filed at least 180 days before the expiration date.

You are required to implement the Monitoring and Reporting Program (MRP) on the effective date (June 1, 2017) of Order No. R4-2017-0095. Your first monitoring report for the period of June 1, 2017, through June 30, 2017, is due by August 1, 2017. Tesoro Refining & Marketing Company LLC, Los Angeles Refinery- Wilmington Facility will electronically submit Self-Monitoring Reports (SMRs) and Discharge Monitoring Reports (DMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) (<http://www.waterboards.ca.gov/ciwqs/index.html>).

When submitting monitoring or technical reports to the Regional Water Board per these requirements, please include a reference to Compliance File CI-5427 and NPDES No. CA0003778, which will assure that the reports are directed to the appropriate file and staff.

We are sending the paper copy of the Permit to the Discharger only. For those on the mailing list or other interested parties who would like access to a copy of the Permit, please go to the Regional Water Board's website at:

Mr. Dave Forster  
Tesoro Refining & Marketing Company LLC  
Los Angeles Refinery- Wilmington

- 2 -

April 17, 2017

[http://www.waterboards.ca.gov/losangeles/board\\_decisions/adopted\\_orders/search.shtml](http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/search.shtml)

If you have any questions, please contact Ching Yin To at [Ching-Yin.To@waterboards.ca.gov](mailto:Ching-Yin.To@waterboards.ca.gov) or at (213) 576-6696.

Sincerely,



Cassandra D. Owens, Chief  
Industrial Permitting Unit (NPDES)

Enclosures: Order No. R4-2017-0095 - Waste Discharge Requirements  
Attachment E - Monitoring and Reporting Program (MRP No. 5427)  
Attachment F - Fact Sheet

cc: **(Via Email Only)**

Mr. David Smith, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)  
Ms. Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)  
Ms. Becky Mitschele, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)  
Mr. Roger Vann, Environmental Protection Agency, Region 9  
Mr. Kenneth Wong, U.S. Army Corps of Engineers  
Mr. Bryant Chesney, NOAA, National Marine Fisheries Service  
Mr. Jeff Phillips, Department of Interior, U.S. Fish and Wildlife Service  
Mr. Kurt Souza, State Water Resources Control Board, Drinking Water Division  
Mr. William Paznokas, California Department of Fish and Wildlife, Region 5  
Ms. Teresa Henry, California Coastal Commission, South Coast Region  
Mr. Tim Smith, Los Angeles County, Department of Public Works  
Mr. Angelo Bellomo, Los Angeles County, Department of Public Health  
Mr. Theodore Johnson, Water Replenishment Districts of Southern California  
Mr. David Snyder, Los Angeles County Sanitation Districts  
Mr. Anthony Arevalo, City of Long Beach  
Ms. Rita Kampalath, Heal the Bay  
Mr. Steven Johnson, Heal the Bay  
Ms. Bruce Reznik, Los Angeles Waterkeeper  
Ms. Laura West, Natural Resources Defense Council  
Ms. Becky Hayat, Natural Resources Defense Council  
Mr. Jason Weiner, Ventura Coastkeeper  
Mr. Daniel Cooper, Lawyers for Clean Water  
Mr. James Ashby, PG Environmental  
Ms. Sarah Torres, PG Environmental  
Mr. Robert Nguyen, Tesoro Refining & Marketing Company LLC  
Mr. Robert Stockdale, Tesoro Refining & Marketing Company LLC

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

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**ORDER R4-2017-0095  
NPDES NO. CA0003778**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE TESORO REFINING & MARKETING COMPANY LLC  
LOS ANGELES REFINERY - WILMINGTON  
DISCHARGE TO THE DOMINGUEZ CHANNEL ESTUARY**

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

**Table 1. Discharger Information**

Discharger	Tesoro Refining & Marketing Company LLC
Name of Facility	Los Angeles Refinery - Wilmington
Facility Address	2101 E. Pacific Coast Highway
	Wilmington, California 90744
	Los Angeles County

**Table 2. Discharge Location**

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Storm Water Only	33.7948°	-118.2299°	Dominguez Channel Estuary
003	Commingled Storm Water and Process Wastewater <sup>1</sup>	33.7858°	-118.2355°	Dominguez Channel Estuary

- <sup>1</sup> Storm water commingled with boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, and miscellaneous wastewaters (including cleanup wastewater, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater), and is discharged only during an emergency when Facility's storage capacity and capacity to discharge to the sanitary sewer system has been exceeded during a severe storm event to prevent flooding of the Facility.

**Table 3. Administrative Information**

This Order was adopted on:	<b>April 6, 2017</b>
This Order shall become effective on:	<b>June 1, 2017</b>
This Order shall expire on:	<b>May 31, 2022</b>
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	MAJOR

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on **April 6, 2017**.

  
 Samuel Unger, P.E., Executive Officer

**CONTENTS**

I. Facility Information ..... 3

II. Findings ..... 3

III. Discharge Prohibitions ..... 3

IV. Effluent Limitations and Discharge Specifications ..... 4

    A. Effluent Limitations – Discharge Point 001 ..... 4

        1. Final Effluent Limitations – Discharge Point 001 ..... 4

    B. Effluent Limitations – Discharge Point 003 ..... 7

        1. Final Effluent Limitations – Discharge Point 003 ..... 7

    C. Sediment Limitations – Discharge Points 001 and 003 ..... 10

V. Recycling Specifications – Not Applicable ..... 11

VI. Receiving Water Limitations ..... 11

    A. Surface Water Limitations ..... 11

    B. Groundwater Limitations – Not Applicable ..... 12

VII. Provisions ..... 12

    A. Standard Provisions ..... 12

    B. Monitoring and Reporting Program (MRP) Requirements ..... 15

    C. Special Provisions ..... 15

        1. Reopener Provisions ..... 15

        2. Special Studies, Technical Reports and Additional Monitoring Requirements ..... 16

        3. Best Management Practices and Storm Water Pollution Prevention ..... 19

        4. Construction, Operation and Maintenance Specifications ..... 20

        5. Other Special Provisions – Not Applicable ..... 20

        6. Compliance Schedules – Not Applicable ..... 20

VIII. Compliance Determination ..... 20

**TABLES**

Table 1. Discharger Information ..... 1

Table 2. Discharge Location ..... 1

Table 3. Administrative Information ..... 1

Table 4. Effluent Limitations at Discharge Point 001 ..... 4

Table 5. Effluent Limitations at Discharge Point 003 ..... 7

Table 6. Sediment Limitations – Discharge Points 001 and 003 ..... 10

Table 7. Effluent Sediment Monitoring Thresholds ..... 17

**ATTACHMENTS**

Attachment A – Definitions ..... A-1

Attachment B – Maps ..... B-1

Attachment C – Flow Schematic ..... C-1

Attachment D – Standard Provisions ..... D-1

Attachment E – Monitoring and Reporting Program (CI-5427) ..... E-1

Attachment F – Fact Sheet ..... F-1

Attachment G – Storm Water Pollution Prevention Plan Requirements ..... G-1

Attachment H – State Water Board Minimum Levels (micrograms/liter(µg/L)) ..... H-1

Attachment I – List of Priority Pollutants ..... I-1

Attachment J – Summary Of Effluent Limitation Calculations ..... J-1

## I. FACILITY INFORMATION

Information describing Tesoro Refining & Marketing Company LLC, Los Angeles Refinery - Wilmington Facility (Facility) is summarized in Table 1 and in Sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Regional 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 (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.
- B. Background and Rationale for Requirements.** The Regional 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 J are also incorporated into this Order.
- C. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- D. Consideration of Public Comment.** The Regional 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.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R4-2010-0179 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger is authorized to discharge from the identified Facility and outfalls into waters of the United States, and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Orders.

## III. DISCHARGE PROHIBITIONS

- A.** Wastes discharged at Discharge Point 001 shall be limited to a maximum of 4.32 million gallons per day (MGD) of non-commingled storm water only as described in the Fact Sheet (Attachment F), and shall occur only because of storm events. The discharge of wastes from accidental spills or other sources is prohibited.
- B.** Wastes discharged at Discharge Point 003 shall be limited to a maximum of 4.00 MGD of commingled storm water and process wastewater from the low-chemical oxygen demand (LCOD) treatment system as described in the Fact Sheet (Attachment F), and shall be limited to emergency discharges during storm events as necessary to prevent flooding in the Facility. The discharge of wastes from accidental spills or other sources is prohibited.

- C. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Dominguez Channel Estuary, or other waters of the State, are prohibited.
- D. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by section 13050 of the Water Code.
- E. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- F. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
- G. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with the waste discharge requirements or other provisions of Division 7 of the CWC, is prohibited.
- H. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under Water Code section 13375.
- I. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.
- J. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations – Discharge Point 001**

**1. Final Effluent Limitations – Discharge Point 001**

- a. The Discharger shall maintain compliance with the following effluent limitations individually at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (Attachment E):

**Table 4. Effluent Limitations at Discharge Point 001**

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Conventional Pollutants</b>				
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	48	--	--
	lbs/day <sup>1</sup>	1,730	--	--
Total Suspended Solids (TSS) <sup>2,3</sup>	mg/L	34	--	--
	lbs/day <sup>1</sup>	1210	--	--
Oil and Grease	mg/L	16	--	--
	lbs/day <sup>1</sup>	560	--	--
pH	standard units	--	6.5	8.5

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Non-Conventional Pollutants</b>				
Chronic Toxicity <sup>4</sup>	Pass or Fail, % Effect (TST)	Pass or % Effect < 50	--	--
Chemical Oxygen Demand (COD)	mg/L	360	--	--
	lbs/day <sup>1</sup>	12960	--	--
Phenolic Compounds	mg/L	0.35	--	--
	lbs/day <sup>1</sup>	13	--	--
Temperature	Degrees F	--	--	86
Total Petroleum Hydrocarbons (TPH) <sup>5</sup>	µg/L	100	--	--
	lbs/day <sup>1</sup>	3.6	--	--
<b>Priority Pollutants</b>				
Arsenic, Total Recoverable	µg/L	59	--	--
	lbs/day <sup>1</sup>	2.1	--	--
Cadmium, Total Recoverable <sup>2</sup>	µg/L	15	--	--
	lbs/day <sup>1</sup>	0.54	--	--
Total Chromium, Total Recoverable	µg/L	600	--	--
	lbs/day <sup>1</sup>	22	--	--
Chromium VI, Total Recoverable	µg/L	60	--	--
	lbs/day <sup>1</sup>	2.3	--	--
Copper, Total Recoverable <sup>3</sup>	µg/L	6.1	--	--
	lbs/day <sup>1</sup>	0.22	--	--
Lead, Total Recoverable <sup>3</sup>	µg/L	14	--	--
	lbs/day <sup>1</sup>	0.50	--	--
Mercury, Total Recoverable	µg/L	0.10	--	--
	lbs/day <sup>1</sup>	0.0036	--	--
Nickel, Total Recoverable	µg/L	14	--	--
	lbs/day <sup>1</sup>	0.50	--	--
Selenium, Total Recoverable	µg/L	120	--	--
	lbs/day <sup>1</sup>	4.3	--	--
Silver, Total Recoverable	µg/L	2.2	--	--
	lbs/day <sup>1</sup>	0.079	--	--
Thallium, Total Recoverable	µg/L	13	--	--
	lbs/day <sup>1</sup>	0.47	--	--
Zinc, Total Recoverable <sup>3</sup>	µg/L	140	--	--
	lbs/day <sup>1</sup>	5.0	--	--
Cyanide	µg/L	1.0	--	--
	lbs/day <sup>1</sup>	0.036	--	--
Benzo(a)anthracene <sup>3,6</sup>	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Benzo(b)fluoranthene	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Benzo(k)fluoranthene	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Benzo(a)pyrene <sup>3,6</sup>	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Chrysene <sup>3,6</sup>	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Dibenzo(a,h)anthracene	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Indeno(1,2,3-cd)pyrene	µg/L	0.098	--	--
	lbs/day <sup>1</sup>	0.0035	--	--
Pyrene <sup>3,6</sup>	µg/L	22,068	--	--
	lbs/day <sup>1</sup>	800	--	--
Fluorene	µg/L	28,087	--	--
	lbs/day <sup>1</sup>	1010	--	--
Chlordane <sup>2</sup>	µg/L	0.0012	--	--
	lbs/day <sup>1</sup>	4.3 x 10 <sup>-5</sup>	--	--
4,4-DDT <sup>3</sup>	µg/L	0.0012	--	--
	lbs/day <sup>1</sup>	4.3 x 10 <sup>-5</sup>	--	--
Dieldrin <sup>2</sup>	µg/L	0.00028	--	--
	lbs/day <sup>1</sup>	1.0 x 10 <sup>-5</sup>	--	--
PCBs, Total <sup>3,7</sup>	µg/L	0.00034	--	--
	lbs/day <sup>1</sup>	1.2 x 10 <sup>-5</sup>	--	--

<sup>1</sup> Mass loading limitations are based on the maximum flow at Discharge Point 001 (4.32 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

<sup>2</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, chlordane, or dieldrin as specified in Table 4 of this Order, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6 of this Order, and implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant until the effluent sediment data demonstrate compliance.

<sup>3</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4-DDT, benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene, or total PCBs as specified in Table 4 of this Order, then the Discharger has not demonstrated attainment with the interim sediment allocations (Effluent Sediment Monitoring Thresholds, Table 7, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11; implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Effluent Sediment Monitoring Thresholds) in Table 7 of this Order demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocations requires additional effluent sediment monitoring during discharge but not



more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

- 4 The MDEL shall be reported "Pass" or "Fail" and "% Effect".
- 5 Total Petroleum Hydrocarbons (TPH) equals the sum of TPH as gasoline (C4-C12), TPH as diesel (C13-C22), and TPH waste oil (C23+).
- 6 CTR human health criteria were not established for total PAHs. Therefore, the Receiving Water Column Concentration-based Waste Load Allocations in Harbor Toxics TMDL for Dominguez Channel Estuary are based on the CTR human health criteria for the individual PAHs; benzo(a)anthracene (0.049 µg/L), benzo(a)pyrene (0.049 µg/L), chrysene (0.049 µg/L) and pyrene (11,000 µg/L). The effluent limitations for the individual PAHs were derived from the respective WLAs.
- 7 Total PCBs means the sum of chlorinated biphenyls whose analytical characteristics resembles those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

**B. Effluent Limitations – Discharge Point 003**

**1. Final Effluent Limitations – Discharge Point 003**

- a. The Discharger shall maintain compliance with the following effluent limitations individually at Discharge Point 003, with compliance measured at Monitoring Location EFF-003 as described in the Monitoring and Reporting Program (Attachment E):

**Table 5. Effluent Limitations at Discharge Point 003**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	26	48	--	--
	lbs/day <sup>1</sup>	860	1600	--	--
Total Suspended Solids (TSS) <sup>2,3</sup>	mg/L	19	31	--	--
	lbs/day <sup>1</sup>	640	1040	--	--
Oil and Grease	mg/L	8.0	15	--	--
	lbs/day <sup>1</sup>	270	510	--	--
pH	standard units	--	--	6.5	8.5
<b>Non-Conventional Pollutants</b>					
Chronic Toxicity <sup>4</sup>	Pass or Fail, % Effect (TST)	Pass	Pass or % Effect < 50	--	--
Chemical Oxygen Demand (COD)	mg/L	180	360	--	--
	lbs/day <sup>1</sup>	6070	11950	--	--
Phenolic Compounds	mg/L	0.17	0.35	--	--
	lbs/day <sup>1</sup>	5.6	12	--	--
Temperature	Degrees F	--	--	--	86
Sulfide	mg/L	0.070	0.16	--	--
	lbs/day <sup>1</sup>	2.4	5.3	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Petroleum Hydrocarbons (TPH) <sup>5</sup>	µg/L	--	100	--	--
	lbs/day <sup>1</sup>	--	3.3	--	--
<b>Priority Pollutants</b>					
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day <sup>1</sup>	1.0	2.0	--	--
Cadmium, Total Recoverable <sup>2</sup>	µg/L	7.7	15	--	--
	lbs/day <sup>1</sup>	0.26	0.50	--	--
Total Chromium, Total Recoverable	µg/L	320	660	--	--
	lbs/day <sup>1</sup>	11	22	--	--
Chromium VI, Total Recoverable	µg/L	20	40	--	--
	lbs/day <sup>1</sup>	0.57	1.3	--	--
Copper, Total Recoverable <sup>3</sup>	µg/L	3.1	6.1	--	--
	lbs/day <sup>1</sup>	0.10	0.20	--	--
Lead, Total Recoverable <sup>3</sup>	µg/L	7.0	14	--	--
	lbs/day <sup>1</sup>	0.23	0.47	--	--
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--
	lbs/day <sup>1</sup>	0.0017	0.0033	--	--
Nickel, Total Recoverable	µg/L	6.8	14	--	--
	lbs/day <sup>1</sup>	0.23	0.47	--	--
Selenium, Total Recoverable	µg/L	58	120	--	--
	lbs/day <sup>1</sup>	1.9	4.0	--	--
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day <sup>1</sup>	0.037	0.073	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day <sup>1</sup>	0.21	0.43	--	--
Zinc, Total Recoverable <sup>3</sup>	µg/L	70	140	--	--
	lbs/day <sup>1</sup>	2.3	4.7	--	--
Cyanide	µg/L	0.50	1.0	--	--
	lbs/day <sup>1</sup>	0.017	0.033	--	--
Benzo(a)anthracene <sup>3,6</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Benzo(a)pyrene <sup>3,6</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Chrysene <sup>3,6</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Dibenzo(a,h)anthracene	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Indeno(1,2,3-cd)pyrene	µg/L	0.049	0.098	--	--
	lbs/day <sup>1</sup>	0.0016	0.0033	--	--
Pyrene <sup>3,6</sup>	µg/L	11,000	22,068	--	--
	lbs/day <sup>1</sup>	370	740	--	--
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day <sup>1</sup>	470	940	--	--
Chlordane <sup>2</sup>	µg/L	0.00059	0.0012	--	--
	lbs/day <sup>1</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--
4,4-DDT <sup>3</sup>	µg/L	0.00059	0.0012	--	--
	lbs/day <sup>1</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--
Dieldrin <sup>2</sup>	µg/L	0.00014	0.00028	--	--
	lbs/day <sup>1</sup>	4.7 x 10 <sup>-6</sup>	9.3 x 10 <sup>-6</sup>	--	--
PCBs, Total <sup>3,7</sup>	µg/L	0.00017	0.00034	--	--
	lbs/day <sup>1</sup>	5.7 x 10 <sup>-6</sup>	1.1 x 10 <sup>-5</sup>	--	--

<sup>1</sup> Mass loading limitations are based on the maximum flow at Discharge Point 003 (4.00 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

<sup>2</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, chlordane, or dieldrin as specified in Table 5 of this Order, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6 of this Order, and implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant until the effluent sediment data demonstrate compliance.

<sup>3</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4-DDT, benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene, or total PCBs as specified in Table 5 of this Order, then the Discharger has not demonstrated attainment with the interim sediment allocations (Effluent Sediment Monitoring Thresholds, Table 7, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11; implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Effluent Sediment Monitoring Thresholds) in Table 7 of this Order demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocations requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

<sup>4</sup> The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail". The MDEL shall be reported "Pass" or "Fail" and "% Effect". 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 are required when one toxicity test results in "Fail".

- <sup>5</sup> Total Petroleum Hydrocarbons (TPH) equals the sum of TPH as gasoline (C4-C12), TPH as diesel (C13-C22), and TPH waste oil (C23+).
- <sup>6</sup> CTR human health criteria were not established for total PAHs. Therefore, the Receiving Water Column Concentration-based Waste Load Allocations in Harbor Toxics TMDL for Dominguez Channel Estuary are based on the CTR human health criteria for the individual PAHs; benzo(a)anthracene (0.049 µg/L), benzo(a)pyrene (0.049 µg/L), chrysene (0.049 µg/L) and pyrene (11,000 µg/L). The effluent limitations for the individual PAHs were derived from the respective WLAs.
- <sup>7</sup> Total PCBs means the sum of chlorinated biphenyls whose analytical characteristics resembles those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

**C. Sediment Limitations – Discharge Points 001 and 003**

The following sediment limitations are based on the final concentration-based sediment waste load allocations (WLAs) for cadmium and bioaccumulative compounds (chlordane and dieldrin) applicable to Dominguez Channel Estuary in the Harbor Toxics TMDL (Resolution No. R11-008).

**Table 6. Sediment Limitations – Discharge Points 001 and 003**

Pollutant	Sediment Limitations (Final Concentration-based Sediment WLAs)	Units
Cadmium, Total Recoverable	1.2	mg/kg dry sediment
Chlordane	0.5	µg/kg dry sediment
Dieldrin	0.02	µg/kg dry sediment

As indicated in Footnote 2 of Table 4 and 5 above, compliance with the effluent limitations for both TSS and chlordane, dieldrin, and cadmium demonstrates the attainment of the sediment limitations and no effluent sediment monitoring for that constituent is required. Otherwise, demonstration of compliance with sediment limitations may be achieved by one of the following options:

Compliance with the sediment limitation (final concentration-based sediment WLA) for cadmium may be demonstrated via one of three means:

1. Final sediment allocation of cadmium (1.2 mg/kg) is met in the effluent. The Discharger may collect sufficient effluent sample to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses. The cadmium analytical result of the effluent sediment can be used for the direct comparison with sediment allocation of cadmium.
2. The qualitative sediment condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the Sediment Quality Plan is met.
3. Sediment numeric target of 1.2 mg/kg is met in bed sediments over a 3-year averaging period. The Discharger may choose to conduct bed sediment monitoring as specified in the MRP (Attachment E) to demonstrate compliance with this condition.

Compliance with the sediment limitations (final concentration-based sediment WLAs) for chlordane and dieldrin may be demonstrated via one of four means:

1. Fish tissue targets of 5.6 µg/kg wet fish tissue for chlordane and 0.46 µg/kg wet fish tissue for dieldrin are met in species resident to the TMDL waterbodies. (A site-specific special study to determine resident species shall be submitted to the Executive Officer for approval if this option is selected.)

2. Final sediment allocations of chlordane (0.5 µg/kg) and dieldrin (0.02 µg/kg) are met in the effluent. The Discharger may collect sufficient effluent sample to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses. The chlordane and dieldrin analytical results of the effluent sediment can be used for the direct comparison with sediment allocations of chlordane and dieldrin, respectively.
3. Sediment numeric targets of chlordane (0.5 µg/kg) and dieldrin (0.02 µg/kg) are met in bed sediments over a 3-year averaging period. The Discharger may choose to conduct bed sediment monitoring as specified in the MRP (Attachment E) to demonstrate compliance with this condition.
4. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan (Part 2 is under development), as amended to address contaminants in resident finfish and wildlife.

## V. RECYCLING SPECIFICATIONS – NOT APPLICABLE

## VI. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitations

The discharge shall not cause the following in the Dominguez Channel Estuary:

1. The pH of the Dominguez Channel Estuary shall not be depressed below 6.5 or raised above 8.5 as a result of the waste discharge. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge. Natural conditions shall be determined on a case-by-case basis.
2. Surface water temperature to rise greater than 5° F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 86° F as a result of waste discharged.
3. The mean annual concentration of dissolved oxygen shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L except when natural conditions cause lesser concentrations.
4. Water Contact Standards

In marine water designated for water contact recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water.

#### a. Rolling 30-day Geometric Mean Limits

- i. Total coliform density shall not exceed 1,000/100 mL.
- ii. Fecal coliform density shall not exceed 200/100 mL.
- iii. Enterococcus density shall not exceed 35/100 mL.

#### b. Single Sample Maximum

- i. Total coliform density shall not exceed 10,000/100 mL.
- ii. Fecal coliform density shall not exceed 400/100 mL.
- iii. Enterococcus density shall not exceed 104/100 mL.
- iv. Total coliform density shall not exceed 1,000/100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

5. Exceedance of the total ammonia (as N) concentrations specified in the Regional Water Board Resolution 2004-022, adopted on March 4, 2004, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including*

*Enclosed Bays, Estuaries, and Wetlands) with the Beneficial Use Designations for Protection of "Aquatic Life".*

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
7. Where natural turbidity is between 0 to 50 NTU, increases in turbidity shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases in turbidity shall not exceed 10%.
8. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.
9. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
10. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
11. Accumulation of bottom deposits or aquatic growths.
12. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
13. The presence of substances that result in increases of BOD that adversely affect beneficial uses.
14. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.
15. Alteration of turbidity, or apparent color beyond present natural background levels.
16. Damage, discolor, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.
17. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.
18. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
19. Nuisance, or adversely affect beneficial uses of the receiving water.
20. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

**B. Groundwater Limitations – Not Applicable**

**VII. PROVISIONS**

**A. Standard Provisions**

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

2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
  - a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R., sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
  - b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.
  - c. A discharge of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.
  - d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the federal CWA and amendments thereto.
  - e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
  - f. Oil or oily material, chemicals, refuse, or other wastes that constitute a condition of pollution or nuisance shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
  - g. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.
  - h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    - i. Violation of any term or condition contained in this Order;
    - ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
    - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
  - i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response

telephone number shall be prominently posted where it can easily be read from the outside.

- j. The Discharger shall notify the Regional Water Board no later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and the appropriate filing fee.
- k. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- l. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.
- m. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.
- n. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.
- o. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.
- p. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
- q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
  - i. Name and general composition of the chemical,
  - ii. Frequency of use,
  - iii. Quantities to be used,
  - iv. Proposed discharge concentrations, and
  - v. U.S. EPA registration number, if applicable.



- r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- s. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- t. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)
- u. The provisions of this order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

**B. Monitoring and Reporting Program (MRP) Requirements**

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

**C. Special Provisions**

**1. Reopener Provisions**

- a. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.
- b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the RPA.
- c. This Order may be reopened and modified, in accordance with the provisions set forth in 40 C.F.R., parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.
- d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Dominguez Channel and Los Angeles/Long Beach Harbor Watershed Management Area.
- e. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on

internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

- f. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 C.F.R. sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation TRE workplan (1-2 pages) **within 90 days** of the effective date of this permit. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected. See section V of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.
- b. **Effluent Sediment Monitoring Thresholds based on Sediment Interim Concentration-based Allocation in the Harbor Toxics TMDL for Sediment Monitoring of Effluent**

The effluent sediment monitoring thresholds in Table 7 are based on the Harbor Toxics TMDL's interim sediment allocations (Dominguez Channel Estuary) for copper, lead, zinc, DDT, PAHs, and PCBs. Effluent sediment monitoring is only required when triggered in accordance with Footnote 3 to Table 4 and 5 of this Order, or at least once during the permit term if a discharge occurs. Attainment with the effluent sediment monitoring thresholds in Table 7 may be demonstrated by compliance with the effluent limitations for both TSS and the corresponding effluent limitations or performance goals for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, pyrene, and chrysene), DDT, and total PCBs as included in Table 4 and 5. Once effluent sediment monitoring is triggered, attainment with the effluent sediment monitoring thresholds may be demonstrated by meeting the effluent sediment monitoring thresholds in the discharge over a 3-year averaging period. A effluent sediment monitoring result that exceeds the effluent sediment monitoring threshold requires additional sediment monitoring of the effluent during discharge but not more frequently than once per year until the three-year average concentration for sediment monitoring results is at or below the interim sediment allocation. If no discharges occur within three years of the initial trigger, the Discharger should conduct effluent sediment monitoring in the subsequent discharge that follows the triggering event. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

**Table 7. Effluent Sediment Monitoring Thresholds**

Pollutant	Effluent Sediment Monitoring Thresholds based on Sediment Interim Concentration-based Allocations (mg/kg sediment)
Copper, Total Recoverable	220.0
Lead, Total Recoverable	510.0
Zinc, Total Recoverable	789.0
PAHs <sup>1</sup>	1.727
DDT	31.60
PCBs	1.490

1. According to the Sediment Quality Plan, total PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthene, anthracene, biphenyl, naphthalene, 2,6- dimethylnaphthalene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, 1- methylphenanthrene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, perylene, and pyrene.

**c. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program**

As defined in the Harbor Toxics TMDL, the Discharger is a “responsible party” because it is an “Individual Industrial Permittee”. As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the “TMDL Element - Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed or develop a site specific monitoring plan. If the Discharger decides to join a group already formed, the Discharge shall notify the Regional Water Board within 90 days of the effective date of the Order. If the Discharger decides to develop a site specific Monitoring Plan with a QAPP, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit them to the Regional Water Board within 12 months of the effective date of the Order for public comment and the Regional Water Board approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring. The Discharger shall submit the annual monitoring report to the Regional Water Board by the specified date in the proposed Monitoring Plan. The annual monitoring report shall indicate compliance and non-compliance with waste load and/or load allocations.

**The Compliance Monitoring Program shall include:**

- i. **Water Column Monitoring.** Water samples and TSS samples shall be collected during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and TSS samples shall be analyzed for a suite of compounds including, at a minimum, copper, lead,

zinc, DDT, PCBs, benzo[a]anthracene, benzo[a]pyrene, chrysene, phenanthrene, and pyrene. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment. Water and total suspended solids samples shall be collected at the outlet of the storm drains discharging to the Dominguez Channel Estuary.

In addition, temperature, dissolved oxygen, pH, electrical conductivity, and receiving water flow shall be monitored during each sampling event. Toxicity shall be tested for in the freshwater portion of the Dominguez Channel.

- ii. **Sediment Monitoring.** A sediment monitoring program shall be developed consistent with the selected method for compliance listed below and on Pg. 23 of Attachment A to Resolution No. R11-008, and all samples shall be collected in accordance with the Surface Water Ambient Monitoring Program (SWAMP) protocol. Sediment samples shall be collected in the Dominguez Channel Estuary.
  - (a) If compliance will be determined based on achieving sediment quality targets, sediment chemistry samples shall be collected every two years for analysis of general sediment quality constituents and the full chemical suite as specified in Table 6 and Attachment A of the Water Quality Control Plan for Enclosed Bays and Estuaries, Part 1 Sediment Quality (SQO Part 1). In addition, benthic community effects shall be assessed in the Dominguez Channel Estuary.
  - (b) If compliance will be determined based on the SQO compliance method, sediment chemistry samples shall also be collected every 5 years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance.

Sediment quality objective evaluation as detailed in the sediment triad sampling as specified in the *State Water Quality Control Plan for Enclosed bays and Estuaries – Part 1 Sediment Quality* (SQO Part 1) shall be performed every 5 years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. Sampling and analysis for the full chemical suite (as included in Attachment A and Table 6 of the SQO document), two toxicity tests and four benthic indices as specified in the SQO Part 1 shall be conducted and evaluated. If moderate toxicity is observed, results shall be highlighted in annual reports and further analysis and evaluation to determine causes and remedies shall be required in accordance with the Executive Officer approved Monitoring Plan. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the Monitoring Plan. The sampling design shall be in compliance with section VII.E of SQO Part 1.

- iii. **Fish Tissue Monitoring.** Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. The target species in the Dominguez Channel Estuary shall be selected based on residency, local abundance and

fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species.

- iv. **Sampling and Analysis Plan.** The Sampling and Analysis Plan must be proposed based on methods or metrics described in the *State Water Board Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Resolution 2008-0070 – SQO Part 1), and the *U.S.EPA or American Society for Testing and Materials* (ASTM). The plan shall include a list of chemical analytes for the water column and sediment.
- v. **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) shall describe the project objectives and organization, functional activities, and quality assurance/quality control protocols for the water and sediment monitoring. The QAPP shall include protocols for sample collection, standard analytical procedures, and laboratory certification. All samples shall be collected in accordance with Surface Water Ambient Monitoring Program (SWAMP) protocols.

The details of the Harbor Toxics TMDL Water and Sediment Monitoring Plan including sampling locations and all methods shall be specified in the Monitoring Plans submitted to the Executive Officer.

### 3. Best Management Practices and Storm Water Pollution Prevention

#### a. Storm Water Pollution Prevention, Best Management Practices, and Spill Contingency Plans.

The Discharger shall submit, within 90 days of the effective date of this Order:

- i. An updated **Storm Water Pollution Prevention Plan (SWPPP)** that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff and trash from being discharged directly to waters of the state. The SWPPP shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of trash or hazardous waste/material; and address the feasibility of containment and/or treatment of storm water. In addition, the SWPPP shall address and include best management practices procedures that the Discharger will implement to prohibit the discharge of trash from the Facility through Discharge Points 001 and 003. The SWPPP shall be developed in accordance with the requirements in Attachment G.
- ii. An updated **Best Management Practices Plan (BMPP)** that will be implemented to reduce the discharge of pollutants to the receiving water. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material and trash from being discharged to waters of the State. Further, the Discharger shall ensure that the storm water discharges from the Facility would neither cause nor contribute to a nuisance in the receiving water, and that unauthorized discharges (i.e. spills) to the receiving water have been effectively prohibited. In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material and trash discharge to surface waters. The BMPP can be included and submitted with the SWPPP.

- iii. An updated **Spill Control Plan (SCP)**, that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The SCP may be substituted with an updated version of the Discharger's existing Spill Prevention Control and Countermeasure (SPCC) Plan.

Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of storm water. The plans shall be reviewed annually and at the same time. Updated information shall be submitted within 30 days of revision.

The Discharger shall implement the SWPPP, BMPP, and SCP (or SPCC) within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. The Discharger shall continue to implement any existing and previously approved SWPPP until an updated SWPPP is approved by the Executive Officer or until the stipulated 90-day period after the updated SWPPP submittal has occurred.

#### **4. Construction, Operation and Maintenance Specifications**

The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this order.

#### **5. Other Special Provisions – Not Applicable**

#### **6. Compliance Schedules – Not Applicable**

### **VIII. COMPLIANCE DETERMINATION**

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

#### **A. Single Constituent Effluent Limitation.**

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.H. of the MRP), then the Discharger is out of compliance.

#### **B. Effluent Limitations Expressed as a Sum of Several Constituents.**

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

#### **C. Effluent Limitations Expressed as a Median.**

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as =  $X_{(n+1)/2}$ , or
2. If the number of measurements (n) is even, then the median will be calculated as =  $[X_{n/2} + X_{(n/2)+1}]/2$ , i.e. the midpoint between the  $n/2$  and  $n/2+1$  data points.

**D. 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:

1. 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.
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.

**E. Average Monthly Effluent Limitation (AMEL).**

If the average (or when applicable, the median determined by subsection 2 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; though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). 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 that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;
2. If the analytical result of a single sample monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger may collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. The concentration of a pollutant (an arithmetic mean or a median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.
3. In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.
4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL; then the Discharger is in violation of the AMEL.

**F. Maximum Daily Effluent Limitation (MDEL).**

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and 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.

**G. Instantaneous Minimum Effluent Limitation.**

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

**H. Instantaneous Maximum Effluent Limitation.**

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

**I. Chronic Toxicity.**

The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) statistical 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. The null hypothesis ( $H_0$ ) for the TST statistical approach is: Mean discharge IWC response  $\leq 0.75 \times$  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:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100\%$ .

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 are required when one toxicity test results in "Fail."

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  $\geq 50\%$ .

**J. Mass and Concentration Limitations.**

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration for a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

**K. Median Monthly Effluent Limitation (MMEL).**

If the median of daily discharges over a calendar month exceeds the MMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of



compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

**L. Bacterial Standards and Analyses.**

The geometric mean used for determining compliance with bacterial standards is calculated using the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total, fecal, and *E. coli*) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. part 136 (revised May 18, 2012), unless alternate methods have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.

## ATTACHMENT A – DEFINITIONS

### Arithmetic Mean ( $\mu$ )

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:

$$\text{Arithmetic mean} = \mu = \Sigma x / n \quad \text{where: } \Sigma x \text{ is the sum of the measured ambient water concentrations, and } n \text{ is the number of samples.}$$

### Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

### Average Weekly Effluent Limitation (AWEL)

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

### Bioaccumulative

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.

### Carcinogenic

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

### 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.

### Daily Discharge

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

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

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

### Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

### Dilution Credit

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

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

### **Dry Weather Event**

Any day when the maximum daily flow measured at a location within the Dominguez Channel is less than 62.7 cubic feet per second (cfs) as measured at Los Angeles County Department of Public Works (LACDPW) flow gauge S-28, in accordance to the Harbor Toxics TMDL.

### **Effluent Concentration Allowance (ECA)**

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

### **Enclosed Bays**

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

### **Estimated Chemical Concentration**

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

### **Estuaries**

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

### **Existing Discharger**

Any Discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., any existing facility with treatment systems in places for its current discharge that is or will be expanding, upgrading, or modifying its permitted discharge after the effective date of this Order.)

### **Four-Day Average of Daily Maximum Flows**

The average of daily maxima taken from the data set in four-day intervals.

### **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).

**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.

**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 40 C.F.R. 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.

**Not Detected (ND)**

Sample results which are less than the laboratory's MDL.

**Persistent Pollutants**

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

**Pollutant Minimization Program (PMP)**

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

**Pollution Prevention**

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

### **Reporting Level (RL)**

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional 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.

### **Significant Storm Event**

A continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

### **Source of Drinking Water**

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

### **Standard Deviation ( $\sigma$ )**

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;

$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

### **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.)

### **Trash**

All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural material.

### **Wet Weather Event**

TESORO REFINING & MARKETING COMPANY LLC  
LOS ANGELES REFINERY - WILMINGTON FACILITY

ORDER NO. R4-2017-0095  
NPDES NO. CA0003778

Any day when the maximum daily flow measured at a location within the Dominguez Channel is equal to or greater than 62.7 cubic feet per second (cfs) as measured at Los Angeles County Department of Public Works (LACDPW) flow gauge S-28, in accordance to the Harbor Toxics TMDL.

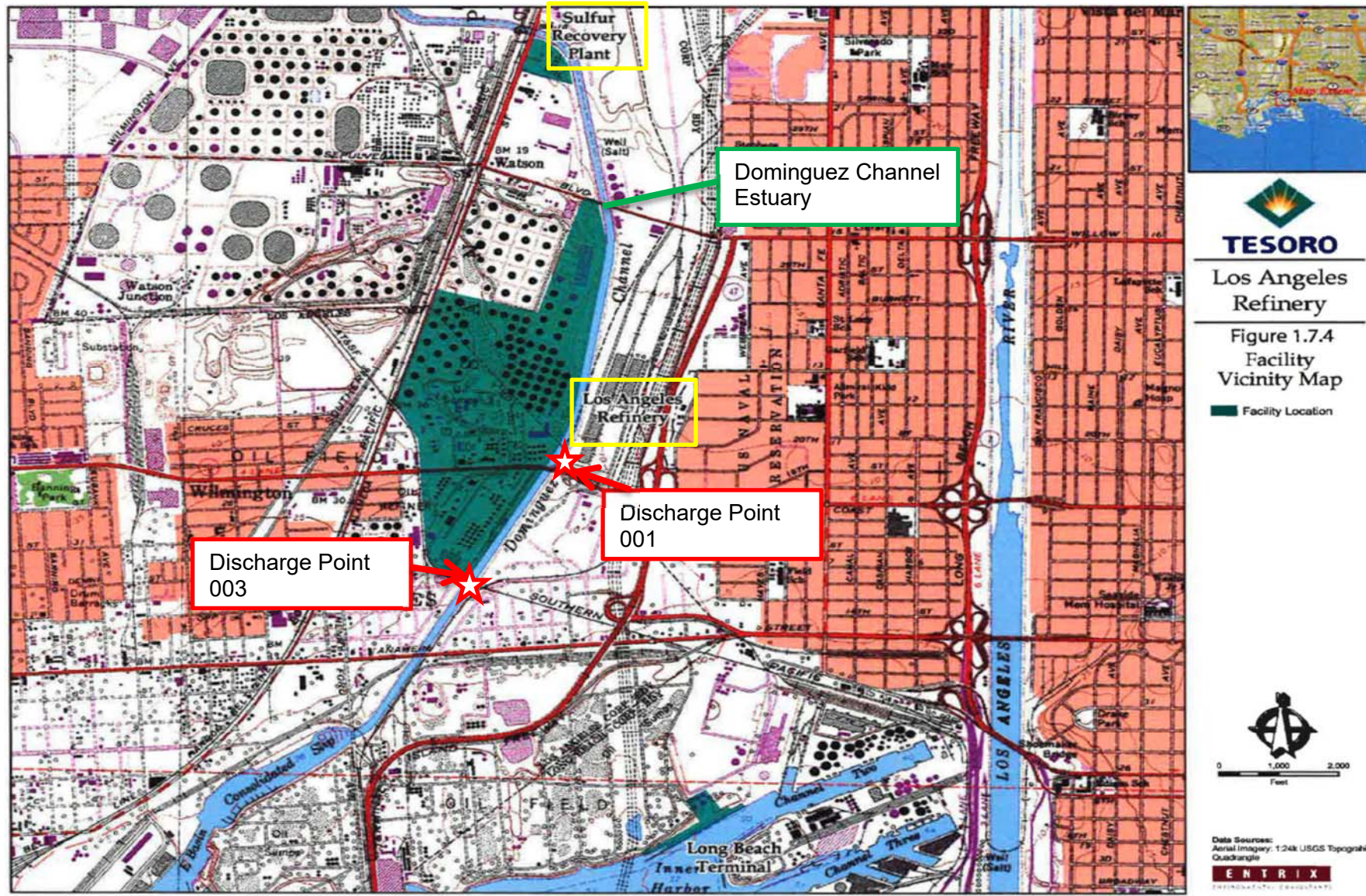
**ACRONYMS AND ABBREVIATIONS**

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
C.F.R.	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	Tesoro Refining & Marketing Company LLC
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	State Water Resources Control Board, Drinking Water Division, Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines, and Standards
Facility	Los Angeles Refinery - Wilmington Facility
g/kg	grams per kilogram
gpd	gallons per day
IWC	In-stream Waste Concentration
LA	Load Allocations
LACDPW	County of Los Angeles, Department of Public Works
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons per Day
ML	Minimum Level
MMEL	Monthly Median Effluent Limitation
MRP	Monitoring and Reporting Program
ND	Not Detected
ng/L	nanograms per liter
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law
PAHs	Polynuclear Aromatic Hydrocarbons
pg/L	picograms per liter
PMEL	Proposed Maximum Daily Effluent Limitation

PMP .....	Pollutant Minimization Plan
POTW .....	Publicly Owned Treatment Works
ppm .....	parts per million
ppb .....	parts per billion
QA .....	Quality Assurance
QA/QC .....	Quality Assurance/Quality Control
Ocean Plan .....	Water Quality Control Plan for Ocean Waters of California
Regional Water Board .....	California Regional Water Quality Control Board, Los Angeles Region
RPA .....	Reasonable Potential Analysis
SCP .....	Spill Contingency Plan
Sediment Quality Plan .....	<i>Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality</i>
SIP .....	State Implementation Policy (Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)
SMR .....	Self-Monitoring Reports
State Water Board .....	California State Water Resources Control Board
SWPPP .....	Storm Water Pollution Prevention Plan
TAC .....	Test Acceptability Criteria
TBEL .....	Technology-Based Effluent Limitation
Thermal Plan .....	Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California
TIE .....	Toxicity Identification Evaluation
TMDL .....	Total Maximum Daily Load
TOC .....	Total Organic Carbon
TRE .....	Toxicity Reduction Evaluation
TSD .....	Technical Support Document
TSS .....	Total Suspended Solid
TST .....	Test of Significant Toxicity Statistical Approach
TU <sub>c</sub> .....	Chronic Toxicity Unit
U.S. EPA .....	United States Environmental Protection Agency
USGS .....	United States Geological Survey
WDR .....	Waste Discharge Requirements
WET .....	Whole Effluent Toxicity
WLA .....	Waste Load Allocations
WQBELs .....	Water Quality-Based Effluent Limitations
WQS .....	Water Quality Standards
% .....	Percent

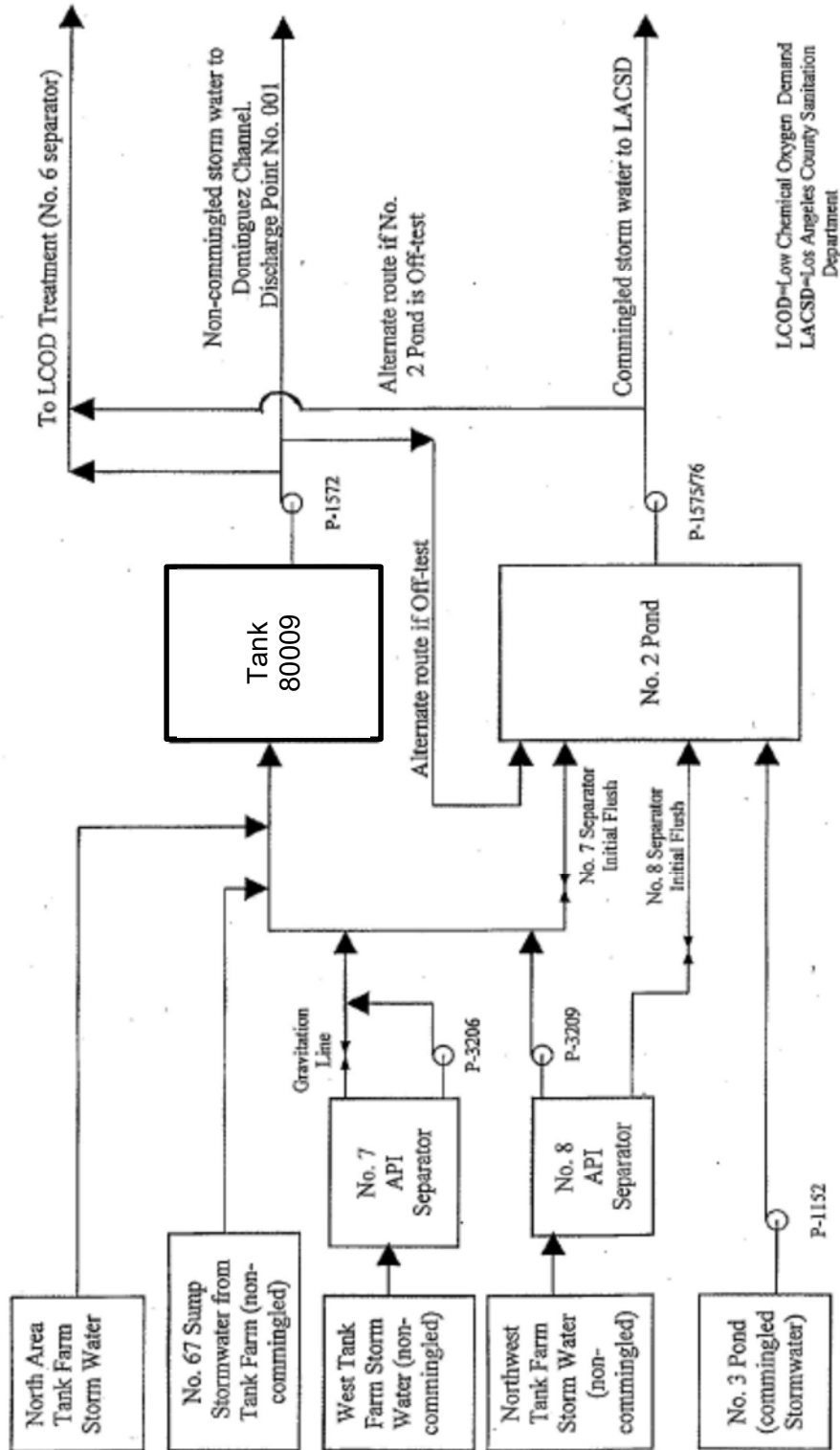


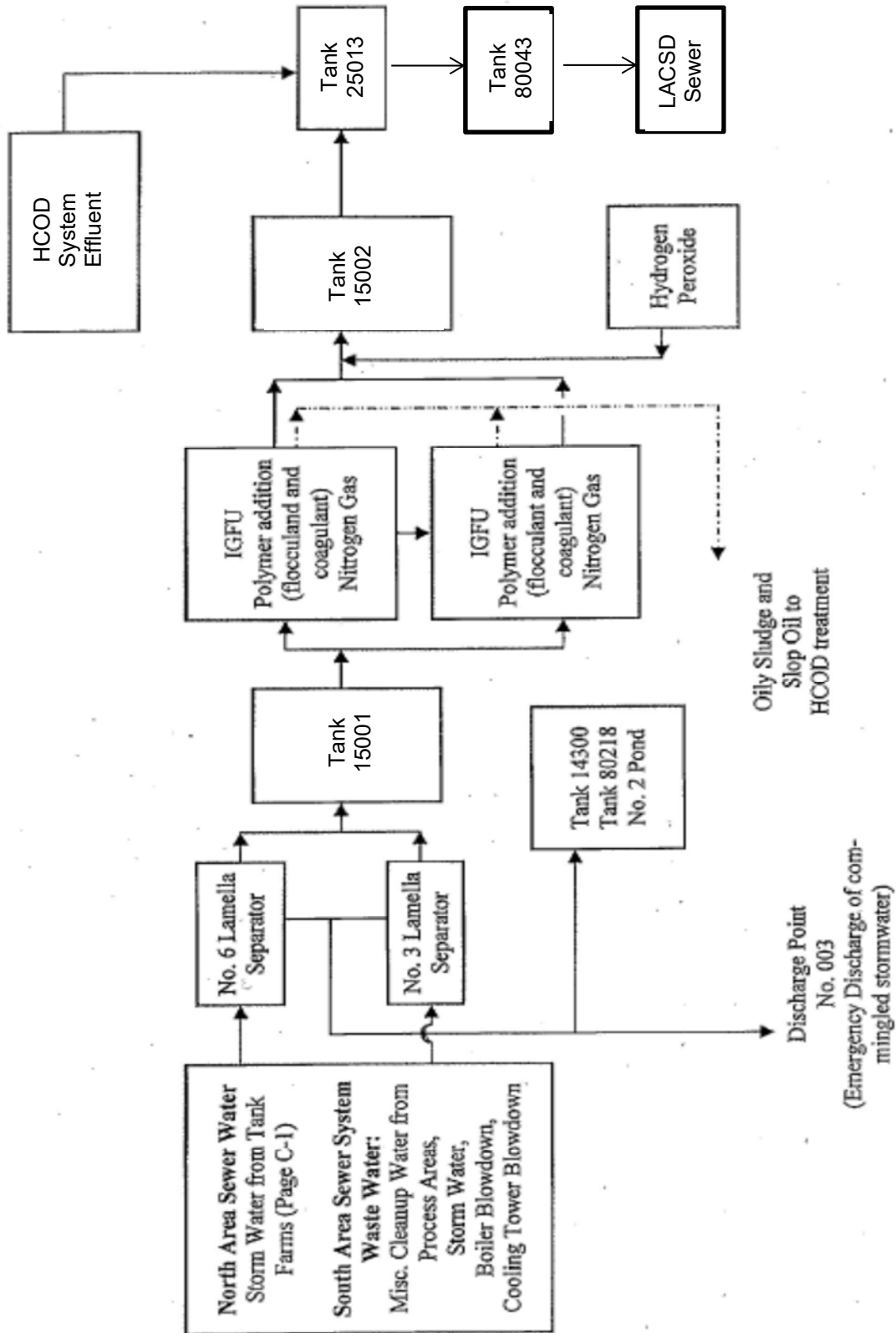
ATTACHMENT B – MAPS



ATTACHMENT C – FLOW SCHEMATIC

Storm Water System





## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(e).)

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 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 C.F.R. § 122.5(c).)

#### **F. Inspection and Entry**

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 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 (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); 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. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

## **G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 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 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

**5. Notice**

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, notices shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 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 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(b).)

### C. Transfers

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

## III. STANDARD PROVISIONS – MONITORING

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

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

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

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

## IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. 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 Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

**B. Records of monitoring information shall include:**

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

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

**V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard



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

- a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 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 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 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 Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 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 C.F.R. § 122.22(d).)
6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an

industry-specific waste stream under 40 C.F.R. chapter 1, subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(l)(5).)

#### **E. Twenty-Four Hour Reporting**

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

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

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

2. The following shall be included as information that must be reported within 24 hours:
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

#### **F. Planned Changes**

The Discharger shall give notice to the Regional 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 C.F.R. § 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 C.F.R. § 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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 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 C.F.R. § 122.41(l)(1)(iii).)

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 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 Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

#### **J. Initial Recipient for Electronic Reporting Data**

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

## VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [section 122.41(a)(2)] [Water Code sections 13385 and 13387].
- C. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 C.F.R. section 122.41(a)(3)].
- D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 C.F.R. section 122.41(j)(5)].
- E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under

this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 C.F.R. section 122.41(k)(2)].

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 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 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 200  $\mu\text{g/L}$  for acrolein and acrylonitrile; 500  $\mu\text{g/L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 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 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(2)(i));
  - b. 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (CI-5427)**

**CONTENTS**

I. General Monitoring Provisions.....	E-2
II. Monitoring Locations.....	E-5
III. Influent Monitoring Requirements – NOT Applicable.....	E-5
IV. Effluent Monitoring Requirements.....	E-5
A. Monitoring Locations EFF-001 and EFF-003.....	E-5
V. Whole Effluent Toxicity Testing Requirements.....	E-11
B. Chlorine Removal.....	E-15
VI. Land Discharge Monitoring Requirements – Not Applicable.....	E-15
VII. Recycling Monitoring Requirements – Not Applicable.....	E-15
VIII. Receiving Water Monitoring Requirements.....	E-15
A. Monitoring Location RSW-001.....	E-15
B. Bed Sediment Monitoring at SED-001.....	E-16
IX. Other Monitoring Requirements.....	E-17
X. Reporting Requirements.....	E-17
A. General Monitoring and Reporting Requirements.....	E-17
B. Self-Monitoring Reports (SMRs).....	E-18
C. Discharge Monitoring Reports (DMRs).....	E-20
D. Other Reports.....	E-20

**TABLES**

Table E-1. Monitoring Station Locations.....	E-5
Table E-2. Effluent Monitoring at Monitoring Locations EFF-001 and EFF-003.....	E-6
Table E-3. Effluent Sediment Monitoring Requirements.....	E-9
Table E-4. Receiving Water Monitoring Requirements (Monitoring Location RSW-001).....	E-15
Table E-5. Bed Sediment Monitoring Requirements (SED-001).....	E-17
Table E-6. Monitoring Periods and Reporting Schedule.....	E-18

## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP No. 5427)**

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 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A.** An effluent sampling station shall be established for the points of discharge (Discharge Points 001 [Latitude 33.7948°, Longitude -118.2299°] and 003 [Latitude 33.7858°, Longitude -118.2355°]) and shall be located where representative samples of that effluent can be obtained.
- B.** The Regional Water Board shall be notified in writing of any changes in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- C.** Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- D.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised May 18, 2012); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
- E.** Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Board, Drinking Water Division, Environmental Laboratory Accreditation Program (ELAP) in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.
- F.** For any analyses performed for which no procedure is specified in the U.S. EPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.
- G.** Each monitoring report must affirm in writing that “all analyses were conducted at a laboratory certified for such analyses by the State Water Board or approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP”.
- H.** The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:
  - 1.** An actual numerical value for sample results greater than or equal to the ML; or
  - 2.** “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s MDL but less than the ML; or,
  - 3.** “Not-Detected (ND)” for sample results less than the laboratory’s MDL with the MDL indicated for the analytical method used.

Analytical data reported as “less than” for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs (Attachment H) are those published by the State Water Board in the Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, February 24, 2005.

- I. The MLs employed for effluent analyses to determine compliance with effluent limitations shall be lower than the effluent limitations established in this Order for a given parameter as per the sufficiently sensitive regulations at 40 C.F.R. section 122.44(i)(1)(iv). If the ML value is not below the effluent limitations, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.
- J. The MLs employed for effluent analyses not associated with determining compliance with effluent limitations in this Order shall be lower than the lowest applicable water quality objective, for a given parameter as per the sufficiently sensitive regulations at 40 C.F.R. section 122.44(i)(1)(iv). Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 C.F.R. section 131.38). If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RLs), and method detection limits (MDLs).

Where no U.S. EPA-approved method exists, the Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment H to be included in the Discharger's permit in any of the following situations:

- 1. When the pollutant under consideration is not included in Attachment H;
  - 2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 C.F.R. Part 136 (revised May 19, 2012);
  - 3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;
  - 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,
  - 5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.
- K. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R. section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
  - L. Field analyses with short sample holding times such as pH, total residual chlorine, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records



of personnel proficiency training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.

- M.** All analyses shall be accompanied by the chain of custody, including but not limited to date and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- N.** The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.
- O.** The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there are fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.
- P.** When requested by the Regional Water Board or U.S. EPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.
- Q.** For parameters that both average monthly and maximum daily limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger may collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.
- R.** In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:
  - 1.** Types of wastes and quantity of each type;
  - 2.** Name and address for each hauler of wastes (or method of transport if other than by hauling); and
  - 3.** Location of the final point(s) of disposal for each type of waste.If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.
- S.** Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.
- T.** The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study

are submitted annually to the State Water Board at the following address:

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

**II. MONITORING 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
<b><i>Effluent Monitoring</i></b>		
001	EFF-001	The effluent sampling station shall be located where representative samples of the discharge through Discharge Point 001 can be obtained prior to discharge into the public storm drain that conveys to the Dominguez Channel Estuary. (Latitude 33.7948°, Longitude -118.2299°)
003	EFF-003	The effluent sampling station shall be located where representative samples of the discharge through Discharge Point 003 can be obtained prior to discharge into the public storm drain that conveys to the Dominguez Channel Estuary. (Latitude 33.7858°, Longitude -118.2355°)
<b><i>Receiving Water Monitoring</i></b>		
--	RSW-001	A receiving water sampling location where representative samples of Dominguez Channel Estuary can be obtained 50-feet upstream (or, if access is limited, at the first point accessible at least 50 feet upstream) of the public storm drain outfall that conveys the discharge from Discharge Point 001 to Dominguez Channel Estuary.
<b><i>Bed Sediment Monitoring</i></b>		
--	SED-001	The bed sediment sampling station shall be located in the Dominguez Channel Estuary at the vicinity of the public storm drain outfall that conveys the discharge from Discharge Point 003 to Dominguez Channel Estuary.

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

**III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE**

**IV. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Locations EFF-001 and EFF-003**

1. The Discharger shall monitor discharges from Discharge Points 001 and 003, individually at Monitoring Locations EFF-001 and EFF-003, respectively, as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding minimum level.

**Table E-2. Effluent Monitoring at Monitoring Locations EFF-001 and EFF-003**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	Gallons/Day	Meter	1/Day <sup>1</sup>	--
<b>Conventional Pollutants</b>				
Biochemical Oxygen Demand (BOD) (5-day @ 20°C) <sup>2</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Total Suspended Solids (TSS) <sup>2,5,6</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Oil and Grease <sup>2</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
pH	standard units	Grab	1/Discharge Event <sup>3</sup>	4
<b>Non-conventional Pollutants</b>				
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Chronic Toxicity	Pass or Fail and % Effect (TST)	Grab	1/Year <sup>7</sup>	8
Chemical Oxygen Demand (COD) <sup>2</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Di-isopropyl ether (DIPE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Ethyl tertiary butyl ether (ETBE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Methyl Tert-butyl Ether (MTBE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Total Coliform	MPN/100mL or CFU/100mL	Grab	1/Discharge Event <sup>3</sup>	9
Fecal Coliform	MPN/100mL or CFU/100mL	Grab	1/Discharge Event <sup>3</sup>	9
<i>Enterococcus</i>	MPN/100mL or CFU/100mL	Grab	1/Discharge Event <sup>3</sup>	9
Phenolic Compounds (4AAP) <sup>2,10</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Settleable Solids	ml/L	Grab	1/Discharge Event <sup>3</sup>	4
Sulfides, Total	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Tertiary amyl methyl ether (TAME)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Tertiary butyl alcohol (TBA)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Total Residual Chlorine	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Temperature	°F	Grab	1/Discharge Event <sup>3</sup>	4
Total Petroleum Hydrocarbons (TPH) as Gasoline (C <sub>4</sub> -C <sub>12</sub> ) <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	EPA Method 503.1 or 8015B
TPH as Diesel (C <sub>13</sub> -C <sub>22</sub> ) <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	EPA Method 503.1, 8015B, or 8270

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TPH as Waste Oil (C <sub>23+</sub> ) <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	EPA Method 503.1, 8015B, or 8270
Turbidity	NTU	Grab	1/Discharge Event <sup>3</sup>	4
<b>Priority Pollutants</b>				
Arsenic, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Barium, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Cadmium, Total Recoverable <sup>2,5</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Total Chromium, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Chromium (VI), Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Copper, Total Recoverable <sup>2,6</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Selenium, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Silver, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Mercury, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Nickel, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Thallium, Total Recoverable <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Lead, Total Recoverable <sup>2,6</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Zinc, Total Recoverable <sup>2,6</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Cyanide	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
4,4-DDT <sup>2,6,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Anthracene	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Benzo(a)anthracene <sup>2,6,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Benzo(b)fluoranthene <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Benzo(k)fluoranthene <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Benzo(a)pyrene <sup>2,6,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Chlordane <sup>2,5,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Dieldrin <sup>2,5,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Chrysene <sup>2,6,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Dibenzo(a,h)anthracene <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Indeno(1,2,3-cd)pyrene <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Pyrene <sup>2,6,11</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Fluorene <sup>2</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
PCBs <sup>2,6,11,12</sup>	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Remaining Priority Pollutants (excluding asbestos) <sup>13</sup>	µg/L	Grab	1/Year <sup>7</sup>	4

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TCDD Equivalents <sup>14</sup>	µg/L	Grab	1/Year <sup>7</sup>	<sup>4</sup>

- <sup>1</sup> Flow shall be recorded daily during each period of discharge. Periods of no flow shall also be reported.
- <sup>2</sup> The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:  

$$M = 8.34 \times C_e \times Q$$
 where: M = mass discharge for a pollutant, lbs/day  
 C<sub>e</sub> = Reported concentration for a pollutant in mg/L  
 Q = actual discharge flow rate (MGD).
- <sup>3</sup> During periods of rainfall that extends over several days, no more than one sample per week (or a consecutive 7-day period) is required. Sampling shall be during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface water during the monitoring period, the corresponding quarterly monitoring report shall so state under penalty of perjury, that no effluent was discharged to surface water during the reporting period.
- <sup>4</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, provided in Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by the Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.
- <sup>5</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for cadmium, chlordane, or dieldrin as specified in Table 4 and 5 of this Order, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6, page 10, of this Order; implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order, demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant(s) until the effluent sediment data demonstrates compliance.
- <sup>6</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4'-DDT, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene or pyrene as specified in Table 4 and 5 of this Order, then the Discharger has not demonstrated attainment with the interim sediment allocations (Effluent Sediment Monitoring Thresholds, Table 7, page 17, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11. Therefore, implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Effluent Sediment Monitoring Thresholds) in Table 7 of this Order, demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the 3-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.
- <sup>7</sup> Monitoring is only required during years in which discharge occurs. Annual samples shall be collected during the first discharge of the year. If there is no discharge to surface water, the corresponding quarterly monitoring report shall so state under penalty of perjury.
- <sup>8</sup> Refer to section V, Whole Effluent Toxicity Requirements.
- <sup>9</sup> Detection methods used for coliforms (total and fecal) and Enterococcus shall be those presented in Table 1A of 40 C.F.R. section 136, unless alternate methods have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.
- <sup>10</sup> Phenolic compounds include chlorinated and non-chlorinate compounds.
- <sup>11</sup> Samples analyzed must be unfiltered samples.
- <sup>12</sup> PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

- <sup>13</sup> Priority Pollutants as defined by the California Toxics Tule (CTR) and in Attachment I to this Order.
- <sup>14</sup> TCDD equivalents shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD equivalents) =  $\sum(Cx \times TEFx)$   
 where: Cx = concentration of dioxin or furan congener x  
 TEFx= TEF for congener x

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

**2. Effluent Sediment Monitoring at Monitoring Location EFF-001 and EFF-003**

Effluent sediment monitoring is only required during years in which an exceedance occurs as described in Footnote 1 and 2 to the following table. If effluent sediment monitoring is not triggered by an exceedance, effluent sediment monitoring must be conducted as described here at least once during the permit term if a discharge occurs.

The Discharger must sample the discharge at EFF-001 and EFF-003 following final treatment, and prior to the discharge entering the receiving water. The exact location of the sampling point must be stipulated in the initial self-monitoring report. The effluent sediment sampling shall be conducted according to methods or metrics described in 40 C.F.R. part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* and the State Water Board Sediment Quality Plan. The Discharger must collect sufficient effluent sample to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses.

**Table E-3. Effluent Sediment Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Copper, Total Recoverable	mg/kg	Grab	1/Year <sup>1</sup>	<sup>3</sup>
Lead, Total Recoverable	mg/kg	Grab	1/Year <sup>1</sup>	<sup>3</sup>

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Zinc, Total Recoverable	mg/kg	Grab	1/Year <sup>1</sup>	3
Cadmium, Total Recoverable	mg/kg	Grab	1/Year <sup>2</sup>	3
Chlordane	µg/kg	Grab	1/Year <sup>2</sup>	3
Dieldrin	µg/kg	Grab	1/Year <sup>2</sup>	3
DDT <sup>4</sup>	mg/kg	Grab	1/Year <sup>1</sup>	3
PAHs <sup>5</sup>	mg/kg	Grab	1/Year <sup>1</sup>	3
PCBs <sup>6</sup>	mg/kg	Grab	1/Year <sup>1</sup>	3

<sup>1</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4'-DDT, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene or pyrene as specified in Table 4 and 5 of this Order, then the Discharger has not demonstrated attainment with the interim sediment allocations (Effluent Sediment Monitoring Thresholds, Table 7, page 17, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11, Item 3; implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Monitoring Thresholds) in Table 7, page 17, of this Order, demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocation requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

<sup>2</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, chlordane, or dieldrin as specified in Table 4 and 5 of this Order, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6, page 10, of this Order; implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order, demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant(s) until the data demonstrates compliance.

<sup>3</sup> Pollutants shall be analyzed in accordance with U.S.EPA or ASTM methodologies where such methods exist. Where no U.S.EPA or ASTM methods exist, the State Water Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the State Water Board in accordance with Water Code section 13176.

<sup>4</sup> The *State Water Board Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality*, August 25, 2009, (known as Sediment Quality Plan, Attachment A) listed chemical analytes needed to characterize sediment contamination exposure and effect. According to Sediment Quality Plan, DDTs shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.

<sup>5</sup> According to the Sediment Quality Plan, total PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthene, anthracene, biphenyl, naphthalene, 2,6-dimethylnaphthalene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, phenanthrene, benzo(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, perylene, and pyrene.

<sup>6</sup> According to the Sediment Quality Plan, total PCBs (polychlorinated biphenyls) shall mean the sum of the following PCB congeners: 2,4'-dichlorobiphenyl, 2,2',5'-trichlorobiphenyl, 2,4,4'- trichlorobiphenyl, 2,2',3,5'-tetrachlorobiphenyl, 2,2',5,5'-tetrachlorobiphenyl, 2,3',4,4'- tetrachlorobiphenyl, 2,2',4,5,5'-pentachlorobiphenyl, 2,3,3',4,4'-pentachlorobiphenyl, 2,3',4,4',5- pentachlorobiphenyl, 2,2',3,3',4,4'-hexachlorobiphenyl, 2,2',3,4,4',5'-hexachlorobiphenyl, 2,2',4,4',5,5'-hexachlorobiphenyl, 2,2',3,3',4,4',5-heptachlorobiphenyl, 2,2',3,4,4',5,5'- heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl, and decachlorobiphenyl.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Chronic Toxicity Testing

#### 1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic toxicity IWC for this discharge is **100 percent** effluent.

#### 2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform both the required toxicity tests and Toxicity Identification Evaluation (TIE) studies. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

#### 3. Chronic Marine and Estuarine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity  $\geq 1$  ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

- a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).
- b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
- c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

#### 4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this Order's first required sample collection. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests, using the fish, an invertebrate, and the alga species as referenced in this section. The sample shall also be analyzed for the parameters required for the discharge. 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.

Rescreening is required at least once per five (5) years. The Discharger shall rescreen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suit of tests. If a different species is the most sensitive, or if there is ambiguity, then the Discharger shall proceed with suites of screening tests using enough collected effluent for a minimum of three, but not to exceed five suites.



## 5. Quality Assurance and Additional Requirements

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

- a. The discharge is subject to a determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) statistical 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. The null hypothesis ( $H_0$ ) for the TST statistical approach is: Mean discharge IWC response  $\leq$  (0.75 x Mean control response). 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:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100\%$ .
- b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail”. This requirement is not applicable to storm water only discharge.
- c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, then the Discharger must re-sample and re-test at the subsequent discharge event.
- d. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
- e. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).
- f. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

## 6. Preparation of Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall prepare and submit a generic Initial Investigation TRE Work Plan within 90 days of the permit effective date to be ready to respond to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At a minimum, the work plan shall include:

- a. A description of the investigation and evaluation techniques that would be used to identify potential causes and source of toxicity, effluent variability, and treatment system efficiency.
- b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the Facility.
- c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

**7. Accelerated Monitoring Schedule for Median Monthly Summary Result: “Fail” (or Maximum Daily Single Result: “Fail and % Effect 50”)**

The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.

Within 24 hours of the time the Discharger becomes aware of a failing result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five concentration (including the discharge IWC) toxicity tests, conducted at approximately two week intervals, over an eight week period. If there is no discharge during the eight week period, the Discharger should conduct toxicity testing at the next discharge event following the failing result. If each of the accelerated toxicity tests at the discharge IWC results in “Pass”, the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests at the discharge IWC results in “Fail”, the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) Process conditions set forth below.

**8. Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process**

- a. Toxicity Identification Evaluation (TIE).** A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if a chronic toxicity test shows “Fail and % Effect value  $\geq 50$ ”. The Discharger shall initiate a TIE using, 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). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
- b. Toxicity Reduction Evaluation (TRE).** When a toxicant or class of toxicants is identified, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs and/or treatment are identified, the Discharger shall submit a TRE Corrective Action Plan to the Executive Officer for approval. At minimum, the plan shall include:
  - i. The potential sources of pollutant(s) causing toxicity.
  - ii. Recommended BMPs and/or treatment to reduce the pollutant(s) causing toxicity.
  - iii. Follow-up monitoring to demonstrate that toxicity has been removed.
  - iv. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
  - v. A schedule for these actions, progress reports, and the final report.
- c.** Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and

evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

- d. The Discharger shall conduct routine effluent monitoring for the duration of the TIE/TRE process.
- e. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

## 9. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter titled *Report Preparation*, including:

- a. The toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge.
- b. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- c. TRE/TIE results. The Regional Water Board Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.
- d. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

## 10. Ammonia Removal

Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

- a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
- b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
- c. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
- d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

**B. Chlorine Removal**

1. Except with prior approval from the Executive Office of the Regional Water Board, chlorine shall not be removed from bioassay samples.

**VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE**

**VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE**

**VIII. RECEIVING WATER MONITORING REQUIREMENTS**

**A. Monitoring Location RSW-001**

1. The Discharger shall monitor the receiving water at Monitoring Location RSW-001 as follows:

**Table E-4. Receiving Water Monitoring Requirements (Monitoring Location RSW-001)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	1/Year <sup>1</sup>	2,3
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Year <sup>1</sup>	2,3
Salinity	ppt	Grab	1/Year <sup>1</sup>	2,3
Temperature	°F	Grab	1/Year <sup>1</sup>	2,3
Total Coliform	MPN/100mL or CFU/100mL	Grab	1/Year <sup>1</sup>	2
Fecal Coliform	MPN/100mL or CFU/100mL	Grab	1/Year <sup>1</sup>	2
Enterococcus	MPN/100mL or CFU/100mL	Grab	1/Year <sup>1</sup>	2
Hardness (as mg/L CaCO <sub>3</sub> )	mg/L	Grab	1/Year <sup>1</sup>	2,3
Remaining priority pollutants (excluding asbestos) <sup>4</sup>	µg/L	Grab	1/Year <sup>1</sup>	2,3
TCDD Equivalents <sup>5</sup>	µg/L	Grab	1/Year <sup>1</sup>	2

1. Sampling shall be during the first hour of the first discharge event of the year. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. Receiving water monitoring at RSW-001 is only required during years of discharge. If there is no discharge to surface waters during the year, the Discharger shall state so in the corresponding monitoring report under penalty of perjury.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.
3. Receiving water pH, temperature, salinity, and hardness shall be collected at the same time the effluent samples (Monitoring Location EFF-001) are collected for ammonia and priority pollutant analyses. A hand-held field meter may be used for pH and temperature, provided the meter utilizes an U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
4. Priority pollutants as defined by the California Toxics Rule (CTR) and included in Attachment I.
5. TCDD equivalents shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall

set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD equivalents)} = \sum(Cx \times \text{TEF}_x)$$

where: Cx = concentration of dioxin or furan congener x  
 TEF<sub>x</sub> = TEF for congener x

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

**B. Bed Sediment Monitoring at SED-001**

The Harbor Toxics TMDL encourages responsible parties to join a group of responsible parties to design and implement a collaborative monitoring plan. The Dominguez Channel Estuary responsible parties are each individually responsible for conducting water, sediment, and fish tissue monitoring. However, they are encouraged to collaborate or coordinate their efforts to avoid duplication and reduce associated costs. Dischargers interested in coordinated monitoring shall submit a collaborative monitoring plan that identifies monitoring to be implemented by the responsible parties. Under the coordinated monitoring option, the compliance point for the WLAs shall be storm drain outfalls or a point(s) in the receiving water that suitably represents the combined discharge of cooperating parties.

The details of the monitoring program including sampling locations and all methods shall be specified in the collaborative monitoring plan to be approved by the Executive Officer.

The Discharger shall monitor bed sediment at a sampling location specified in the collaborative monitoring plan. As an option, the Discharger may choose to conduct additional bed sediment monitoring at Monitoring Location SED-001 in order to demonstrate compliance with sediment limitations by meeting sediment numeric targets of cadmium, chlordane and dieldrin in bed sediments over a 3-year averaging period (see section IV.B. of the Order). Surface grab samples containing the upper 5 centimeters of sediment shall be collected and analyzed for the following:

**Table E-5. Bed Sediment Monitoring Requirements (SED-001)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Cadmium, Total Recoverable	mg/kg dry sediment	Grab	1/Year	1
Chlordane	µg/kg dry sediment	Grab	1/Year	1
Dieldrin	µg/kg dry sediment	Grab	1/Year	1

<sup>1</sup> Pollutants shall be analyzed in accordance with U.S. EPA or ASTM methodologies where such methods exist. Where no U.S. EPA or ASTM methods exist, the State Board or Regional Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the State Water Board in accordance with Water Code section 13176.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Storm Water Monitoring**

- 1. Rainfall Monitoring.** The Discharger shall measure and record the rainfall on each day of the month at the Facility. If no rainfall measurement data is available at the Facility, the Discharger may submit data obtained from the nearest city/county operated rain gauge monitoring station. The location of the rain gauge utilized and the distance from the Facility and any other information shall be included in the monitoring report for that month.
- 2. Visual Observation.** The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of trash, floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A “significant storm water discharge” is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

**B. Regional Monitoring**

The Discharger may be required to participate in the development of Regional Monitoring Program(s) to address pollutants as specified in the Harbor Toxics TMDL. If the Discharger joins a group of stakeholders to complete this monitoring, the Discharger must provide documentation of participation and a description of applicable responsibilities. The Regional Water Board must also be provided with documentation of the availability of the reports associated with the implementation of the Monitoring Plan.

**X. 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.** If there is no discharge during any reporting period, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.
- 3.** If the Discharger conducts monitoring more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order.
- 4.** Each monitoring report shall contain a separate section titled “Summary of Non-Compliance” which discusses the compliance record and corrective actions taken or

planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

5. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
6. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.

**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/water\\_issues/programs/ciwqs/](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/)>. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-6. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
1/Day	June 1, 2017	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with quarterly SMR
1/Discharge Event	June 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	Submit with quarterly SMR
1/Quarter	June 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
1/Year	June 1, 2017	January 1 through December 31	February 1
1/Permit Term	June 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	Submit with quarterly SMR

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

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

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

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 5. Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
- 6. Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
- 7.** 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 waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

### C. Discharge Monitoring Reports (DMRs)

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

<[http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring)>.

### D. Other Reports

1. **Within 90 days** of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
  - a. Initial Investigation TRE workplan
  - b. Updated SWPPP
  - c. Updated BMPP
  - d. Updated Spill Contingency Plan (SCP) or SCPP

The SWPPP, BMP, SCP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of trash and pollutants in wastewater and storm water discharged from the Facility are addressed. All changes or revisions to the SWPPP, BMPP, and SCP shall be submitted to the Regional Water Board within 30 days of revisions. The Discharger is required to submit the SWPPP to the Regional Water Board annually.

2. According to the Harbor Toxics TMDL, the Discharger shall submit an annual monitoring/implementation report to the Regional Water Board. The report shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs, as specified in section VII.C.2.c of the Order. The annual report shall be received by the Regional Water Board by the specified date in the proposed Monitoring Plan and Quality Assurance Project Plan (QAPP).

**ATTACHMENT F – FACT SHEET**

**CONTENTS**

I. Permit Information.....	F-3
II. Facility Description.....	F-4
A. Description of Wastewater Treatment and Controls.....	F-4
B. Discharge Points and Receiving Waters.....	F-6
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data.....	F-6
D. Compliance Summary.....	F-7
E. Planned Changes.....	F-8
III. Applicable Plans, Policies, and Regulations.....	F-8
A. Legal Authorities.....	F-8
B. California Environmental Quality Act (CEQA).....	F-8
C. State and Federal Laws, Regulations, Policies, and Plans.....	F-8
D. Impaired Water Bodies on the CWA section 303(d) List.....	F-11
IV. Rationale For Effluent Limitations and Discharge Specifications.....	F-14
A. Discharge Prohibitions.....	F-15
B. Technology-Based Effluent Limitations.....	F-15
1. Scope and Authority.....	F-15
2. Applicable Technology-Based Effluent Limitations (TBELs).....	F-16
C. Water Quality-Based Effluent Limitations (WQBELs).....	F-22
1. Scope and Authority.....	F-22
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives.....	F-22
3. Determining the Need for WQBELs.....	F-25
4. WQBEL Calculations.....	F-25
5. WQBELs Calculation Example.....	F-26
6. WQBELs Based on Basin Plan Objectives.....	F-29
7. Whole Effluent Toxicity (WET).....	F-29
8. Final WQBELs.....	F-31
D. Final Effluent Limitation Considerations.....	F-34
1. Anti-Backsliding Requirements.....	F-34
2. Antidegradation Policies.....	F-35
3. Mass-based Effluent Limitations.....	F-36
4. Stringency of Requirements for Individual Pollutants.....	F-36
5. Summary of Final Effluent Limitations.....	F-37
E. Interim Effluent Limitations – Not Applicable.....	F-43
F. Land Discharge Specifications – Not Applicable.....	F-43
G. Recycling Specifications – Not Applicable.....	F-43
V. Rationale for Receiving Water Limitations.....	F-43
A. Surface Water.....	F-43
B. Groundwater – Not Applicable.....	F-43
VI. Rationale for Provisions.....	F-43
A. Standard Provisions.....	F-43
B. Special Provisions.....	F-43
1. Reopener Provisions.....	F-43
2. Special Studies and Additional Monitoring Requirements.....	F-44
3. Best Management Practices and Pollution Prevention.....	F-44
4. Construction, Operation, and Maintenance Specifications.....	F-45
5. Other Special Provisions – Not Applicable.....	F-45

6. Compliance Schedules – Not Applicable .....	F-45
VII. Rationale for Monitoring and Reporting Requirements .....	F-45
A. Influent Monitoring – Not Applicable .....	F-45
B. Effluent Monitoring.....	F-45
C. Whole Effluent Toxicity Testing Requirements .....	F-46
D. Receiving Water Monitoring.....	F-46
1. Surface Water Monitoring.....	F-46
2. Bed Sediment Monitoring.....	F-46
3. Groundwater – Not Applicable .....	F-46
E. Other Monitoring Requirements.....	F-46
1. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program .....	F-46
2. Storm Water Monitoring Requirements.....	F-47
3. Harbor Toxics TMDL Monitoring Requirements .....	F-47
VIII. Public Participation .....	F-47
A. Notification of Interested Parties.....	F-47
B. Written Comments.....	F-47
C. Public Hearing .....	F-47
D. Reconsideration of Waste Discharge Requirements.....	F-48
E. Information and Copying.....	F-48
F. Register of Interested Persons .....	F-48
G. Additional Information.....	F-48

**TABLES**

Table F-1. Facility Information .....	F-3
Table F-2. Historic Effluent Monitoring Data .....	F-6
Table F-3. Basin Plan Beneficial Uses.....	F-8
Table F-4. ELGs for Contaminated Storm Water Runoff .....	F-17
Table F-5. BPJ Allocations for Non-Storm Water Contribution to Discharge Point 003.....	F-17
Table F-6. Summary of Technology-Based Effluent Limitations at Discharge Points 001 and 003....	F-20
Table F-7. Applicable Water Quality Criteria.....	F-23
Table F-8. Harbor Toxics TMDL WLAs Applicable to Discharge Points 001 and 003.....	F-24
Table F-9. Summary of Final WQBELs at Discharge Point 001 .....	F-31
Table F-10. Summary of Final WQBELs at Discharge Point 003 .....	F-32
Table F-11. Summary of Final Effluent Limitations at Discharge Point 001.....	F-37
Table F-12. Summary of Final Effluent Limitations at Discharge Point 003.....	F-40

**ATTACHMENT F – FACT SHEET**

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional 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**

The following table summarizes administrative information related to the Facility.

**Table F-1. Facility Information**

<b>WDID</b>	4B192121001
<b>Discharger</b>	Tesoro Refining & Marketing Company
<b>Name of Facility</b>	Los Angeles Refinery
<b>Facility Address</b>	2101 E. Pacific Coast Highway
	Wilmington, CA 90744
	Los Angeles County
<b>Facility Contact, Title and Phone</b>	Robert Stockdale, Lead Environmental Engineer, (310)522-6281
<b>Authorized Person to Sign and Submit Reports</b>	Dave Foster, Vice President, Los Angeles Refinery, (310)522-6441
<b>Mailing Address</b>	Same as Facility Address
<b>Billing Address</b>	Same as Facility Address
<b>Type of Facility</b>	Petroleum Refinery (SIC 2911)
<b>Major or Minor Facility</b>	Major
<b>Threat to Water Quality</b>	1
<b>Complexity</b>	A
<b>Pretreatment Program</b>	N/A
<b>Recycling Requirements</b>	N/A
<b>Facility Permitted Flow</b>	4.32 million gallons per day (MGD) at Discharge Point 001 4.00 MGD at Discharge Point 003
<b>Facility Design Flow</b>	N/A
<b>Watershed</b>	Dominguez Channel Watershed, Los Angeles/Long Beach Harbor Watershed Management Area
<b>Receiving Water</b>	Dominguez Channel Estuary
<b>Receiving Water Type</b>	Inland Surface Water, Estuary

- A. Tesoro Refining & Marketing Company LLC (hereinafter, Discharger) is the owner and operator of the Los Angeles Refinery - Wilmington Facility (hereinafter Facility), an industrial discharge from a petroleum refinery. Tesoro Refining & Marketing Company LLC is also the owner of the Facility property.

On December 1, 2012, the Discharger converted from a Delaware corporation to a Delaware limited liability company, with a name change from “Tesoro Refining and Marketing

Company” to “Tesoro Refining & Marketing Company LLC”; all rights, liabilities and responsibilities of the company remain unchanged.

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

- B. The Facility discharges non-commingled storm water (storm water segregated from process wastewater) and commingled storm water (storm water commingled with process wastewater) through storm drains to the Dominguez Channel Estuary, a water of the United States, within the Dominguez Channel Watershed. The Discharger was previously regulated by Order No. R4-2010-0179 and National Pollutant Discharge Elimination System (NPDES) Permit (NPDES CA0003778), adopted on October 7, 2010, and effective on November 8, 2010; Order No. R4-2010-0179 was scheduled to expire on September 10, 2015. Attachment B provides a map of the area around the Facility. Attachment C provides flow schematics of the Facility.
- C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on March 16, 2015. Supplemental information was provided by the Discharger in revised ROWDs submitted on September 2, 2015, through June 30, 2016. The application was deemed complete on January 12, 2017. A site visit was conducted on May 7, 2015, and on November 21, 2016, to observe operations of the Facility and to collect additional data to develop permit limitations and requirements for waste discharge.

## II. FACILITY DESCRIPTION

The Discharger operates a petroleum refinery located at 2101 East Pacific Coast Highway Wilmington, California. The Facility spans approximately 308 acres and processes approximately 100,000 barrels per day (bbbls/day) of crude oil, primarily from California production sources. Crude oil is delivered to the Facility via pipeline and marine vessels. The crude oil is converted into a full range of petroleum products, including various grades of automotive gasoline and aviation gasoline, jet fuels, diesel fuels, bunker fuels, and petroleum coke. Recovered byproducts include liquefied petroleum gas (LPG), coke, and sulfur. Finished products such as gasoline and distillate fuels, and by-products such as residual fuel oil and petroleum coke are exported from the Facility by pipeline, marine vessels, trucks, and rail cars; other materials, such as LPG, are exported using rail cars and trucks. The Facility has a maximum crude and product storage capacity of approximately 5.6 million barrels. The refinery processes include desalting, atmospheric distillation, vacuum distillation, fluid catalytic cracking, hydrocracking, delayed coking, hydrotreating, alkylation, catalytic reforming, hydrogen generation, isomerization, depentanizer, and sulfur recovery. The Discharger also owns the Sulfur Recovery Plant (SRP), located offsite approximately 1.3 miles north of the Facility, and the wastewater and storm water from the SRP is normally routed to the Los Angeles Refinery – Wilmington Facility for treatment and discharge (subsequent to treatment of sulfide at the SRP). During storm events when both the SRP and the Los Angeles Refinery are hydraulically overloaded, the Discharger also has the option to discharge storm water commingled with wastewater from the SRP directly to the Dominguez Channel Estuary under a separate NPDES permit No. CA0002020.

### A. Description of Wastewater Treatment and Controls

Wastewater (storm water and process wastewater) generated at the Facility are collected and/or treated by one of the following three separate systems:

1. High Chemical Oxygen Demand (HCOD) Treatment System

Process wastewater from the enclosed process unit systems and crude clearing waters are treated in the HCOD system, which consists of a pre-treatment unit, corrugated plate interceptors, induced gas floatation units, sour water strippers, a dissolved air floatation unit, and flow equalization tanks. Effluent from the HCOD treatment system is combined with the effluent from the low chemical oxygen demand (LCOD) system and discharged to the Los Angeles County Sanitation Districts' (LACSD) sanitary sewer under an Industrial Waste Permit No. 20098.

**2. Low Chemical Oxygen Demand (LCOD) Treatment System**

Wastewater from boiler blowdown, cooling tower blowdown, miscellaneous wastewater (including miscellaneous cleanup wastewaters, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatics test waters, fire system test wastewater, and water softener regeneration wastewaters), sulfur recovery plant wastewater (including storm water), drainage from the truck loading area, and storm water from the Facility enter the LCOD treatment system. The LCOD treatment system consists of the No. 3 and No. 6 lamella separators, both of which drain to storage Tank No. 15001. Floor drainage from areas south of the Pacific Coast Highway is routed to the No. 3 separator, and drainage from areas north of the Pacific Coast Highway is routed to the No. 6 separator. From Tank No. 15001, wastewater is treated by two induced gas flotation units operating in parallel and then routed to the LCOD system Effluent Tank No. 15002. The LCOD system effluent is then transferred to Tank No. 25013, where it is combined with the effluent from the HCOD system, and then to the Final Effluent Tank No. 80043 from which it is discharged to the sanitary sewer. When necessary, the effluent from the lamella separators may be discharged to the Dominguez Channel Estuary through Discharge Point 003. This emergency discharge will only occur when the flooding of the plant is imminent: (1) after taking all reasonable operational steps to contain excess wastewater (after reaching all on-site storage capacity and the capacity to discharge to LACSD); (2) if there are risks to human life, the safety of employees, and the community from flooding of the Facility. Discharge to Discharge Point 003 is manually controlled by a valve that is normally closed and chain-locked to prevent unauthorized discharge.

The Discharger reported in Form 2C of the ROWD the following average non-storm water flows through Discharge Point 003 during an emergency discharge event.

Boiler Blowdown:	0.440 MGD
Cooling Tower Blowdown:	0.850 MGD
Miscellaneous Wash Water/Other:	0.760 MGD

The remainder of the discharge through Discharge Point 003 (up to 1.95 MGD) would consist of storm water.

**3. Segregated Storm Water System**

Storm water collected in the tank farms from the north and west section of the Facility is segregated from other sources of refinery wastewater and storm water from other areas, and is referred to as non-commingled storm water. Storm water from the north tank farm can be routed by gravity to a collection sump, which discharges to Tank No. 80009; storm water from the northwest and west tank farms are routed to oil/water separators #7 and #8, which can discharge to the Pond No. 2 (Pond No. 2 discharges either to the sanitary sewer or to the LCOD system) or Tank 80009. From Tank 80009, the collected storm water is normally routed to the LCOD system and subsequently discharged to the sanitary sewer. Tank 80009 has a design storage capacity of approximately 3.3 million gallons. The Discharger also has the option to discharge Tank 80009 effluent to the Dominguez

Channel Estuary through Discharge Point 001 to prevent flooding of the Facility. If the Discharger needs to discharge through Discharge Point 001 during non-emergency (emergency conditions as described in the preceding paragraph for discharge through Discharge Point 003), the Discharger will sample the effluent prior to discharge to ensure that permit limits are met.

The Facility has a combined storm water storage capacity of 31 million gallons. The Facility has not discharged non-commingled storm water or commingled storm water during the term of Order No. R4-2010-0179. There had been no discharges through Discharge Point 001 since the system that segregates storm water from process water was put into service in 2001. The last discharge through Discharge Point 003 occurred in 1995 in a storm event that produced 6.5 inches of rainfall within 24-hours, and before the discharge of process wastewater and commingled storm water to the LACSD sanitary sewer was permitted.

**B. Discharge Points and Receiving Waters**

Consistent with Order No. R4-2010-0179, the submitted ROWD, and subsequent correspondence with the Discharger, the Facility proposes to discharge up to 4.32 MGD of non-commingled storm water through Discharge Point 001 (Latitude 33.7948°, Longitude -118.2299°) and 4.00 MGD of commingled storm water through Discharge Point 003 (Latitude 33.7858°, Longitude -118.2355°) into the Dominguez Channel Estuary, a water of the United States. Discharge to Discharge Point 003 will occur during an emergency only. Historically, the Facility discharged treated wastewater to the Dominguez Channel through Discharge Point 002 (Latitude 33.7914°, Longitude -118.2308°). Discharge through Discharge Point 002 was terminated in 2001 as an outcome of Cease and Desist Order No. 99-013, issued by the Regional Water Board on September 16, 1999. To comply with Order No. 99-013, the Facility directed the treated wastewater and storm water discharge (previously discharged through Discharge Point 002) to the sanitary sewer.

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

Effluent limitations from Order No. R4-2010-0179 for Discharge Points 001 and 003 are listed in Table F-2. No discharge occurred during the term of Order No. R4-2010-0179.

**Table F-2. Historic Effluent Monitoring Data**

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	std Units	6.5 - 8.5 <sup>1</sup>	
Total Suspended Solids	lbs/1,000 gallons per day of storm water runoff	0.14	0.24
Biochemical Oxygen Demand (BOD) (5-day @ 20 deg. C)		0.21	0.40
Chemical Oxygen Demand (COD)		1.5	3.0
Oil and Grease		0.067	0.13
Phenolic Compounds		0.0014	0.0029
Total Chromium, Total Recoverable		0.0018	0.0050
Chromium (VI), Total Recoverable		0.00023	0.00052
Total Petroleum Hydrocarbons	µg/L	--	100

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Temperature	Degrees F	86 <sup>2</sup>	
Acute Toxicity	% Survival	3	
Chronic Toxicity	TUc	4	
Arsenic, , Total Recoverable	µg/L	30	59
Cadmium, Total Recoverable	µg/L	8	15
Copper, Total Recoverable	µg/L	3	6
Lead, Total Recoverable	µg/L	7	14
Mercury, Total Recoverable	µg/L	0.05	0.102
Nickel, Total Recoverable	µg/L	7	14
Selenium, Total Recoverable	µg/L	58	117
Silver, Total Recoverable	µg/L	1.1	2.2
Thallium, Total Recoverable	µg/L	6.3	13
Zinc, Total Recoverable	µg/L	47	95
Cyanide	µg/L	0.5	1
Benzo(a)anthracene	µg/L	0.049	0.098
Benzo(b)fluoranthene	µg/L	0.049	0.098
Benzo(k)fluoranthene	µg/L	0.049	0.098
Benzo(a)pyrene	µg/L	0.049	0.098
Chrysene	µg/L	0.049	0.098
Dibenzo(a)anthracene	µg/L	0.049	0.098
Indeno(1,2,3-cd)pyrene	µg/L	0.049	0.098
Pyrene	µg/L	11,000	22,068
Fluorene	µg/L	14,000	28,087

ND – Non-detected.

<sup>1</sup> Instantaneous minimum and maximum range.

<sup>2</sup> Instantaneous maximum.

<sup>3</sup> The acute toxicity of the effluent shall be such that:

- i. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay test shall be at least 90%, and
- ii. No single test shall produce less than 70% survival.

<sup>4</sup> Order No. R4-2010-0179 includes a chronic toxicity trigger defined as an exceedance of 1.0 TU<sub>c</sub> in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU<sub>c</sub> in a critical life stage test.)

**D. Compliance Summary**

The Facility did not discharge during the term of Order No. R4-2010-0179. One reporting violation was cited on February 2, 2015, for submitting the 2014 Second Quarterly Report 14 days past its deadline. The violation is not subject to mandatory minimum penalties.



**E. Planned Changes**

The Discharger does not anticipate any changes to their storm water discharge during the term of this Order.

**III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in this Order are based on the requirements and authorities described in this section.

**A. Legal Authorities**

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

**B. California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

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

1. **Water Quality Control Plan.** The Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. . In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. However, the Dominguez Channel Estuary was not included. Beneficial uses applicable to the Dominguez Channel Estuary are as follows:

**Table F-3. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 003	Dominguez Channel Estuary	<p><u>Existing:</u>                      Water Contact Recreation (REC-1)<sup>1</sup>; Non-contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Estuarine Habitat (EST); Marine Habitat (MAR); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN).</p> <p><u>Potential:</u>                      Navigation (NAV)</p>

<sup>1</sup> Access prohibited by Los Angeles County Department of Public Works.

2. **Enclosed Bays and Estuaries Policy.** The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Control Board (State Board) as Resolution No. 95-84 on November 16, 1995, states that:

*"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Water Board only when the Regional 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."*

While the Facility discharges to the Dominguez Channel Estuary, discharges from the Facility are comprised mostly of storm water, and only occur as necessitated by heavy rainfall and during situations to prevent flooding of the Facility and to protect human life. Nonetheless, this Order contains provisions necessary to protect the beneficial uses of the receiving water in the event that discharges to the Dominguez Channel Estuary occur.

3. **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 January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. Additionally, a white paper was developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and it is consistent with the maximum temperature limitation of 86°F for thermal waste discharges to estuaries in the Thermal Plan. The Facility discharges to the Dominguez Channel Estuary. Therefore, a maximum temperature effluent limitation of 86°F is included in this Order for the protection of aquatic life and beneficial uses of the Dominguez Channel Estuary.
4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.
5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
6. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High

Quality of Waters in California”). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional 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 C.F.R. section 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. 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.
8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
9. **Part 1 Trash Provisions Requirements.** The State Water Board adopted the “*Amendment to the Ocean Plan and Part I Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*” (Trash Amendments) through Resolution 2015-0019, which was approved by OAL on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Regional Water Board where trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments. The discharge described in this Order is subject to the Trash Provisions as there are no trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments for the Dominguez Channel Estuary. The Trash Amendments established a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements. No specific implementation provisions were prescribed for individual industrial permittees, and no references were made to the monitoring and reporting requirements for individual industrial permits.

This Order implements the requirements of the Trash Provisions through the prohibition of trash discharges to the NPDES discharge points. The Trash Provisions did not prescribe specific monitoring and reporting requirements applicable to the Discharger; as such, consistent with the monitoring and reporting requirements for dischargers under the General Industrial Storm Water Permit (due to similarity of the type of discharge), this Order requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include specific BMPs used as storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Dominguez Channel Watershed. The Discharger is required to detail and submit to the Regional Water Board annually (through their annual SWPPP submittal) specific BMPs (storm water control measures) employed to control and prohibit the discharge of trash and other pollutants from the Facility through the NPDES discharge points to satisfy the monitoring and reporting requirement of the Trash Provisions.

#### D. Impaired Water Bodies on the CWA section 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all CWA section 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt total maximum daily loads (TMDLs) that will specify waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved the State's 2012 303(d) list of impaired water bodies on June 26, 2015. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 303(d) List of Water Quality Limited Segments (hereinafter 303(d) list) and have been scheduled for TMDL development. The Facility discharges into Dominguez Channel Estuary. The 2012 State Water Board's California 303(d) List classifies the Dominguez Channel Estuary as impaired. The pollutants of concern in the Dominguez Channel Estuary includes ammonia, coliform bacteria, miscellaneous pollutants causing benthic community effects, benzo(a)anthracene, benzo(a)pyrene, chlordane (tissue), chrysene, DDT (dichlorodiphenyltrichloroethane), dieldrin (tissue), lead (tissue), phenanthrene, pyrene, PCBs (polychlorinated biphenyls), sediment toxicity, and zinc (sediment). The inclusion of the Dominguez Channel Estuary on the 2012 303(d) list documents the waterbody's lack of assimilative capacity for the pollutants of concern. Total Maximum Daily Loads (TMDLs) are developed for pollutants of concern to facilitate the waterbody's recovery of its ability to fully support its beneficial uses. TMDLs for ammonia, miscellaneous pollutants causing benthic community effects, benzo(a)anthracene, benzo(a)pyrene, chlordane, chrysene, DDT, dieldrin (tissue), lead (tissue), phenanthrene, pyrene, PCBs, and zinc (sediment) are scheduled for completion in 2019; the TMDL for sediment toxicity is scheduled for completion in 2021.

The following are summaries of the TMDLs for the Dominguez Channel Estuary:

- 1. Bacteria TMDL.** The Los Angeles Harbor Bacteria TMDL was adopted by the Regional Water Board on July 1, 2004, by Resolution No. R4-2004-011. The TMDL was subsequently approved by the State Water Board on October 21, 2004, by the Office of Administrative Law (OAL) on January 5, 2005, and by U.S. EPA on March 1, 2005. The TMDL became effective on March 10, 2005. The Bacteria TMDL addresses Inner Cabrillo Beach and the Main Ship Channel of the Los Angeles Inner Harbor, but does not address the Dominguez Channel Estuary. The requirements in the Bacteria TMDL are not applicable to the discharge from the Facility. This Order includes receiving water limitations for bacteria based on water quality objectives (WQO) included in the Basin Plan that are applicable to the Dominguez Channel Estuary. These WQOs are identical to the WQOs used to develop the Los Angeles Harbor Bacteria TMDL that is applicable to the Main Ship Channel, which is downstream of the Dominguez Channel Estuary.
- 2. Harbor Toxics TMDL.** The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters (Harbor Toxics TMDL). The Harbor Toxics TMDL was approved by the State Water Board on February 7, 2012, the OAL on March 21, 2012, and the U.S. EPA on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, the Regional Water Board has developed and included effluent limitations and monitoring requirements within this Order that are consistent with all assumptions and requirements of all WLAs included in the Harbor Toxics TMDL.

For the Dominguez Channel Estuary, the Harbor Toxics TMDL included:

- a. Sediment interim concentration-based allocations (in mg/kg sediment) for copper, lead, zinc, 4,4'-DDT, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), and PCBs (Attachment A to Resolution No. R11-008, p. 11).
- b. Water column final concentration-based WLAs ( $\mu\text{g/L}$ ) for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs (Attachment A to Resolution No. R11-008, pp. 13-14).
- c. Final concentration-based sediment WLA (in mg/kg dry sediment) for cadmium (Attachment A to Resolution No. R11-008, p. 17)
- d. Final bed sediment concentration-based allocations (in  $\mu\text{g/kg}$  dry sediment) for bioaccumulative compounds: chlordane and dieldrin (Attachment A to Resolution No. R11-008, p. 21).
- e. Provisions for monitoring discharges and/or receiving waters during the TMDL's 20 year implementation schedule to determine attainment with wasteload and load allocations as appropriate.

**Implementation of the Harbor Toxics TMDL:**

The provisions of this Order implement and are consistent with the assumptions and requirements of all waste load allocations (WLAs) established in the Harbor Toxics TMDL.

**Water Column WLAs.** This Order requires final WQBELs that are statistically-calculated based on salt water column final concentration-based WLAs (in  $\mu\text{g/L}$ , total recoverable) for metals: copper (3.73), lead (8.52), and zinc (85.6); in addition, WQBELs are developed based on the final concentration-based WLAs (in  $\mu\text{g/L}$ ) for PAHs [benzo(a)anthracene (0.049), benzo(a)pyrene (0.049), chrysene (0.049), and pyrene (11,000)], chlordane (0.00059), 4,4'-DDT (0.00059), dieldrin (0.00014), and total PCBs (0.00017). These WLAs are referred to in this Order as CTR TMDL-based WLAs. The WLAs for metals are converted from saltwater CTR criteria using CTR saltwater default translators. CTR human health criteria were not established for total PAHs; therefore, the CTR criterion for individual PAHs of 0.049  $\mu\text{g/L}$  is applied individually to benzo(a)anthracene, benzo(a)pyrene, and chrysene. The CTR criterion for pyrene of 11,000  $\mu\text{g/L}$  is assigned as an individual WLA to pyrene. WQBELs are developed using relevant implementation provisions in section 1.4 of the State Implementation Policy.

The TMDL includes provisions for a 20-year implementation schedule when warranted. One condition for obtaining a compliance schedule is that the Discharger must demonstrate an inability to comply with more stringent effluent limitations resulting from the TMDL. This Order includes final WQBELs that are based on the final concentration-based WLAs specified in the Harbor Toxics TMDL. The Discharger retains coverage under the NPDES permit for the emergency discharge of storm water in the event that storm water from the Facility cannot be contained within the Facility or discharged to the LACSD sewer system.

**Interim and Final Sediment WLAs and Monitoring.** This Order also includes monitoring thresholds based on the Harbor Toxics TMDL's interim and final sediment allocations (in mg/kg dry sediment) for cadmium (1.2), copper (220.0) lead (510.0), zinc (789.0), DDT (1.727), PAHs (31.60), and PCBs (1.490), and allocations in bed sediments for chlordane (0.5  $\mu\text{g/kg}$  dry sediment) and dieldrin (0.02  $\mu\text{g/kg}$  dry sediment); this Order also includes the associated sediment monitoring requirements for the effluent. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.

The TMDL's final sediment allocations were developed to ensure that the beneficial uses of the Dominguez Channel Estuary are preserved.

During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and an effluent limit or performance goal for cadmium, copper, lead, zinc, PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene], chlordane, dieldrin, DDT or total PCBs, then the Discharger has not demonstrated attainment with the sediment allocations stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, and implementation of the effluent sediment monitoring program is required for that priority pollutant. Effluent sediment monitoring of the effluent shall begin during the first discharge event following the effluent exceedances. An effluent sediment monitoring result at or below interim and final sediment allocations (sediment monitoring thresholds) in Tables 6 and 7 of this Order demonstrates attainment with the monitoring thresholds and additional effluent sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the sediment allocation requires additional sediment monitoring of the effluent during discharge, but not more frequently than once per year, until the three-year average concentration for effluent sediment monitoring results is at or below the applicable sediment allocation. In an effort to accurately characterize the sediment discharged from the Facility, the Discharger will be required to collect enough effluent to perform sediment monitoring at least once during the permit term, if the effluent monitoring does not trigger sediment monitoring during the five year permit term and a discharge occurs from the Facility.

The water column CTR TMDL-based WLAs for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs were developed to ensure that the beneficial uses of the Dominguez Channel Estuary are preserved. However, no water column CTR TMDL-based WLA was assigned for cadmium in the Dominguez Channel Estuary. Order No. R4-2010-0179 contained effluent limitations for cadmium that are retained in this Order. The cadmium limitations were developed using CTR criteria and section 1.4 of the SIP. This effluent limitation will therefore serve both as an effluent limitation and a monitoring threshold for cadmium, to ensure proper implementation of the TMDLs final cadmium sediment allocation for this discharge.

**Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance, and Dominguez Channel Estuary:** As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the "TMDL Element - Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed or develop a site specific monitoring plan. If the Discharger decides to join a group already formed, the Discharge shall notify the Regional Water Board within 90 days of the effective date of the Order. Documentation of Discharger's participation and responsibilities shall be provided with the notification. If the Discharger decides to develop a site specific Monitoring Plan with a QAPP, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit them to the Regional Water Board within 12 months of the effective date of the Order for public comment, and subsequently, the Regional Water Board approval. The Discharger shall begin monitoring 6 months after the

Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring. The Discharger shall submit the annual monitoring report to the Regional Water Board by the specified date in the proposed Monitoring Plan. The annual monitoring report shall indicate compliance and non-compliance with waste load and/or load allocations.

#### **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 United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations (C.F.R.): 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. 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.

Discharges from the Facility include the discharge of non-commingled storm water and storm water commingled with wastewater from a petroleum refinery, including: boiler blowdown, cooling tower blowdown, miscellaneous wastewater (including miscellaneous cleanup wastewaters, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatics test waters, fire system test wastewater, and water softener regeneration wastewaters), sulfur recovery plant wastewater, and drainage from the truck loading area. Storm water from the Facility may pick up solids, oil and grease, total petroleum hydrocarbons (TPH), sulfide, metals, volatile organic compounds (VOCs), and constituents contributing to biochemical oxygen demand (BOD) and chemical oxygen demand (COD). Order No. R4-2010-0179 identified a number of pollutants believed to be present in the discharge from the Facility based on a review of the operations at the Facility, and it included monitoring requirements and effluent limitations for total suspended solids (TSS), BOD, COD, oil and grease, chromium, phenolic compounds, pH, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a)anthracene, indeno(1,2,3-cd)pyrene, fluorene, pyrene, arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and TPH. This Order considered the regulated pollutants identified in Order No. R4-2010-0179 as pollutants of concern. Pollutants of concern were also identified based on the Facility's monitoring history, impairments of the receiving water as identified by the State's 2012 303(d) list, and waste load allocations as established in applicable TMDLs for the receiving water.

Pursuant to 40 C.F.R. §122.45(d), permit limitations for continuous discharges shall be expressed, unless impracticable, as both average monthly effluent limitations (AMELs) and maximum daily effluent limitations (MDELs). Discharges through Discharge Point 003 consist of commingled storm water and process wastewater from the Facility; therefore, both AMELs and MDELs are applicable and have been established in this Order. However, discharges through Discharge Point 001 are comprised of storm water only, are intermittent and of short durations; therefore, AMELs are not applicable for discharges through Discharge Point 001 and only MDELs have been established.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitations on a case-by-case basis limitations based on mass are infeasible because the mass of

pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

#### **A. Discharge Prohibitions**

The discharge prohibitions enumerated in section III of the Waste Discharge Requirements of this Order are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges to the Dominguez Channel Estuary that are regulated by NPDES permits.

#### **B. Technology-Based Effluent Limitations**

##### **1. Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. 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 discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- a. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- c. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.



## 2. **Applicable Technology-Based Effluent Limitations (TBELs)**

The Facility is categorized as a cracking refinery, with the SIC code 2911. 40 C.F.R. Part 419 subpart B contains effluent limitation guidelines (ELGs) for wastewater discharged from the cracking subcategory within the petroleum refining point source category. TBELs for Discharge Point 001 are developed based on the ELGs for contaminated runoff included in 40 C.F.R. Part 419, as discharges through this location consist of storm water only. The TBELs for Discharge Point 003 are developed based on both the ELGs for contaminated runoff as included in 40 C.F.R. Part 419, and also BPJ allocations selected from U.S. EPA's *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Petroleum Refining Point Source Category* [EPA-440/1-74-014a], published in 1974 (1974 Development Document). BPJ allocations are included to account for the process wastewater contribution to contaminant loading, as discharges through this location consist of commingled process wastewater and storm water. This Order also retains the TBEL for TPH included in Order No. R4-2010-0179 at Discharge Points 001 and 003. This Order establishes a TBEL for sulfide at Discharge Point 003 based on BPJ in accordance with 40 C.F.R. section 125.3, as sulfide is a pollutant of concern at Discharge Point 003, which may include effluent from the Sulfur Recovery Plant. The following paragraphs provide details of the TBELs development for Discharge Points 001 and 003.

Effluent limitation guidelines (ELGs) for contaminated storm water runoff have been established for biochemical oxygen demand (BOD), total suspended solids (TSS), chemical oxygen demand (COD), oil and grease, phenolic compounds, total chromium, hexavalent chromium, and pH, representing BPT, BCT, and BAT. These contaminated storm water runoff ELGs are applicable to the Facility, as the Facility discharges contaminated storm water runoff at both Discharge Points 001 and 003. Applicable BPT, BAT, and BCT for contaminated storm water runoff contained in 40 C.F.R. parts 419.22, 419.23, and 419.24 are summarized in Table F-4. The most stringent of BPT, BAT, or BCT included in Table F-4 for each constituent is selected in the development of the TBELs to account for the storm water contaminant loading at Discharge Points 001 and 003.

Discharges to Discharge Point 003 consist of storm water commingled with some process wastewater, including boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, wastewater generated from equipment washing, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater. Based on the ROWD submitted by the Discharger, the Facility may discharge up to 4.0 MGD of commingled storm water through Discharge Point 003, consisting of 2.05 MGD of process wastewater and up to 1.95 MGD of storm water. The types of process wastewater to be discharged through Discharge Point 003 cannot be tied to a specific production process, with more than 60% of flow consisting of non-contact wastewater (boiler and cooling tower blowdown). In addition, the Facility discharges most of the process wastewater generated at the Facility through the sanitary sewer rather than to the NPDES Discharge Point 003. Therefore, the Regional Water Board determined that it is inappropriate to consider only ELGs for contaminated storm water runoff, or incorporate production-based allocations included in 40 C.F.R. Part 419 subpart B for discharges through Discharge Point 003. As such, allocations based on BPJ in accordance with 40 C.F.R. section 125.3 are incorporated to account for contaminant loading associated with process wastewater flow in the commingled discharge through Discharge Point 003. These BPJ allocations are selected from the attainable concentrations from the application of best practical control technology currently available (BPCTCA), which were used to develop the ELGs in 40 C.F.R. Part 419, and can be found in the U. S. EPA's 1974 Development Document (referenced

above). These values are converted into concentration-based maximum daily and 30-day average (monthly average) limitations using variability factors included in the same development document, and are summarized in Table F-5.

**Table F-4. ELGs for Contaminated Storm Water Runoff<sup>1</sup>**

Parameter	ELGs in 40 CFR 419 Subpart B						Most Stringent ELG		Basis for Most Stringent ELG
	BPT 419.22(e)		BAT 419.23(f)		BCT 419.24(e)		Daily Max	30-day Avg.	
	Daily Max	30-day Avg.	Daily Max	30-day Avg.	Daily Max	30-day Avg.			
	(lbs/1000 gal)	(lbs/1000 gal)	(lbs/1000 gal)	(lbs/1000 gal)	(lbs/1000 gal)	(lbs/1000 gal)	(lbs/ 1000 gal)	(lbs/ 1000 gal)	
BOD <sub>5</sub>	0.4	0.22	--	--	0.4	0.22	0.4	0.22	BPT/BCT
TSS	0.28	0.18	--	--	0.28	0.18	0.28	0.18	BPT/BCT
COD	3.0	1.5	3.0	1.5	--	--	3.0	1.5	BPT/BAT
Oil and Grease	0.13	0.067	--	--	0.13	0.067	0.13	0.067	BPT/BCT
Phenolic Compounds	0.0029	0.0014	0.0029	0.0014	--	--	0.0029	0.0014	BPT/BAT
Total Chromium, Total Recoverable	0.0060	0.0035	0.0050	0.0018	--	--	0.0050	0.0018	BAT
Chromium (VI), Total Recoverable	0.00052	0.00023	0.00052	0.00023	--	--	0.00052	0.00023	BPT/BAT
pH	6.0 – 9.0		--		6.0 – 9.0		6.0 – 9.0		BPT/BCT

1 Order No. R4-2019-0179 applied the contaminated runoff ELGs as variable mass-based limits at Discharge Points 001 and 003, with effluent limitations varying based on the observed flow during a discharge event. This Order implements the ELGs as fixed mass- and concentration-based effluent limitations, calculated based on the permitted flow at each discharge point and the ELGs for each parameter, with consideration of the infrequency of discharge, compliance measurement and enforcement complexities associated with variable limits, and consistent with EPA effluent guidelines development documents for 40 C.F.R. Part 419. This action does not result in less stringent effluent limitations, as concentration based effluent limitations (which are not variable in respect to flow) are also included along with mass based effluent limitations for these parameters to insure that the contaminant level for each parameter permitted to be discharged is consistent with its respective ELGs.

**Table F-5. BPJ Allocations for Non-Storm Water Contribution to Discharge Point 003**

Parameter	Attainable Concentration, BPCTCA <sup>3</sup> (mg/L)	Variability Factors		BPJ-Based Allocations		
		Average Monthly	Maximum Daily	Units	Average Monthly	Maximum Daily
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	15	1.7	3.2	mg/L	25.5	48
				lbs/day <sup>1</sup>	436	821
Total Suspended Solids (TSS)	10	1.7	2.9	mg/L	17	29
				lbs/day <sup>1</sup>	291	496

Parameter	Attainable Concentration, BPCTCA <sup>3</sup> (mg/L)	Variability Factors		BPJ-Based Allocations		
		Average Monthly	Maximum Daily	Units	Average Monthly	Maximum Daily
Chemical Oxygen Demand (COD)	115	1.6	3.1	mg/L	184	357
				lbs/day <sup>1</sup>	3146	6095
Oil and Grease	5	1.6	3.0	mg/L	8	15
				lbs/day <sup>1</sup>	137	256
Phenolic Compounds	0.1	1.7	3.5	mg/L	0.17	0.35
				lbs/day <sup>1</sup>	2.91	5.98
Total Chromium, Total Recoverable	0.25	1.7	2.9	mg/L	0.43	0.73
				lbs/day <sup>1</sup>	7.27	12.4
Chromium (VI), Total Recoverable	0.005	1.4	3.1	mg/L	0.007	0.016
				lbs/day <sup>1</sup>	0.12	0.27
Sulfide	0.1	1.4	3.1	mg/L	0.14	0.31
				lbs/day <sup>1</sup>	2.39	5.30

<sup>1</sup> Only the process wastewater flow at Discharge Point 003 is used to calculate these mass-based BPJ allocations as the BPJ allocations accounts for the contaminant loading from process wastewater only. Mass-based allocations are calculated based on the flow rate of 2.05 million gallons per day (MGD) for process wastewater (contribution to the discharge waste stream to Discharge Point 003), as follows:

$$\text{Mass Limitation (lbs/day)} = 2.05 \text{ MGD} \times \text{Concentration Limit (mg/L)} \times 8.34 \text{ (conversion factor)}$$

<sup>2</sup> The concentration-based average monthly and maximum daily BPJ allocations are calculated as follows:

$$\text{BPJ Allocation, Average Monthly (mg/L)} = \text{Attainable Concentration} \times \text{Average Monthly Variability Factor}$$

$$\text{BPJ Allocation, Maximum Daily (mg/L)} = \text{Attainable Concentration} \times \text{Maximum Daily Variability Factor}$$

<sup>3</sup> Attainable concentration from the application of best practical control technology currently available (BPCTCA), based on U.S. EPA's 1974 *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Petroleum Refining Point Source Category* [EPA-440/1-74-014a].

TBELs developed for Discharge Points 001 and 003 based on the most stringent ELGs and BPJ allocations are summarized in Table F-6. These limits are calculated based on the permitted flow rate of 4.32 MGD for Discharge Point 001 and the permitted flow rate of 4.0 MGD (consisting of 1.95 MGD of storm water and 2.05 MGD of process wastewater) for Discharge Point 003. As discharges through Discharge Points 001 and 003 occur only during storm events that result in storm water runoff in excess of the amount permitted for discharge to the sanitary sewer and the onsite storage capacity to prevent flooding of the Facility, the permitted flow of each discharge point is the maximum discharge flow rate from each discharge point. Only maximum daily effluent limitations were included for Discharge Point 001 as discharge through Discharge Point 001 is intermittent, of short duration, and consisting of storm water only. Both average monthly and maximum daily effluent limitations are applicable and included for discharges through Discharge Point 003.

Using TSS as example, the following demonstrates how TBELs were established for this Order. The calculation of the TBEL for TSS at Discharge Point 001 represents a TBEL established based on ELG for contaminated storm water runoff only, as discharges through Discharge Point 001 consist solely of storm water. The calculation of the TBEL for

TSS at Discharge Point 003 represents a TBEL established based on both the ELG for contaminated storm water runoff and BPJ allocations, as discharges through Discharge Point 003 consist of commingled storm water and process wastewater.

**Example Calculation of TSS Technology-Based Effluent Limits at Discharge Point 001 (Non-commingled Storm Water)**

As shown in Table F-4, the BPT/BCT ELGs for TSS are the most stringent. Only ELGs for contaminated storm water runoff are used to develop TBELs for Discharge Point 001 as discharge through Discharge Point 001 is non-commingled storm water only. From Table F-4, ELGs for contaminated storm water runoff for TSS include a maximum daily limitation of 0.28 lbs/1,000 gallons of contaminated storm water flow, and a 30-day average (average monthly) limitation of 0.18 lbs/1,000 gallons of contaminated storm water flow. Only maximum daily effluent limitations (MDEL) are applicable at Discharge Point 001.

The following formula was used to calculate the mass-based TBEL for TSS based on the ELGs:

$$\text{MDEL (lbs/day)} = \text{Flow at Discharge Point 001} \times \text{ELG (Table F-4)}$$

$$\begin{aligned} \text{where} \quad \text{Flow} &= 4,320,000 \text{ gallons per day (gpd) (Permitted flow)} \\ \text{ELG for TSS (Maximum Daily)} &= 0.28 \text{ lbs/1,000 gallons of flow} \end{aligned}$$

Therefore,

$$\text{TSS MDEL (lbs/day)} = 4,320,000 \text{ gpd} \times 0.28 \text{ lb/1,000 gallons} = 1209.6 \text{ lbs/day}$$

Pursuant to 40 C.F.R. section 122.45(f)(2), pollutants limited in terms of mass may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. Concentration-based effluent limitations are calculated using the following formula:

$$\begin{aligned} \text{TSS MDEL (mg/L)} &= \text{ELG} \div 0.00834 \text{ (conversion factor)} \\ &= 0.28 \text{ (lbs/1,000 gallons)} \div 0.00834 = 34 \text{ mg/L} \end{aligned}$$

**Example Calculation of TSS Technology-Based Effluent Limits at Discharge Point 003 (Commingled Storm Water)**

Both ELGs for contaminated storm water runoff (Table F-4) and BPJ allocations (Table F-5) are used to develop TBELs for Discharge Point 003 as discharges through Discharge Point 003 consist of commingled storm water and process wastewater. TBELs for TSS at Discharge Point 003 are calculated as the sum of the mass allocation for storm water (calculated based on the ELG for contaminated runoff and the storm water flow at Discharge Point 003) and the BPJ mass allocations for process wastewater in Table F-5 (based on BPCTCA and process wastewater flow at Discharge Point 003). As shown in Table F-4, the BPT/BCT ELGs for TSS are the most stringent. ELGs for TSS include a maximum daily limitation of 0.28 lbs/1,000 gallons of contaminated storm water flow and a 30-day average (average monthly) limitation of 0.18 lbs/1,000 gallons of contaminated storm water flow. BPJ allocation for TSS include a maximum daily limitation of 29 mg/L (496 lbs/day) and a 30-day average (average monthly) limitation of 17 mg/L (291 lbs/day) (refer to Table F-5). Both the MDEL and AMEL are applicable at Discharge Point 003.

The following formula was used to calculate the mass-based TBELs for TSS:

$$\text{Mass-based TBEL (lbs/day)} = \text{Storm Water Flow} \times \begin{matrix} \text{ELG} \\ \text{(Table F-4)} \end{matrix} + \begin{matrix} \text{BPJ Allocation} \\ \text{(Table F-5)} \end{matrix}$$

where:

- Storm Water Flow = 1,950,000 gallons per day (gpd) at Discharge Point 003
- ELG for TSS (Maximum Daily) = 0.28 lbs/1,000 gallons (Table F-4)
- BPJ for TSS (Maximum Daily) = 496 lbs/day (Table F-5)
- ELG for TSS (30-day Average) = 0.18 lbs/1,000 gallons (Table F-4)
- BPJ for TSS (30-day Average) = 291 lbs/day (Table F-5)

$$\begin{aligned} \text{MDEL (lbs/day)} &= 1,950,000 \text{ gpd} \times (0.28 \text{ lbs}/1,000 \text{ gallons}) + 496 \text{ lbs/day} \\ &= 1042 \text{ lbs/day} \end{aligned}$$

$$\begin{aligned} \text{AMEL (lbs/day)} &= 1,950,000 \text{ gpd} \times (0.18 \text{ lbs}/1,000 \text{ gallons}) + 291 \text{ lbs/day} \\ &= 642 \text{ lbs/day} \end{aligned}$$

Pursuant to 40 CFR section 122.45(f)(2), pollutants limited in terms of mass may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. Concentration-based effluent limitations are calculated from the mass-based limitations using the following formula:

$$\text{Concentration-based TBEL (mg/L)} = \text{Mass-based TBEL} \div \text{Total flow at Discharge Point 003 (4 MGD)} \div 8.34 \text{ (conversion factor):}$$

$$\text{MDEL (mg/L)} = 1042 \text{ lbs/day} \div 4 \text{ MGD} \div 8.34 = 31.2 \text{ mg/L}$$

$$\text{AMEL (mg/L)} = 642 \text{ lbs/day} \div 4 \text{ MGD} \div 8.34 = 19.2 \text{ mg/L}$$

TBELs for Discharge Points 001 and 003 that are developed based on the most stringent ELGs and BPJ allocations are summarized in Table F-6.

**Table F-6. Summary of Technology-Based Effluent Limitations at Discharge Points 001 and 003**

Parameter	Units	Technology-Based Effluent Limitations		
		Discharge Point 001	Discharge Point 003	
		Maximum Daily	Average Monthly	Maximum Daily
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	48	26	48
	lbs/day	1,730	860	1600
Total Suspended Solids (TSS)	mg/L	34	19	31
	lbs/day	1210	640	1040
pH	standard units	Between 6.0 and 9.0	Between 6.0 and 9.0	
Chemical Oxygen Demand (COD)	mg/L	360	180	360
	lbs/day	12960	6070	11950

Parameter	Units	Technology-Based Effluent Limitations		
		Discharge Point 001	Discharge Point 003	
		Maximum Daily	Average Monthly	Maximum Daily
Oil and Grease	mg/L	16	8.0	15
	lbs/day	560	270	510
Phenolic Compounds	mg/L	0.35	0.17	0.35
	lbs/day	13	5.6	12
Total Chromium, Total Recoverable	mg/L	0.60	0.32	0.66
	lbs/day	22	11	22
Chromium VI, Total Recoverable	mg/L	0.060	0.020	0.040
	lbs/day	2.3	0.57	1.3
Sulfide	mg/L	--	0.070	0.16
	lbs/day	--	2.4	5.3
Total Petroleum Hydrocarbons (TPHs) <sup>1</sup>	µg/L	100	--	100
	lbs/day	3.6 <sup>2</sup>	--	3.3 <sup>3</sup>

<sup>1</sup> TPH equals the sum of TPH gasoline (C<sub>4</sub>-C<sub>12</sub>), TPH diesel (C<sub>13</sub>-C<sub>22</sub>), and TPH waste oil (C<sub>23+</sub>).

<sup>2</sup> Mass loading limitations are based on the maximum flow at Discharge Point 001 (4.32 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

<sup>3</sup> Mass loading limitations are based on the maximum flow at Discharge Point 003 (4.0 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

Pursuant to 40 C.F.R section 122.44(k), this Order requires the Discharger to develop, implement, and annually submit a Storm Water Pollution Prevention Plan (SWPPP), in accordance to Attachment G, to outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff and trash from being discharged directly into the storm drain or receiving water. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water runoff and to prevent the entrainment of trash in storm water that is discharged through Discharge Points 001 and 003. These procedures shall also ensure that at no time will process wastewaters be commingled with storm water at Discharge Point 001 and unauthorized non-storm water discharges do not occur from the Facility. The SWPPP shall include a summary of BMPs aimed at controlling the potential exposure of pollutants to storm water, inspection practices, schedules of preventive maintenance, housekeeping procedures, vehicle management practices, and spill containment and cleanup procedures; it should demonstrate the Discharger's continued effective implementation of the SWPPP.

This Order also requires the Discharger to develop and implement a Best Management Practices Plan (BMPP) to establish site-specific procedures that will ensure proper operation and maintenance of transfer and storage areas, and to ensure that unauthorized non-storm water discharges (i.e. spills) do not occur at the Facility. This Order also requires the Discharger to develop and implement a Spill Contingency Plan (SCP). The SCP should

be site-specific and shall cover all areas of the Facility; it should address measures to be taken to control accidental discharges and to minimize the effect of such events at the Facility.

The combination of the SWPPP, BMPP, SCP, and permit limitations based on past performance, ELGs, and BPJ serve as the equivalent of technology-based effluent limitations, in order to carry out the purposes and intent of the CWA.

### **C. Water Quality-Based Effluent Limitations (WQBELs)**

#### **1. Scope and Authority**

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

40 C.F.R. section 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi). WQBELs must also be consistent with the assumption and requirements of TMDL WLAs approved by U.S. EPA.

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated beneficial 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.

The specific procedures for determining reasonable potential for discharges from the Facility, and if necessary for calculating WQBELs, are contained in the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (TSD) for storm water discharges and in the SIP for non-storm water discharges. The TSD in section 3.3.8 in the first paragraph on page 64 states: "*The statistical approach shown in Box 3-2 or an analogous approach developed by a regulatory authority can be used to determine the reasonable potential.*" The Regional Water Board has determined the procedures for determining reasonable potential and calculating WQBELs contained in the SIP for non-storm water discharges may be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. As described in the statement from the TSD, an analogous approach may also be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. Hence, for this Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for discharges through Discharge Points 001 and 003.

#### **2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

As noted in section III of the Fact Sheet, the Regional Water Board adopted a Basin Plan that 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 Dominguez Channel Estuary

are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the Dominguez Channel Estuary. 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 section 131.38(c)(3); freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. The Regional Water Board has determined that saltwater criteria applies to the Dominguez Channel Estuary, consistent with Order No. R4-2010-0179. The CTR criteria for saltwater 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 Dominguez Channel Estuary, a water of the United States.

The Facility's last discharge event was in 1995 at Discharge Point 003. The Facility has not discharged through Discharge Point 001 since the storm water segregation system was implemented in 2001. Due to the lack of discharges, no recent effluent or receiving water monitoring has been conducted by the Discharger.

Table F-7 summarizes the applicable water quality criteria/objective for priority pollutants that were reported in detectable concentrations historically in the discharge effluent at EFF-001, EFF-003, or for which the receiving water is identified to be impaired. These criteria were used to conduct the RPA used in this Order.

**Table F-7. Applicable Water Quality Criteria**

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria		
			Saltwater		Human Health for Consumption of: Organisms only
			Acute	Chronic	
			µg/L	µg/L	µg/L
2	Arsenic	36	69	36	--
4	Cadmium	9.36	42.25	9.36	--
5b	Chromium (VI)	50.4	1108	50.4	Narrative
6	Copper, Total Recoverable	3.73	--	3.73 <sup>1</sup>	--
7	Lead, Total Recoverable	8.52	--	8.52 <sup>1</sup>	Narrative
8	Mercury, Total Recoverable	0.051	--	--	0.051
9	Nickel, Total Recoverable	8.28	74.75	8.28	4600
10	Selenium, Total Recoverable	71.14	290.58	71.14	Narrative
11	Silver, Total Recoverable	2.24	2.24	--	--
12	Thallium, Total Recoverable	6.3	--	--	6.3
13	Zinc, Total Recoverable	85.6	--	85.6 <sup>1</sup>	--
14	Cyanide	1	1	1	220,000
60	Benzo(a)anthracene	0.049	--	--	0.049 <sup>1</sup>
61	Benzo(a)pyrene	0.049	--	--	0.049 <sup>1</sup>
62	Benzo(b)fluoranthene	0.049	--	--	0.049



CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria		
			Saltwater		Human Health for Consumption of: Organisms only
			Acute	Chronic	
			µg/L	µg/L	µg/L
64	Benzo(k)fluoranthene	0.049	--	--	0.049
73	Chrysene	0.049	--	--	0.049 <sup>1</sup>
74	Dibenzo(a,h)anthracene	0.049	--	--	0.049
87	Fluorene	14,000	--	--	14,000
92	Indeno(1,2,3-cd)pyrene	0.049	--	--	0.049
100	Pyrene	11,000	--	--	11,000 <sup>1</sup>
107	Chlordane	0.00059	0.09	0.004	0.00059 <sup>1</sup>
108	4,4-DDT	0.00059	0.13	0.001	0.00059 <sup>1</sup>
111	Dieldrin	0.00014	0.71	0.0019	0.00014 <sup>1</sup>
119-125	Polychlorinated biphenyls (PCBs)	0.00017	--	0.03	0.00017 <sup>1</sup>

<sup>1</sup> WLAs as included in the Harbor Toxics TMDL.

**Harbor Toxics TMDL.** The Harbor Toxics TMDL assigned concentration-based waste load allocations (WLAs) to any future minor NPDES permits or enrollees under a general NPDES permit. The TMDL states, “The allocations are set equal to the saltwater targets for metals and equal to the human health targets for the organic compounds in CTR. The averaging period for the concentration-based WLAs shall be consistent with that specified in the regulation establishing the criterion or objective or relevant implementation guidance published by the establishing agency.”

Table F-8 summarizes the applicable WLAs for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), chlordane, 4,4'-DDT, dieldrin, and total PCBs contained in the Harbor Toxics TMDL. These WLAs are applicable to Discharge Points 001 and 003 discharging to the Dominguez Channel Estuary. This Order implements the applicable WLAs as required in the Harbor Toxics TMDL. The WLAs are converted into effluent limitations by applying the CTR-SIP procedures in accordance to the TMDL.

**Table F-8. Harbor Toxics TMDL WLAs Applicable to Discharge Points 001 and 003**

Constituents	Units	WLA
Copper, Total Recoverable <sup>1</sup>	µg/L	3.73
Lead, Total Recoverable <sup>1</sup>	µg/L	8.52
Zinc, Total Recoverable <sup>1</sup>	µg/L	85.6
PAHs <sup>2</sup>	µg/L	0.049
Chlordane	µg/L	0.00059
4,4'-DDT	µg/L	0.00059
Dieldrin	µg/L	0.00014
Total PCBs	µg/L	0.00017

<sup>1</sup> WLAs for metals are converted from saltwater dissolved CTR criteria using CTR saltwater default translators.

<sup>2</sup> CTR human health criteria were not established for total PAHs. Therefore, the CTR criterion for individual PAHs of 0.049 µg/L is applied individually to benzo(1)anthracene, benzo(a)pyrene, and chrysene. The CTR criterion for pyrene of 11,000 µg/L is assigned as an individual WLA to pyrene. Other PAH compounds in the CTR shall be screened as part of the TMDL monitoring.

### 3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

- i. Trigger 1 – if  $MEC \geq C$ , a limit is needed.
- ii. Trigger 2 – If the background concentration  $B > C$  and the pollutant is detected in the effluent, a limit is needed.
- iii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, or other applicable factors indicate that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

No effluent monitoring data from the term of Order No. R4-2010-0179 were available for a new RPA. Therefore, the Regional Water Board considered results from past monitoring events, the Facility's compliance history, effluent limitations contained in Order No. R4-2010-0179, and the impairments of the receiving water in determining reasonable potential and developing WQBELs in this Order.

The Regional Water Board developed WQBELs for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), chlordane, 4,4'-DDT, dieldrin, and total PCBs based on their WLAs included in the Harbor Toxics TMDL. These effluent limitations were established regardless of whether or not there is reasonable potential for these parameters to be present in the discharge at levels that would cause or contribute to a violation of water quality standards. The Regional Water Board developed WQBELs for these parameters pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis for pollutants with WLAs. Similarly, the SIP at section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

### 4. WQBEL Calculations

- a. If 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. 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 Regional Water Board.
- b. The WQBELs for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), chlordane, 4,4'-DDT, dieldrin, and total PCBs are established based on the final WLAs established in the Harbor Toxics TMDL.
- c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. No dilution credit is included in this Order.

## 5. WQBELs Calculation Example

Using total recoverable lead as example, the following demonstrates how WQBELs were established for this Order. The calculation for total recoverable lead represents a WQBEL established based on WLAs included in the Harbor Toxics TMDL. Attachment J summarizes the calculation of all WQBELs for this Order using the process described below. The process for developing these limits is in accordance with the Harbor Toxics TMDL and section 1.4 of the SIP.

### Concentration-Based Effluent Limitations

Two sets of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

### Calculation of AMEL and MDEL

**Step 1:** For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \quad \text{when } C > B, \text{ and}$$

$$ECA = C \quad \text{when } C \leq B$$

- Where:
- C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. Discharge from the Facility uses saltwater criteria, which are independent of hardness and pH.
  - D = The dilution credit
  - B = The ambient background concentration

As discussed above, this Order does not allow dilution; therefore:

$$ECA = C$$

When a WLA has been established through a TMDL for a parameter, the applicable WLA is set equal to the ECA. For total recoverable lead, the ECA is equal to the concentration-based final WLA established in the Harbor Toxics TMDL:

$$ECA = WLA = 8.52 \mu\text{g/L}$$

**Step 2:** For each ECA based or 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.

$$LTA_{acute} = ECA_{acute} \times Multiplier_{acute99}$$

$$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic99}$$

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. If the data set is greater than 10 samples, and at least 20% 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 total recoverable lead, the following data were 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	No. of Non-Detects (% of Total)	CV	ECA Multiplier <sub>acute</sub>	ECA Multiplier <sub>chronic</sub>
0	NA	0.6	0.321	0.527

Total recoverable lead:

Note that for total recoverable lead, the TMDL WLA is based on the chronic criterion in the CTR, and therefore only chronic multipliers will be used to develop the effluent limitations.

$$LTA_{chronic} = 8.52 \mu\text{g/L} \times 0.527 = 4.49 \mu\text{g/L}$$

**Step 3:** Select the most limiting (lowest) of the LTA.

For total recoverable lead, only the chronic LTA is calculated, no comparison is made.

$$LTA = LTA_{chronic} = 4.49 \mu\text{g/L}$$

**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 total recoverable lead, 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 (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	Multiplier <sub>MDEL99</sub>	Multiplier <sub>AMEL95</sub>
4	0.6	3.11	1.55

Total recoverable lead:

$$\text{AMEL} = 4.49 \mu\text{g/L} \times 1.55 = 7.0 \mu\text{g/L}$$

$$\text{MDEL} = 4.49 \mu\text{g/L} \times 3.11 = 14.0 \mu\text{g/L}$$

Calculation of human health AMEL and MDEL:

**Step 5:** For the ECA based on human health, set the AMEL equal to the  $\text{ECA}_{\text{human health}}$

$$\text{AMEL}_{\text{human health}} = \text{ECA}_{\text{human health}}$$

There are no human health criteria for total recoverable lead.

**Step 6:** Calculate the MDEL for human health by multiplying the AMEL by the ratio of Multiplier<sub>MDEL</sub> to the Multiplier<sub>AMEL</sub>. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$$\text{MDEL}_{\text{human health}} = \text{AMEL}_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

There are no human health criteria for total recoverable lead.

**Step 7:** Select the lower set of the AMEL and MDEL based on aquatic life and human health criteria as the WQBEL for the Order.

Final WQBELs for Lead

Parameter	MDEL (µg/L)	AMEL(µg/L)
Total Recoverable Lead	14	7.0

WLAs for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), chlordane, 4,4'-DDT, dieldrin, and total PCBs have been established in the Harbor Toxics TMDL; therefore, effluent limitations for these parameters are established based on the Harbor Toxics TMDL WLAs.

In addition, the Regional Water Board has determined that arsenic, cadmium, mercury, nickel, selenium, silver, thallium, cyanide, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a)anthracene, indeno(1,2,3-cd) pyrene, and fluorene have reasonable potential to cause or contribute to water quality objectives of the Dominguez Channel Estuary, in accordance with Step 7 of section 1.3 in the SIP, which states that other information may be considered to determine whether a WQBEL is needed. Such information includes, among other aspects, the Facility type, compliance history, and the potential toxic impacts of the discharge. Order No. R4-2010-0179 contained effluent limitations for these

parameters based on reasonable potential of past monitoring data and a review of Facility operation. As such, effluent limitations for these pollutants are retained in this Order to protect the beneficial uses of the Dominguez Channel Estuary. Final WQBELs are summarized in Table F-9 and Table F-10 of this Fact Sheet.

As explained in the sections above, discharges through Discharge Point 001 are intermittent, of short duration, and consist of storm water only; therefore, only MDELs are prescribed for Discharge Point 001. Both AMELs and MDELs are applicable for discharges through Discharge Point 003 and are included for Discharge Point 003 in this Order.

## 6. WQBELs Based on Basin Plan Objectives

- a. **pH.** This Order includes effluent limitations for pH in the range of 6.5 – 8.5 (instantaneous minimum and maximum) at Discharge Points 001 and 003, and receiving water limitations for pH, to ensure compliance with Basin Plan Objectives for pH.
- b. **Ammonia.** The Basin Plan objectives for ammonia are expressed as a function of pH and temperature. No ammonia effluent data are available for a RPA. This Order requires the Discharger to conduct effluent ammonia monitoring and receiving water monitoring for ammonia, pH, temperature, and salinity in order to provide data necessary to calculate ammonia objectives and conduct future RPAs.
- c. **Turbidity.** Where natural turbidity is between 0 to 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%. This Order applies the water quality objective for turbidity as a receiving water limitation.
- d. **Temperature.** This Order includes an instantaneous effluent temperature limitation of 86°F based on the Thermal Plan and consistent with a white paper entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. This effluent limitation was determined to be appropriate for the protection of the Basin Plan objective for temperature in estuaries.
- e. **Bacteria.** The Dominguez Channel Estuary is identified on the 2012 303(d) list as impaired for coliform bacteria. This Order includes receiving water limitation and effluent and receiving water monitoring for bacteria to assess bacterial contributions from the discharge.

## 7. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. Order No. R4-2010-0179 contains acute and chronic toxicity limitations, triggers,

and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. A chronic toxicity trigger was also included, implemented as an exceedance of 1 TUC in a critical life stage test for 100% effluent, and a monthly median limitation of 1 TUC in a critical life stage test. There was no acute or chronic toxicity monitoring conducted at Discharge Points 001 or 003 during the term of Order No. R4-2010-0179 due to the lack of discharge events.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Because discharge from the Facility may include a number of chemicals, which individually may not be present in toxic concentrations while exhibiting aggregated toxic effects as a whole, this Order prescribes a chronic toxicity effluent limitation and requires chronic toxicity monitoring of the effluent at Discharge Points 001 and 003. The whole effluent toxicity testing is evaluated using U.S. EPA's 2010 Test of Significant Toxicity (TST) statistical approach. In 2010, U.S. EPA endorsed the peer-reviewed TST statistical approach in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) as an improved statistical tool to evaluate data from U.S. EPA's toxicity test methods. The TST statistical approach is the superior statistical approach for addressing statistical uncertainty when used in combination with U.S. EPA's toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

The TST's null hypothesis for chronic toxicity is:

H0: Mean response (In-stream Waste Concentration (IWC) in % effluent)  $\leq$  (0.75 x mean response (Control)).

Results obtained from a chronic toxicity test are analyzed using the TST statistical approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P". Chronic toxicity results are expressed as "Pass" or "Fail" and "% Effect. The chronic toxicity IWCs for Discharge Points 001 and 003 is 100 percent effluent. The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed at the IWC using the TST statistical approach, results in "Fail" and the "Percent Effect" is  $\geq 0.50$ . The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median result of the chronic toxicity tests, analyzed at the IWC using the TST statistical approach, is a "fail".

Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The Regional Water Board has determined that chronic toxicity demonstrates reasonable potential based on Step 7 of the RPA procedure described in the SIP which states that other information may be considered to determine whether a WQBEL is needed. Such information includes, among other aspects, the facility type, the discharge type, and the potential toxic impacts of the discharge. The Facility has the potential to discharge a number of pollutants as a result of the Facility operations (petroleum refinery operations) that may include metals, volatile organic compounds, and petroleum product-related pollutants, which may cause or contribute to chronic toxicity in the receiving water; the Facility is also in close proximity to the receiving water (the Facility is immediately adjacent to the Dominguez Channel Estuary). Therefore, a chronic toxicity effluent limitation is included in this Order. Order No. R4-2010-0179 contained final effluent limitations and monitoring requirements for both acute toxicity and chronic toxicity. This Order contains monitoring requirements and effluent limitations for chronic toxicity. Since chronic toxicity is a more stringent requirement than acute toxicity, and it evaluates the

mortality endpoint as does the acute toxicity testing, removal of the numeric acute toxicity effluent limitation does not constitute backsliding.

**8. Final WQBELs**

**Table F-9. Summary of Final WQBELs at Discharge Point 001**

Parameter	Units	Water Quality-Based Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard units	--	6.5	8.5
Chronic Toxicity <sup>1</sup>	Pass or Fail, % Effect (TST)	Pass or % Effect < 50	--	--
Temperature	Degrees F	--	--	86
Arsenic, Total Recoverable	µg/L	59	--	--
	lbs/day <sup>2</sup>	2.1	--	--
Cadmium, Total Recoverable	µg/L	15	--	--
	lbs/day <sup>2</sup>	0.54	--	--
Chromium (VI), Total Recoverable	µg/L	83	--	--
	lbs/day <sup>2</sup>	3.0	--	--
Copper, Total Recoverable <sup>3</sup>	µg/L	6.1	--	--
	lbs/day <sup>2</sup>	0.22	--	--
Lead, Total Recoverable <sup>3</sup>	µg/L	14	--	--
	lbs/day <sup>2</sup>	0.50	--	--
Mercury, Total Recoverable	µg/L	0.10	--	--
	lbs/day <sup>2</sup>	0.0036	--	--
Nickel, Total Recoverable	µg/L	14	--	--
	lbs/day <sup>2</sup>	0.50	--	--
Selenium, Total Recoverable	µg/L	120	--	--
	lbs/day <sup>2</sup>	4.3	--	--
Silver, Total Recoverable	µg/L	2.2	--	--
	lbs/day <sup>2</sup>	0.079	--	--
Thallium, Total Recoverable	µg/L	13	--	--
	lbs/day <sup>2</sup>	0.47	--	--
Zinc, Total Recoverable <sup>3</sup>	µg/L	140	--	--
	lbs/day <sup>2</sup>	5.0	--	--
Cyanide	µg/L	1.0	--	--
	lbs/day <sup>2</sup>	0.036	--	--
Benzo(a)anthracene <sup>3</sup>	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Benzo(b)fluoranthene	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Benzo(k)fluoranthene	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--



Parameter	Units	Water Quality-Based Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Benzo(a)pyrene <sup>3</sup>	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Chrysene <sup>3</sup>	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Dibenzo(a,h)anthracene	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Ideno(1,2,3-cd)pyrene	µg/L	0.098	--	--
	lbs/day <sup>2</sup>	0.0035	--	--
Pyrene <sup>3</sup>	µg/L	22,068	--	--
	lbs/day <sup>2</sup>	800	--	--
Fluorene	µg/L	28,087	--	--
	lbs/day <sup>2</sup>	1010	--	--
Chlordane <sup>3</sup>	µg/L	0.0012	--	--
	lbs/day <sup>2</sup>	4.3 x 10 <sup>-5</sup>	--	--
4,4-DDT <sup>3</sup>	µg/L	0.0012	--	--
	lbs/day <sup>2</sup>	4.3 x 10 <sup>-5</sup>	--	--
Dieldrin <sup>3</sup>	µg/L	0.00028	--	--
	lbs/day <sup>2</sup>	1.0 x 10 <sup>-5</sup>	--	--
PCBs, Total <sup>3</sup>	µg/L	0.00034	--	--
	lbs/day <sup>2</sup>	1.2 x 10 <sup>-5</sup>	--	--

- <sup>1</sup> The MDEL shall be reported "Pass" or "Fail" and "% Effect".
- <sup>2</sup> Mass loading limitations are based on the maximum flows at Discharge Point 001 (4.32 million gallons per day (MGD)) and are calculated as follows:  

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$
- <sup>3</sup> This final effluent limitation is derived from the final waste load allocation as set forth in the Harbor Toxics TMDL, translated into effluent limitations by applying the procedures in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

**Table F-10. Summary of Final WQBELs at Discharge Point 003**

Parameter	Units	Water Quality-Based Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard units	--	--	6.5	8.5
Chronic Toxicity <sup>1</sup>	Pass or Fail, % Effect (TST)	Pass	Pass or % Effect < 50	--	--
Temperature	Degrees F	--	--	--	86
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day <sup>2</sup>	1.0	2.0	--	--
Cadmium, Total Recoverable	µg/L	7.7	15	--	--
	lbs/day <sup>2</sup>	0.26	0.50	--	--

Parameter	Units	Water Quality-Based Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chromium (VI), Total Recoverable	µg/L	41	83	--	--
	lbs/day <sup>2</sup>	1.4	2.8	--	--
Copper, Total Recoverable <sup>3</sup>	µg/L	3.1	6.1	--	--
	lbs/day <sup>2</sup>	0.10	0.20	--	--
Lead, Total Recoverable <sup>3</sup>	µg/L	7.0	14	--	--
	lbs/day <sup>2</sup>	0.23	0.47	--	--
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--
	lbs/day <sup>2</sup>	0.0017	0.0033	--	--
Nickel, Total Recoverable	µg/L	6.8	14	--	--
	lbs/day <sup>2</sup>	0.23	0.47	--	--
Selenium, Total Recoverable	µg/L	58	120	--	--
	lbs/day <sup>2</sup>	1.9	4.0	--	--
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day <sup>2</sup>	0.037	0.073	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day <sup>2</sup>	0.21	0.43	--	--
Zinc, Total Recoverable <sup>3</sup>	µg/L	70	140	--	--
	lbs/day <sup>2</sup>	2.3	4.7	--	--
Cyanide	µg/L	0.50	1.0	--	--
	lbs/day <sup>2</sup>	0.017	0.033	--	--
Benzo(a)anthracene <sup>3</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Benzo(a)pyrene <sup>3</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Chrysene <sup>3</sup>	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Dibenzo(a,h)anthracene	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Ideno(1,2,3-cd)pyrene	µg/L	0.049	0.098	--	--
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--
Pyrene <sup>3</sup>	µg/L	11,000	22,068	--	--
	lbs/day <sup>2</sup>	370	740	--	--
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day <sup>2</sup>	470	940	--	--
Chlordane <sup>3</sup>	µg/L	0.00059	0.0012	--	--
	lbs/day <sup>2</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--

Parameter	Units	Water Quality-Based Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
4,4-DDT <sup>3</sup>	µg/L	0.00059	0.0012	--	--
	lbs/day <sup>2</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--
Dieldrin <sup>3</sup>	µg/L	0.00014	0.00028	--	--
	lbs/day <sup>2</sup>	4.7 x 10 <sup>-6</sup>	9.3 x 10 <sup>-6</sup>	--	--
PCBs, Total <sup>3</sup>	µg/L	0.00017	0.00034	--	--
	lbs/day <sup>2</sup>	5.7 x 10 <sup>-6</sup>	1.1 x 10 <sup>-5</sup>	--	--

- <sup>1</sup> The median monthly effluent limitation (MMEL) shall be reported as “Pass” or “Fail”. The MDEL shall be reported “Pass” or “Fail” and “% Effect”. 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 are required when one toxicity test results in “Fail”.
- <sup>2</sup> Mass loading limitations are based on the maximum flows at Discharge Point 001 (4.32 million gallons per day (MGD)) and are calculated as follows:  

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$
- <sup>3</sup> This final effluent limitation is derived from the final waste load allocation as set forth in the Harbor Toxics TMDL, translated into effluent limitations by applying the procedures in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

**D. Final Effluent Limitation Considerations**

Effluent limitations for copper, lead, zinc, PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene), chlordane, 4,4'-DDT, dieldrin, and total PCBs are included in this Order consistent with the Harbor Toxics TMDL. Technology-based effluent limitations for BOD, TSS, COD, oil and grease, phenolic compounds, total chromium, chromium VI, sulfide, and TPH are also included in this Order, based on a review of Facility operations, ELGs, and BPJ. The WQBEL for chromium VI based on CTR criteria was also considered and compared with the technology-based effluent limitation (TBEL) for chromium VI, and the more stringent TBEL was chosen as the final effluent limitation for chromium VI. WQBELs for arsenic, cadmium, mercury, nickel, selenium, silver, thallium, cyanide, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a)anthracene, indeno(1,2,3-cd)pyrene, and fluorene are retained from Order No. R4-2010-0179; and the effluent limitations were developed based on CTR criteria and SIP procedure. A chronic toxicity effluent limitation (evaluated using the TST statistical approach), which is a more stringent requirement than the acute toxicity limitation, is included in this Order. Effluent limitations for temperature and pH are included in this Order in accordance with the Basin Plan.

Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

**1. Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. 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 established in this Order are at least as stringent as the requirements and limitations of Order No. R4-2010-0179, with the exception of a revision of the effluent limitation for zinc and the removal of the acute toxicity effluent limitation; average monthly effluent limitations at Discharge Point 001 are also removed. As discussed below, the relaxations of effluent limitations for these parameters are consistent with the anti-backsliding exceptions allowed in the CWA and federal regulations.

The effluent limitation for zinc is modified in this Order in accordance with the WLAs included in the Harbor Toxics TMDL for zinc, which was developed subsequent to the adoption of Order No. R4-2010-0179. The information on which the Harbor Toxics TMDL was based is new information that was not available at the time of the prior permit issuance and it would have justified the application of a less stringent effluent limitation. The cumulative effect of the implementation of the WLAs will be a decrease in the amount of pollutants discharged into the receiving waters. Furthermore, the cumulative effect of the revised effluent limitations based on the WLAs in the Harbor Toxics TMDL will assure attainment of the water quality standard for zinc in the receiving water, consistent with CWA section 303(d)(4)(A).

As explained in section IV.C.6, Order No. R4-2010-0179 contains acute and chronic toxicity limitations based on the objectives in the Basin Plan. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Discharge from the Facility may include a number of chemicals, which individually may not be present in toxic concentrations while exhibiting aggregated toxic effects as a whole. This Order retains only the chronic toxicity effluent limitation, evaluated using the TST statistical approach, and requires chronic toxicity monitoring for the effluent at Discharge Points 001 and 003. The removal of the acute toxicity effluent limitations for discharges through Discharge Points 001 and 003 is consistent with the exceptions to the anti-backsliding requirements of the CWA and federal regulations since chronic toxicity is protective of both the numeric and the narrative acute toxicity Basin Plan water quality objectives.

The federal antibacksliding provisions allow for relaxation of effluent limitations when material and substantial alterations or additions to the permitted facility occurred after permit issuance that justifies the application of a less stringent effluent limitation. Another exception is when information is available which was not available at the time of permit issuance that would have justified the application of less stringent effluent limitation at the time of permit issuance. In 2001, the Discharger completed facility modifications to segregate storm water from process wastewater for discharges through Discharge Point 001; they also obtained an Industrial Waste Discharge Permit #14887 from the Los Angeles County Sanitation Districts (LACSD) to discharge process wastewater and commingled storm water to the sanitary sewer. Therefore, discharge through Discharge Point 001 will be intermittent, of short duration, consist of storm water only, and occur only when the onsite storage capacity and permitted discharge flowrate to the sanitary sewer are exceeded. There have been no discharges through Discharge Point 001 since the system that segregates storm water from process water was put into service in 2001. NPDES permits for the discharges consisting solely of storm water generally include only daily maximum effluent limitations since storm events occur infrequently in this region. Therefore, the removal of the average monthly effluent limitations that were included in the previous Order for Discharge Point 001 is consistent with the anti-backsliding requirements of the CWA and federal regulations, based on the consideration of modifications to the facility and new information.

## **2. Antidegradation Policies**

40 C.F.R. section 131.12 requires that the state water quality standards include an anti-degradation 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 incorporates 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 Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal

antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

The permitted discharge is not a new discharge. This Order does not provide for an increase in the permitted design flow at Discharge Points 001 and 003. This Order does not allow for a reduction in the level of treatment. The final limitations in this Order, which include concentration based and mass based limitations, hold the Discharger to performance levels that will not adversely impact the beneficial uses or degrade the water quality of Dominguez Channel Estuary, and are developed consistent with federal effluent limitation guidelines and state regulations.

As discussed in section IV.D.1 of this Fact Sheet, this Order contains effluent limitations for zinc that are less stringent than those in Order No. R4-2010-0179. These limitations are based on TMDL WLAs that were adopted into the Basin Plan as a means to achieve water quality objectives within the receiving water. The new effluent limitations are consistent with the TMDL and the cumulative effect of all revised effluent limitations stemming from the TMDL will assure attainment of the water quality standard of the receiving water. As such, the relaxed effluent limitations are consistent with Resolution No. 68-16.

The effluent limitations in this Order hold the Discharger to performance levels that will not cause or contribute to water quality impairments or water quality degradation. The effluent limitations, receiving water limitations, and effluent and receiving water monitoring requirements ensure that excursions above water quality objectives of the Dominguez Channel Estuary will be apparent and can be addressed immediately. Further, compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Therefore, the permitted discharge is consistent with the state's antidegradation policy.

### **3. Mass-based Effluent Limitations**

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 C.F.R. 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis, limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production.

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

Mass-based effluent limitations applicable to Discharge Points 001 and 003 are calculated based on a permitted discharge flow of 4.32 MGD and 4.00 MGD, respectively.

### **4. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on for

BOD, TSS, COD, oil and grease, phenolics (4AAP), total chromium, chromium VI, sulfide, and TPH. Restrictions on these pollutants are discussed in section IV.B of the Fact Sheet. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The WQBELs for temperature and pH are based on the Thermal Plan and the Basin Plan. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 C.F.R. section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by U.S. EPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**5. Summary of Final Effluent Limitations**

**Table F-11. Summary of Final Effluent Limitations at Discharge Point 001**

Parameter	Units	Effluent Limitations			Basis <sup>1</sup>
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	48	--	--	E, ELG
	lbs/day <sup>2</sup>	1,730	--	--	
Total Suspended Solids (TSS) <sup>3,4</sup>	mg/L	34	--	--	E, ELG
	lbs/day <sup>2</sup>	1210	--	--	
Oil and Grease	mg/L	16	--	--	E, ELG
	lbs/day <sup>2</sup>	560	--	--	
pH	standard units	--	6.5	8.5	E,BP, ELG
<b>Non-Conventional Pollutants</b>					
Chronic Toxicity <sup>5</sup>	Pass or Fail, % Effect (TST)	Pass or % Effect < 50	--	--	E, BP, BPJ
Chemical Oxygen Demand (COD)	mg/L	360	--	--	E, ELG
	lbs/day	12960	--	--	
Phenolic Compounds	mg/L	0.35	--	--	E, ELG
	lbs/day	13	--	--	
Temperature	Degrees F	--	--	86	E, BP, TP, WP
Total Petroleum Hydrocarbons (TPH) <sup>6</sup>	µg/L	100	--	--	E, BPJ
	lbs/day <sup>2</sup>	3.6	--	--	

Parameter	Units	Effluent Limitations			Basis <sup>1</sup>
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
<b>Priority Pollutants</b>					
Arsenic, Total Recoverable	µg/L	59	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	2.1	--	--	
Cadmium, Total Recoverable <sup>3</sup>	µg/L	15	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.54	--	--	
Total Chromium, Total Recoverable	mg/L	0.60	--	--	E, ELG
	lbs/day	22	--	--	
Chromium VI, Total Recoverable	µg/L	60	--	--	E, ELG
	lbs/day <sup>2</sup>	2.3	--	--	
Copper, Total Recoverable <sup>4</sup>	µg/L	6.1	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.22	--	--	
Lead, Total Recoverable <sup>4</sup>	µg/L	14	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.50	--	--	
Mercury, Total Recoverable	µg/L	0.10	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0036	--	--	
Nickel, Total Recoverable	µg/L	14	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.50	--	--	
Selenium, Total Recoverable	µg/L	120	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	4.3	--	--	
Silver, Total Recoverable	µg/L	2.2	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.079	--	--	
Thallium, Total Recoverable	µg/L	13	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.47	--	--	
Zinc, Total Recoverable <sup>4</sup>	µg/L	140	--	--	E, TMDL
	lbs/day <sup>2</sup>	5.0	--	--	
Cyanide	µg/L	1.0	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.036	--	--	
Benzo(a)anthracene <sup>4,7</sup>	µg/L	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0035	--	--	
Benzo(b)fluoranthene	µg/L	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0035	--	--	
Benzo(k)fluoranthene	µg/L	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0035	--	--	
Benzo(a)pyrene <sup>4,7</sup>	µg/L	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0035	--	--	
Chrysene <sup>4,7</sup>	µg/L	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0035	--	--	
Dibenzo(a,h)anthracene	µg/L	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0035	--	--	

Parameter	Units	Effluent Limitations			Basis <sup>1</sup>
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Indeno(1,2,3-cd)pyrene	µg/L	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0035	--	--	
Pyrene <sup>4,7</sup>	µg/L	22,068	--	--	E, TMDL
	lbs/day <sup>2</sup>	800	--	--	
Fluorene	µg/L	28,087	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	1010	--	--	
Chlordane <sup>3</sup>	µg/L	0.0012	--	--	TMDL
	lbs/day <sup>2</sup>	4.3 x 10 <sup>-5</sup>	--	--	
4,4-DDT <sup>4</sup>	µg/L	0.0012	--	--	TMDL
	lbs/day <sup>2</sup>	4.3 x 10 <sup>-5</sup>	--	--	
Dieldrin <sup>3</sup>	µg/L	0.00028	--	--	TMDL
	lbs/day <sup>2</sup>	1.0 x 10 <sup>-5</sup>	--	--	
PCBs, Total <sup>4,8</sup>	µg/L	0.00034	--	--	TMDL
	lbs/day <sup>2</sup>	1.2 x 10 <sup>-5</sup>	--	--	

<sup>1</sup> E= Order No. R4-2010-0179; BPJ = Best Professional Judgment; BP = Basin Plan; TMDL = Total Maximum Daily Load (Harbor Toxics TMDL); CTR = California Toxic Rule; SIP = State Implementation Policy; WP = White Paper; TP= Thermal Plan; and ELG = Effluent Limitation Guidelines (40 C.F.R. Part 419).

<sup>2</sup> Mass loading limitations are based on the maximum flow at Discharge Point 001 (4.32 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

<sup>3</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, chlordane, or dieldrin as specified in Table 4 of this Order or the above table, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6 of this Order, implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant until the effluent sediment data demonstrates compliance.

<sup>4</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4-DDT, benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene, or total PCBs as specified in Table 4 of this Order or the above table, then the Discharger has not demonstrated attainment with the interim sediment allocations (Monitoring Thresholds, Table 7, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11; implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Monitoring Thresholds) in Table 7 of this Order demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocations requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

<sup>5</sup> The MDEL shall be reported "Pass" or "Fail" and "% Effect".

<sup>6</sup> Total Petroleum Hydrocarbons (TPH) equals the sum of TPH as gasoline (C4-C12), TPH as diesel (C13-C22), and TPH waste oil (C23+).

<sup>7</sup> CTR human health criteria were not established for total PAHs. Therefore, the Receiving Water Column Concentration-based Waste Load Allocations in Harbor Toxics TMDL for Dominguez Channel Estuary are based on the CTR human health criteria for the individual PAHs; benzo(a)anthracene (0.049 µg/L),



benzo(a)pyrene (0.049 µg/L), chrysene (0.049 µg/L) and pyrene (11,000 µg/L). The effluent limitations for the individual PAHs were derived from the respective WLAs.

<sup>8</sup> Total PCBs means the sum of chlorinated biphenyls whose analytical characteristics resembles those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

**Table F-12. Summary of Final Effluent Limitations at Discharge Point 003**

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
<b>Conventional Pollutants</b>						
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	26	48	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day <sup>2</sup>	860	1600	--	--	
Total Suspended Solids (TSS) <sup>4,5</sup>	mg/L	19	31	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day <sup>2</sup>	640	1040	--	--	
Oil and Grease	mg/L	8.0	15	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day <sup>2</sup>	270	510	--	--	
pH	standard units	--	--	6.5	8.5	E, BP, ELG
<b>Non-Conventional Pollutants</b>						
Chronic Toxicity <sup>6</sup>	Pass or Fail, % Effect (TST)	Pass	Pass or % Effect < 50	--	--	E, BP, BPJ
Chemical Oxygen Demand (COD)	mg/L	180	360	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day	6070	11950	--	--	
Sulfide	mg/L	0.070	0.16	--	--	BPJ <sup>3</sup>
	lbs/day	2.4	5.3	--	--	
Phenolic Compounds	mg/L	0.17	0.35	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day	5.6	12	--	--	
Temperature	Degrees F	--	--	--	86	E, BP, TP, WP
Total Petroleum Hydrocarbons (TPH) <sup>7</sup>	µg/L	--	100	--	--	E, BPJ
	lbs/day <sup>2</sup>	--	3.3	--	--	
<b>Priority Pollutants</b>						
Arsenic, Total Recoverable	µg/L	30	59	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	1.0	2.0	--	--	
Cadmium, Total Recoverable <sup>4</sup>	µg/L	7.7	15	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.26	0.50	--	--	
Total Chromium, Total Recoverable	mg/L	0.32	0.66	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day	11	22	--	--	

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Chromium VI, Total Recoverable	µg/L	20	40	--	--	E, ELG, BPJ <sup>3</sup>
	lbs/day <sup>2</sup>	0.57	1.3	--	--	
Copper, Total Recoverable <sup>5</sup>	µg/L	3.1	6.1	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.10	0.20	--	--	
Lead, Total Recoverable <sup>5</sup>	µg/L	7.0	14	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.23	0.47	--	--	
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0017	0.0033	--	--	
Nickel, Total Recoverable	µg/L	6.8	14	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.23	0.47	--	--	
Selenium, Total Recoverable	µg/L	58	120	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	1.9	4.0	--	--	
Silver, Total Recoverable	µg/L	1.1	2.2	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.037	0.073	--	--	
Thallium, Total Recoverable	µg/L	6.3	13	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.21	0.43	--	--	
Zinc, Total Recoverable <sup>5</sup>	µg/L	70	140	--	--	E, TMDL
	lbs/day <sup>2</sup>	2.3	4.7	--	--	
Cyanide	µg/L	0.50	1.0	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.017	0.033	--	--	
Benzo(a)anthracene <sup>5,8</sup>	µg/L	0.049	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Benzo(a)pyrene <sup>5,8</sup>	µg/L	0.049	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Chrysene <sup>5,8</sup>	µg/L	0.049	0.098	--	--	E, TMDL
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Dibenzo(a,h)anthracene	µg/L	0.049	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Indeno(1,2,3-cd)pyrene	µg/L	0.049	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	0.0016	0.0033	--	--	
Pyrene <sup>5,8</sup>	µg/L	11,000	22,068	--	--	E, TMDL
	lbs/day <sup>2</sup>	370	740	--	--	

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Fluorene	µg/L	14,000	28,087	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	470	940	--	--	
Chlordane <sup>4</sup>	µg/L	0.00059	0.0012	--	--	TMDL
	lbs/day <sup>2</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--	
4,4-DDT <sup>5</sup>	µg/L	0.00059	0.0012	--	--	TMDL
	lbs/day <sup>2</sup>	2.0 x 10 <sup>-5</sup>	4.0 x 10 <sup>-5</sup>	--	--	
Dieldrin <sup>4</sup>	µg/L	0.00014	0.00028	--	--	TMDL
	lbs/day <sup>2</sup>	4.7 x 10 <sup>-6</sup>	9.3 x 10 <sup>-6</sup>	--	--	
PCBs, Total <sup>5,9</sup>	µg/L	0.00017	0.00034	--	--	TMDL
	lbs/day <sup>2</sup>	5.7 x 10 <sup>-6</sup>	1.1 x 10 <sup>-5</sup>	--	--	

<sup>1</sup> E= Order No. R4-2010-0179; BPJ = Best Professional Judgment; BP = Basin Plan; TMDL = Total Maximum Daily Load (Harbor Toxics TMDL); CTR = California Toxic Rule; SIP = State Implementation Policy; WP = White Paper; TP= Thermal Plan; and ELG = Effluent Limitation Guidelines (40 C.F.R. Part 419).

<sup>2</sup> Mass loading limitations are based on the maximum flow at Discharge Point 003 (4.00 million gallons per day (MGD)) and are calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

<sup>3</sup> BPJ allocations selected based on the attainable concentrations from the application of best practical control technology currently available (BPCTCA), included in U. S. EPA's *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Petroleum Refining Point Source Category* [EPA-440/1-74-014a], published in 1974 (1974 Development Document).

<sup>4</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, chlordane, or dieldrin as specified in Table 5 of this Order or the above table, then the Discharger has not demonstrated attainment with the sediment limitations (final concentration-based sediment WLAs) as specified in Table 6 of this Order, implementation of the effluent sediment monitoring program is required for that priority pollutant. An effluent sediment monitoring result at or below the sediment limitations (final concentration-based sediment WLAs) in Table 6 of this Order demonstrates attainment with the sediment limitations and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that is above the sediment limitations (Table 6) of cadmium, chlordane, or dieldrin constitutes an exceedance of sediment limitations. Annual effluent sediment monitoring is required for the pollutant until the effluent sediment data demonstrates compliance.

<sup>5</sup> During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for copper, lead, zinc, 4,4-DDT, benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene, or total PCBs as specified in Table 5 of this Order or the above table, then the Discharger has not demonstrated attainment with the interim sediment allocations (Monitoring Thresholds, Table 7, of this Order) stipulated by the Harbor Toxics TMDL, Resolution No. R11-008, page 11; implementation of the effluent sediment monitoring program is required for that priority pollutant. The effluent sediment monitoring shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the interim sediment allocation (Monitoring Thresholds) in Table 7 of this Order demonstrates attainment with the interim sediment allocation and additional effluent sediment monitoring for those pollutants is not required. An effluent sediment monitoring result that exceeds the interim sediment allocations requires additional effluent sediment monitoring during discharge but not more frequently than once per year until the three-year average concentration for effluent sediment monitoring results is at or below the interim sediment allocation.

<sup>6</sup> The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail". The MDEL shall be reported "Pass" or "Fail" and "% Effect". 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 are required when one toxicity test results in "Fail".

<sup>7</sup> Total Petroleum Hydrocarbons (TPH) equals the sum of TPH as gasoline (C4-C12), TPH as diesel (C13-C22), and TPH waste oil (C23+).

- <sup>8</sup> CTR human health criteria were not established for total PAHs. Therefore, the Receiving Water Column Concentration-based Waste Load Allocations in Harbor Toxics TMDL for Dominguez Channel Estuary are based on the CTR human health criteria for the individual PAHs; benzo(a)anthracene (0.049 µg/L), benzo(a)pyrene (0.049 µg/L), chrysene (0.049 µg/L) and pyrene (11,000 µg/L). The effluent limitations for the individual PAHs were derived from the respective WLAs.
- <sup>9</sup> Total PCBs means the sum of chlorinated biphenyls whose analytical characteristics resembles those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

**E. Interim Effluent Limitations – Not Applicable**

**F. Land Discharge Specifications – Not Applicable**

**G. Recycling Specifications – Not Applicable**

**V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water. If there is reasonable potential or a U.S. EPA-approved TMDL WLA, then WQBELs are included in this Order to ensure protection of water quality standards.

**B. Groundwater – Not Applicable**

**VI. RATIONALE FOR PROVISIONS**

**A. Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

40 C.F.R. Sections 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 C.F.R. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. 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. Special Provisions**

**1. Reopener Provisions**

These provisions are based on 40 C.F.R part 123 and Order No. R4-2010-0179. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan or revisions to the applicable TMDLs associated with the Dominguez Channel Watershed.

## 2. Special Studies and Additional Monitoring Requirements

- a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.
- b. **Monitoring Thresholds Based on Sediment Interim and Final Concentration-based Allocations in the Harbor Toxics TMDL for Sediment Monitoring of Effluent.** This Order implements the Harbor Toxics TMDL's interim sediment allocations for copper, lead, zinc, DDT, PAHs, and PCBs as monitoring thresholds, and includes sediment limitations for cadmium, chlordane, and dieldrin based on their final concentration based sediment waste load allocations in the Harbor Toxics TMDL. Compliance with these thresholds shall be demonstrated in accordance with Footnotes 2 and 3 to Tables 4 and 5 of the Waste Discharge Requirements of this Order which include effluent limitations for TSS and the targeted pollutants. If there is a discharge during the term of this Order, the Discharger is required to collect a sufficient sample at least once during the permit term to analyze the sediment in the effluent volume directly. Regardless of these monitoring thresholds, the Discharger shall ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies or controls existing at the time of permit issuance, reissuance, or modification.
- c. **Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance, and Dominguez Channel Estuary.** This provision implements the Compliance Monitoring Program as required in the Harbor Toxics TMDL. The Compliance Monitoring Program includes water column monitoring, sediment monitoring and fish tissue monitoring at monitoring stations in the Dominguez Channel Estuary. The Discharger may join a collaboration group or develop a site specific plan to comply with this requirement.

## 3. Best Management Practices and Pollution Prevention

- a. **Storm Water Pollution Prevention Plan (SWPPP).** This Order requires the Discharger to update, as necessary, and continue to implement a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing trash and contaminated storm water runoff from being discharged directly into the receiving water. At a minimum, best management practices should be implemented to ensure that raw materials and chemicals do not come into contact with storm water runoff and to prevent the entrainment of trash in storm water that is discharged. These procedures shall also ensure that at no time will process wastewaters other than those specified by this Order be commingled with storm water and be discharged through Discharge Points 001 and 003.

SWPPP requirements are included as Attachment G, based on 40 C.F.R. 122.44(k).

- b. **Best Management Practices Plan (BMPP).** This Order requires the Discharger to develop and implement the BMPP. The BMPP may be included as a component of the SWPPP. The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment, to ensure that unauthorized non-storm water discharges (i.e., spills) do not occur at the Facility. The BMPP shall incorporate the requirements contained in Attachment G. Attachment G requires a

discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

- c. **Spill Contingency Plan (SCP).** This Order requires the Discharger to develop and implement a SCP to control the discharge of pollutants. The SCP shall include a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events at the site. This provision is included in this Order to minimize and control the amount of pollutants discharged in case of a spill. The SCP shall be site specific and shall cover all areas of the Facility. A Spill Prevention, Control, and Countermeasure (SPCC) Plan may satisfy this requirement.

#### **4. Construction, Operation, and Maintenance Specifications**

This provision is based on the requirements of 40 C.F.R section 122.41(e).

#### **5. Other Special Provisions – Not Applicable**

#### **6. Compliance Schedules – Not Applicable**

### **VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

#### **A. Influent Monitoring – Not Applicable**

#### **B. Effluent Monitoring**

Effluent monitoring for pollutants expected to be present in the discharge will be required at Monitoring Locations EFF-001 and EFF-003 as prescribed in Table E-2 in the MRP (Attachment E). To demonstrate compliance with established effluent limitations, the Order includes monitoring requirements of once per discharge event for parameters with effluent limitations. Chronic toxicity monitoring was required at least once per year. Monitoring for additional pollutants is required based on considerations of pollutants commonly associated with similar operations.

The SIP states that the Regional Water Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires the Discharger to conduct annual monitoring for the remaining CTR priority pollutants at Discharge Points 001 and 003. The Regional Water Board will use the additional data to conduct an RPA and determine if additional WQBELs are required. The Regional Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.

The Harbor Toxics TMDL requires attainment with the TMDL's interim and final sediment allocations. This Order implements this requirement in a framework of effluent limits, sediment monitoring thresholds, and effluent monitoring requirements. Attainment with the interim and final sediment allocations shall be demonstrated, as specified in Footnotes 2 and 3 to Tables 4 and 5 of the Waste Discharge Requirements of this Order. These requirements will ensure that discharges from the Facility do not contribute to contaminant sediment concentrations in the Dominguez Channel Estuary. The effluent sediment monitoring is also required to demonstrate

attainment with sediment limitations (final concentration-based sediment WLAs) as specified in Table 6 of this Order.

**C. Whole Effluent Toxicity Testing Requirements**

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. A chronic toxicity test measures mortality, reproduction, and growth. A chemical at a low concentration can have chronic effects but no acute effects. Chronic toxicity is a more stringent requirement than acute toxicity. For this Order, chronic toxicity monitoring in the discharge is required. The chronic toxicity testing results are analyzed using U.S. EPA's 2010 TST statistical approach.

**D. Receiving Water Monitoring**

**1. Surface Water Monitoring**

Monitoring requirements at the upstream receiving water monitoring station RSW-001 are retained for this Order. The SIP requires monitoring of the upstream receiving water for the CTR priority pollutants, including TCDD equivalents, to determine reasonable potential. Additionally, the Discharger must analyze pH, temperature, salinity, hardness, and ammonia of the receiving water at the same time as the samples are collected for priority pollutants (including TCDD equivalents) analyses. The Discharger is required to perform upstream receiving monitoring at RSW-001 at least once per year if a discharge occurs.

**2. Bed Sediment Monitoring**

The final concentration-based sediment WLAs for cadmium, chlordane, and dieldrin were included in the Harbor Toxics TMDL for the Dominguez Channel Estuary. The effluent or bed sediment monitoring will provide data for the direct determination of compliance with these WLAs. The Discharger may alternatively demonstrate compliance with these WLAs by compliance with TSS and the respective effluent limits or performance goal as specified in Footnote 2 to Tables 4 and 5 of this Order.

**3. Groundwater – Not Applicable**

**E. Other Monitoring Requirements**

**1. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program**

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program, including all minor dischargers beginning in 2017. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

## 2. Storm Water Monitoring Requirements

Because the discharge is comprised mostly of storm water, the Discharger is required to measure and record the rainfall each day of the month. The Discharger is also required to conduct visual observations of storm water discharges to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. These requirements are consistent with requirements of storm water dischargers in the region.

## 3. Harbor Toxics TMDL Monitoring Requirements

To implement the Harbor Toxics TMDL, the Discharger is encouraged to participate in the development of a Regional Monitoring Program(s) or to develop a site specific plan to address pollutants as required in the Harbor Toxics TMDL.

## VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Tesoro Refining & Marketing Company LLC, Los Angeles Refinery - Wilmington Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

### A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following: email and local newspaper; relevant documents to the tentative permit was also available on the Regional Water Board website.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at:

<http://www.waterboards.ca.gov/losangeles>

### B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDRs as provided through the notification process. Comments were required to be submitted either in person or by mail to the Executive Officer at the Regional Water Board at 320 West 4th Street, Suite 200, Los Angeles, CA 90013, or by email to [losangeles@waterboards.ca.gov](mailto:losangeles@waterboards.ca.gov) with a copy to [Ching-Yin.To@waterboards.ca.gov](mailto:Ching-Yin.To@waterboards.ca.gov).

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. **March 17, 2017.**

### C. Public Hearing

The Regional 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: April 6, 2017  
Time: 9:00 a.m.  
Location: City of Simi Valley, Council Chambers  
2929 Tapo Canyon Road,  
Simi Valley, California

Interested persons were invited to attend. At the public hearing, the Regional 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 Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day: State Water Resources Control Board  
Office of Chief Counsel  
Adrianna M. Crowl  
P.O. Box 100  
Sacramento, CA 95812-0100

Or by email to: [waterqualitypetitions@waterboards.ca.gov](mailto:waterqualitypetitions@waterboards.ca.gov)

For instructions on how to file a petition for review, see

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

**E. Information and Copying**

The Report of Waste Discharge (ROWD), tentative WDRs, comments received, and other supporting documents are on file and the electronic copies may be assessed in the CIWQS database or on the Los Angeles Regional Water Quality Control Board website at [www.waterboards.ca.gov/losangeles](http://www.waterboards.ca.gov/losangeles). Hard copies may be inspected at the Regional Water Board's office at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Viewing and copying of documents may be arranged through the Regional Water Board by calling (213) 576 – 6600.

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Ching-Yin To at [Ching-Yin.To@waterboards.ca.gov](mailto:Ching-Yin.To@waterboards.ca.gov) or at (213) 576-6696.

## **ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS**

### **I. IMPLEMENTATION SCHEDULE**

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Regional Water Board, or no later than 90 days from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

### **II. OBJECTIVES**

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify 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. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

### **III. PLANNING AND ORGANIZATION**

#### **A. Pollution Prevention Team**

The SWPPP shall identify a specific individual or 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 Permit. The SWPPP shall clearly identify Permit-related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

#### **B. Review Other Requirements and Existing Facility Plans**

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, state, and federal requirements that impact, complement, or are consistent with the requirements of this permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators

whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

#### 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, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

**TABLE A**  
**FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL**  
**STORM WATER POLLUTION PREVENTION PLANS**

<b>PLANNING AND ORGANIZATION</b>
----------------------------------

Form Pollution Prevention Team Review other plans
--

<b>ASSESSMENT PHASE</b>
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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
--

<b>BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE</b>
---

Non-structural BMPs Structural BMPs Select activity and site-specific BMPs
--

<b>IMPLEMENTATION PHASE</b>
-----------------------------

Train employees Implement BMPs Conduct recordkeeping and reporting
--

<b>EVALUATION / MONITORING</b>
--------------------------------

Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP
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The following information shall be included on the site map:

- A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.
- B. 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. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section VI.A.4 below have occurred.
- E. Areas of industrial activity. This shall include the locations of 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 rinsing areas, and other areas of industrial activity which are potential pollutant sources.

## V. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials<sup>1</sup> handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

## VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

- A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section IV.E above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:
  - 1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
  - 2. **Material Handling and Storage Areas.** Describe each handling and storage area, 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

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<sup>1</sup> "Significant materials" includes, but is not limited to: 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); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be 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 and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.
4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or authorized non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (C.F.R.) part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 C.F.R., parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material 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 spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, 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. This shall include the source, quantity, frequency, and characteristics of the authorized non-storm water discharges and associated drainage area.

Non-storm water discharges that are not authorized by this Permit, other waste discharge requirements, or other NPDES permits are prohibited. The SWPPP must include BMPs to prevent or reduce contact of authorized non-storm water discharges with significant materials (as defined in Footnote 1 of section V above) or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.
7. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.

- B. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section VIII. below.

## 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 section VI above to determine:
  1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.
- B.** Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in section VIII below.

### **VIII. STORM WATER BEST MANAGEMENT PRACTICES**

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (sections VI and VII above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

**TABLE B**  
**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.  Spills caused by topping off fuel tanks.  Hosing or washing down fuel oil fuel area.  Leaking storage tanks.  Rainfall running off fuel oil, and rainfall running onto and off fueling area.	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 preventive tank and line leaks.  Inspect fueling areas regularly to detect problems before they occur.  Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

**A. Non-Structural BMPs**

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see section VIII.B. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.
2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (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 of significant materials to storm water and authorized non-storm water discharges.
5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
7. **Recordkeeping 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, etc.
9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.
10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

**B. Structural BMPs.**

Where non-structural BMPs as identified in section VIII.A above are not effective, structural BMPs shall be considered. Structural BMPs generally 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 should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of 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 generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.



## **IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION**

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. . 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 potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- C.** A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- D.** An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section X.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.B.5 of Attachment D.

## **X. SWPPP GENERAL REQUIREMENTS**

- A.** The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.
- B.** The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.
- C.** The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- D.** The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.
- E.** When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) 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. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

- F.** The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under section 308(b) of the Clean Water Act.

**ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS (MICROGRAMS/LITER(µG/L))**

The Minimum Levels (MLs) in this Attachment are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

\*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2- Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Phenol **	1	1		50
Pyrene		10	0.05	

\* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

\*\* Phenol by colorimetric technique has a factor of 1.

Table 2c INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

\* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5

Table 2d – PESTICIDES – PCBs*	GC
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

\* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)

DCP - Direct Current Plasma

COLOR – Colorimetric

**ATTACHMENT I – LIST OF PRIORITY POLLUTANTS**

CTR Number	Parameter	CAS Number	Analytical Methods
1	Antimony	7440360	1
2	Arsenic	7440382	1
3	Beryllium	7440417	1
4	Cadmium	7440439	1
5a	Chromium (III)	16065831	1
5a	Chromium (VI)	18540299	1
6	Copper	7440508	1
7	Lead	7439921	1
8	Mercury	7439976	1
9	Nickel	7440020	1
11	Selenium	7782492	1
11	Silver	7440224	1
12	Thallium	7440280	1
13	Zinc	7440666	1
14	Cyanide	57125	1
15	Asbestos	1332214	1
16	2,3,7,8-TCDD	1746016	1
17	Acrolein	117028	1
18	Acrylonitrile	117131	1
19	Benzene	71432	1
20	Bromoform	75252	1
21	Carbon Tetrachloride	56235	1
22	Chlorobenzene	118907	1
23	Chlorodibromomethane	124481	1
24	Chloroethane	75003	1
25	2-Chloroethylvinyl Ether	111758	1
26	Chloroform	67663	1
27	Dichlorobromomethane	75274	1
28	1,1-Dichloroethane	75343	1
29	1,2-Dichloroethane	117062	1
30	1,1-Dichloroethylene	75354	1
31	1,2-Dichloropropane	78875	1
32	1,3-Dichloropropylene	542756	1
33	Ethylbenzene	110414	1
34	Methyl Bromide	74839	1
35	Methyl Chloride	74873	1
36	Methylene Chloride	75092	1
37	1,1,2,2-Tetrachloroethane	79345	1
38	Tetrachloroethylene	127184	1
39	Toluene	118883	1
40	1,2-Trans-Dichloroethylene	156605	1
41	1,1,1-Trichloroethane	71556	1
42	1,1,2-Trichloroethane	79005	1
43	Trichloroethylene	79016	1
44	Vinyl Chloride	75014	1
45	2-Chlorophenol	95578	1
46	2,4-Dichlorophenol	120832	1

CTR Number	Parameter	CAS Number	Analytical Methods
47	2,4-Dimethylphenol	115679	1
48	2-Methyl-4,6-Dinitrophenol	534521	1
49	2,4-Dinitrophenol	51285	1
50	2-Nitrophenol	88755	1
51	4-Nitrophenol	110027	1
52	3-Methyl-4-Chlorophenol	59507	1
53	Pentachlorophenol	87865	1
54	Phenol	118952	1
55	2,4,6-Trichlorophenol	88062	1
56	Acenaphthene	83329	1
57	Acenaphthylene	208968	1
58	Anthracene	120127	1
59	Benzidine	92875	1
60	Benzo(a)Anthracene	56553	1
61	Benzo(a)Pyrene	50328	1
62	Benzo(b)Fluoranthene	205992	1
63	Benzo(ghi)Perylene	191242	1
64	Benzo(k)Fluoranthene	207089	1
65	Bis(2-Chloroethoxy)Methane	111911	1
66	Bis(2-Chloroethyl)Ether	111444	1
67	Bis(2-Chloroisopropyl)Ether	118601	1
68	Bis(2-Ethylhexyl)Phthalate	117817	1
69	4-Bromophenyl Phenyl Ether	111553	1
70	Butylbenzyl Phthalate	85687	1
71	2-Chloronaphthalene	91587	1
72	4-Chlorophenyl Phenyl Ether	7005723	1
73	Chrysene	218019	1
74	Dibenzo(a,h)Anthracene	53703	1
75	1,2-Dichlorobenzene	95501	1
76	1,3-Dichlorobenzene	541731	1
77	1,4-Dichlorobenzene	116467	1
78	3,3'-Dichlorobenzidine	91941	1
79	Diethyl Phthalate	84662	1
80	Dimethyl Phthalate	131113	1
81	Di-n-Butyl Phthalate	84742	1
82	2,4-Dinitrotoluene	121142	1
83	2,6-Dinitrotoluene	606202	1
84	Di-n-Octyl Phthalate	117840	1
85	1,2-Diphenylhydrazine	122667	1
86	Fluoranthene	206440	1
87	Fluorene	86737	1
88	Hexachlorobenzene	118741	1
89	Hexachlorobutadiene	87863	1
90	Hexachlorocyclopentadiene	77474	1
91	Hexachloroethane	67721	1
92	Indeno(1,2,3-cd)Pyrene	193395	1
93	Isophorone	78591	1
94	Naphthalene	91203	1
95	Nitrobenzene	98953	1
96	N-Nitrosodimethylamine	62759	1
97	N-Nitrosodi-n-Propylamine	621647	1
98	N-Nitrosodiphenylamine	86306	1



CTR Number	Parameter	CAS Number	Analytical Methods
99	Phenanthrene	85018	1
100	Pyrene	129000	1
101	1,2,4-Trichlorobenzene	120821	1
102	Aldrin	309002	1
103	alpha-BHC	319846	1
104	beta-BHC	319857	1
105	gamma-BHC	58899	1
106	delta-BHC	319868	1
107	Chlordane	57749	1
108	4,4'-DDT	50293	1
109	4,4'-DDE	72559	1
110	4,4'-DDD	72548	1
111	Dieldrin	60571	1
112	alpha-Endosulfan	959988	1
113	beta-Endosulfan	33213659	1
114	Endosulfan Sulfate	1131178	1
115	Endrin	72208	1
116	Endrin Aldehyde	7421934	1
117	Heptachlor	76448	1
118	Heptachlor Epoxide	1124573	1
119	PCB-1016	12674112	1
120	PCB-1221	11104282	1
121	PCB-1232	11141165	1
122	PCB-1242	53469219	1
123	PCB-1248	12672296	1
124	PCB-1254	11097691	1
125	PCB-1260	11096825	1
126	Toxaphene	8001352	1

<sup>1</sup> Pollutants shall be analyzed using the methods described in 40 C.F.R. Part 136.

**ATTACHMENT J – SUMMARY OF EFFLUENT LIMITATION CALCULATIONS**

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)				Lowest C
					Saltwater		Human Health for consumption of:		
					C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only	
1	Antimony	ug/L						4300.00	4300.00
2	Arsenic	ug/L	0.6		69.00	36.00			36.00
3	Beryllium	ug/L		No Criteria				Narrative	No Criteria
4	Cadmium	ug/L	0.6		42.25	9.36			9.36
5a	Chromium (III)			No Criteria				Narrative	No Criteria
5b	Chromium (VI)	ug/L	0.6		1107.75	50.35			50.35
6	Copper *	ug/L	0.6			3.73			3.73
7	Lead *	ug/L	0.6			8.52		Narrative	8.52
8	Mercury	ug/L	0.6		Reserved	Reserved		0.051	0.051
9	Nickel	ug/L	0.6		74.75	8.28		4600.00	8.28
10	Selenium	ug/L	0.6		290.58	71.14		Narrative	71.14
11	Silver	ug/L	0.6		2.24				2.24
12	Thallium	ug/L	0.6					6.30	6.30
13	Zinc *	ug/L	0.6			85.60			85.60
14	Cyanide	ug/L	0.6		1.00	1.00		220000.00	1.00
15	Asbestos	Fibers/L		No Criteria					No Criteria
16	2,3,7,8 TCDD	ug/L						0.00000014	0.00000014
	TCDD Equivalents	ug/L	0					0.00000014	0.00000014
17	Acrolein	ug/L						780	780
18	Acrylonitrile	ug/L						0.66	0.660
19	Benzene	ug/L	0.6					71	71.0
20	Bromoform	ug/L						360	360.0
21	Carbon Tetrachloride	ug/L						4.4	4.40
22	Chlorobenzene	ug/L						21000	21000
23	Chlorodibromomethane	ug/L						34	34.00
24	Chloroethane	ug/L		No Criteria					No Criteria
25	2-Chloroethylvinyl ether	ug/L		No Criteria					No Criteria
26	Chloroform	ug/L		No Criteria				reserved	No Criteria
27	Dichlorobromomethane	ug/L						46	46.00
28	1,1-Dichloroethane	ug/L		No Criteria					No Criteria
29	1,2-Dichloroethane	ug/L						99	99.00
30	1,1-Dichloroethylene	ug/L						3.2	3.200
31	1,2-Dichloropropane	ug/L						39	39.00
32	1,3-Dichloropropylene	ug/L						1700	1700
33	Ethylbenzene	ug/L	0.6					29000	29000
34	Methyl Bromide	ug/L						4000	4000
35	Methyl Chloride	ug/L		No Criteria				narrative	No Criteria
36	Methylene Chloride	ug/L						1600	1600.0
37	1,1,2,2-Tetrachloroethane	ug/L						11	11.00
38	Tetrachloroethylene	ug/L						8.85	8.9
39	Toluene	ug/L	0.6					200000	200000
40	1,2-Trans-Dichloroethylene	ug/L						140000	140000
41	1,1,1-Trichloroethane	ug/L		No Criteria				narrative	No Criteria
42	1,1,2-Trichloroethane	ug/L						42	42.0
43	Trichloroethylene	ug/L						81	81.0
44	Vinyl Chloride	ug/L						525	525
45	2-Chlorophenol	ug/L						400	400
46	2,4-Dichlorophenol	ug/L						790	790
47	2,4-Dimethylphenol	ug/L						2300	2300
48	4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	ug/L						765	765.0
49	2,4-Dinitrophenol	ug/L						14000	14000
50	2-Nitrophenol	ug/L		No Criteria					No Criteria
51	4-Nitrophenol	ug/L		No Criteria					No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria					No Criteria
53	Pentachlorophenol	ug/L			13.00	7.90		8.2	7.90
54	Phenol	ug/L						4600000	4600000
55	2,4,6-Trichlorophenol	ug/L						6.5	6.5
56	Acenaphthene	ug/L						2700	2700
57	Acenaphthylene	ug/L		No Criteria					No Criteria
58	Anthracene	ug/L						110000	110000
59	Benzidine	ug/L						0.00054	0.00054

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)										
		MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL > C?	If B > C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason
1	Antimony			N	N				No detected value of B, Step 7		Ud	No effluent data & no B
2	Arsenic			N					No detected value of B, Step 7		Ud	No effluent data & no B
3	Beryllium	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
4	Cadmium			N					No detected value of B, Step 7		Ud	No effluent data & no B
5a	Chromium (III)	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
5b	Chromium (VI)			N					No detected value of B, Step 7		Ud	No effluent data & no B
6	Copper *			N					No detected value of B, Step 7	TMDL WLA	Ud	TMDL
7	Lead *			N					No detected value of B, Step 7	TMDL WLA	Yes	TMDL
8	Mercury			N					No detected value of B, Step 7		Ud	No effluent data & no B
9	Nickel			N					No detected value of B, Step 7		Ud	No effluent data & no B
10	Selenium			N					No detected value of B, Step 7		Ud	No effluent data & no B
11	Silver			N					No detected value of B, Step 7		Ud	No effluent data & no B
12	Thallium			N					No detected value of B, Step 7		Ud	No effluent data & no B
13	Zinc *			N					No detected value of B, Step 7	TMDL WLA	Ud	TMDL
14	Cyanide			N					No detected value of B, Step 7		Ud	No effluent data & no B
15	Asbestos	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
16	2,3,7,8 TCDD			N					No detected value of B, Step 7		Ud	No effluent data & no B
	TCDD Equivalents			N					No detected value of B, Step 7		Ud	No effluent data & no B
17	Acrolein			N					No detected value of B, Step 7		Ud	No effluent data & no B
18	Acrylonitrile			N					No detected value of B, Step 7		Ud	No effluent data & no B
19	Benzene			N					No detected value of B, Step 7		Ud	No effluent data & no B
20	Bromoform			N					No detected value of B, Step 7		Ud	No effluent data & no B
21	Carbon Tetrachloride			N					No detected value of B, Step 7		Ud	No effluent data & no B
22	Chlorobenzene			N					No detected value of B, Step 7		Ud	No effluent data & no B
23	Chlorodibromomethane			N					No detected value of B, Step 7		Ud	No effluent data & no B
24	Chloroethane	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
25	2-Chloroethylvinyl ether	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
26	Chloroform	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
27	Dichlorobromomethane			N					No detected value of B, Step 7		Ud	No effluent data & no B
28	1,1-Dichloroethane	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
29	1,2-Dichloroethane			N					No detected value of B, Step 7		Ud	No effluent data & no B
30	1,1-Dichloroethylene			N					No detected value of B, Step 7		Ud	No effluent data & no B
31	1,2-Dichloropropane			N					No detected value of B, Step 7		Ud	No effluent data & no B
32	1,3-Dichloropropylene			N					No detected value of B, Step 7		Ud	No effluent data & no B
33	Ethylbenzene			N					No detected value of B, Step 7		Ud	No effluent data & no B
34	Methyl Bromide			N					No detected value of B, Step 7		Ud	No effluent data & no B
35	Methyl Chloride	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
36	Methylene Chloride			N					No detected value of B, Step 7		Ud	No effluent data & no B
37	1,1,2,2-Tetrachloroethane			N					No detected value of B, Step 7		Ud	No effluent data & no B
38	Tetrachloroethylene			N					No detected value of B, Step 7		Ud	No effluent data & no B
39	Toluene			N					No detected value of B, Step 7		Ud	No effluent data & no B
40	1,2-Trans-Dichloroethylene			N					No detected value of B, Step 7		Ud	No effluent data & no B
41	1,1,1-Trichloroethane	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
42	1,1,2-Trichloroethane			N					No detected value of B, Step 7		Ud	No effluent data & no B
43	Trichloroethylene			N					No detected value of B, Step 7		Ud	No effluent data & no B
44	Vinyl Chloride			N					No detected value of B, Step 7		Ud	No effluent data & no B
45	2-Chlorophenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
46	2,4-Dichlorophenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
47	2,4-Dimethylphenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
48	4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)			N					No detected value of B, Step 7		Ud	No effluent data & no B
49	2,4-Dinitrophenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
50	2-Nitrophenol	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
51	4-Nitrophenol	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
53	Pentachlorophenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
54	Phenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
55	2,4,6-Trichlorophenol			N					No detected value of B, Step 7		Ud	No effluent data & no B
56	Acenaphthene			N					No detected value of B, Step 7		Ud	No effluent data & no B
57	Acenaphthylene	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
58	Anthracene			N					No detected value of B, Step 7		Ud	No effluent data & no B
59	Benzidine			N					No detected value of B, Step 7		Ud	No effluent data & no B

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS										LIMITS		Recommendation	
		Organisms only			Saltwater / Freshwater / Basin Plan										Lowest AMEL	Lowest MDEL		
		AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life					
1	Antimony																	No Limit
2	Arsenic		2.01		0.32	22.15	0.53	18.99	18.99	1.55	29.48	3.11	59.1360843	29.5	59.1		Limit	
3	Beryllium																	No Limit
4	Cadmium		2.01		0.32	13.57	0.53	4.93	4.93	1.55	7.66	3.11	15.369036	7.7	15.4		Limit	
5a	Chromium (III)																	No Limit
5b	Chromium (VI)		2.01		0.32	355.68	0.53	26.56	26.56	1.55	41.23	3.11	82.7124374	41.2	82.7		Limit	
6	Copper *		2.01		0.32	0.00	0.53	1.97	1.97	1.55	3.06	3.11	6.13526979	3.1	6.1		TMDL Limit Applied	
7	Lead *		2.01		0.32	0.00	0.53	4.49	4.49	1.55	6.97	3.11	13.9911871	7.0	14		TMDL Limit Applied	
8	Mercury	0.051	2.01	0.10232						1.55		3.11		0.051	0.102		Limit	
9	Nickel	4600	2.01	9228.47012	0.32	24.00	0.53	4.37	4.37	1.55	6.78	3.11	13.6059453	6.8	14		Limit	
10	Selenium		2.01		0.32	93.30	0.53	37.52	37.52	1.55	58.25	3.11	116.863226	58.3	116.9		Limit	
11	Silver		2.01		0.32	0.72	0.53		0.72	1.55	1.11	3.11	2.23529412	1.1	2.2		Limit	
12	Thallium	6.3	2.01	12.63899						1.55		3.11		6.3	12.6		Limit	
13	Zinc *		2.01		0.32	0.00	0.53	45.15	45.15	1.55	70.09	3.11	140.612467	70	141		TMDL Limit Applied	
14	Cyanide	220000	2.01	441361.61457	0.32	0.32	0.53	0.53	0.32	1.55	0.50	3.11	1	0.50	1.00		Limit	
15	Asbestos																	No Limit
16	2,3,7,8 TCDD																	No Limit
	TCDD Equivalent																	No Limit
17	Acrolein																	No Limit
18	Acrylonitrile																	No Limit
19	Benzene																	No Limit
20	Bromoforn																	No Limit
21	Carbon Tetrachloride																	No Limit
22	Chlorobenzene																	No Limit
23	Chlorodibromomethane																	No Limit
24	Chloroethane																	No Limit
25	2-Chloroethylvinyl ether																	No Limit
26	Chloroform																	No Limit
27	Dichlorobromomethane																	No Limit
28	1,1-Dichloroethane																	No Limit
29	1,2-Dichloroethane																	No Limit
30	1,1-Dichloroethylene																	No Limit
31	1,2-Dichloropropane																	No Limit
32	1,3-Dichloropropylene																	No Limit
33	Ethylbenzene																	No Limit
34	Methyl Bromide																	No Limit
35	Methyl Chloride																	No Limit
36	Methylene Chloride																	No Limit
37	1,1,2,2-Tetrachloroethane																	No Limit
38	Tetrachloroethylene																	No Limit
39	Toluene																	No Limit
40	1,2-Trans-Dichloroethylene																	No Limit
41	1,1,1-Trichloroethane																	No Limit
42	1,1,2-Trichloroethane																	No Limit
43	Trichloroethylene																	No Limit
44	Vinyl Chloride																	No Limit
45	2-Chlorophenol																	No Limit
46	2,4-Dichlorophenol																	No Limit
47	2,4-Dimethylphenol																	No Limit
48	4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)																	No Limit
49	2,4-Dinitrophenol																	No Limit
50	2-Nitrophenol																	No Limit
51	4-Nitrophenol																	No Limit
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)																	No Limit
53	Pentachlorophenol																	No Limit
54	Phenol																	No Limit
55	2,4,6-Trichlorophenol																	No Limit
56	Acenaphthene																	No Limit
57	Acenaphthylene																	No Limit
58	Anthracene																	No Limit
59	Benzidine																	No Limit

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)				Lowest C
					Saltwater		Human Health for consumption of:		
					C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only	
60	Benzo(a)Anthracene	ug/L	0.6					0.049	0.0490
61	Benzo(a)Pyrene	ug/L	0.6					0.049	0.0490
62	Benzo(b)Fluoranthene	ug/L	0.6					0.049	0.0490
63	Benzo(ghi)Perylene	ug/L		No Criteria					No Criteria
64	Benzo(k)Fluoranthene	ug/L	0.6					0.049	0.0490
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria					No Criteria
66	Bis(2-Chloroethyl)Ether	ug/L						1.4	1.400
67	Bis(2-Chloroisopropyl)Ether	ug/L						170000	170000
68	Bis(2-Ethylhexyl)Phthalate	ug/L						5.9	5.9
69	4-Bromophenyl Phenyl Ether	ug/L		No Criteria					No Criteria
70	Butylbenzyl Phthalate	ug/L						5200	5200
71	2-Chloronaphthalene	ug/L						4300	4300
72	4-Chlorophenyl Phenyl Ether	ug/L		No Criteria					No Criteria
73	Chrysene	ug/L	0.6					0.049	0.0490
74	Dibenzo(a,h)Anthracene	ug/L	0.6					0.049	0.0490
75	1,2-Dichlorobenzene	ug/L						17000	17000
76	1,3-Dichlorobenzene	ug/L						2600	2600
77	1,4-Dichlorobenzene	ug/L						2600	2600
78	3,3-Dichlorobenzidine	ug/L						0.077	0.08
79	Diethyl Phthalate	ug/L						120000	120000
80	Dimethyl Phthalate	ug/L						2900000	2900000
81	Di-n-Butyl Phthalate	ug/L						12000	12000
82	2,4-Dinitrotoluene	ug/L						9.10	9.10
83	2,6-Dinitrotoluene	ug/L		No Criteria					No Criteria
84	Di-n-Octyl Phthalate	ug/L		No Criteria					No Criteria
85	1,2-Diphenylhydrazine	ug/L						0.54	0.540
86	Fluoranthene	ug/L						370	370
87	Fluorene	ug/L	0.6					14000	14000
88	Hexachlorobenzene	ug/L						0.00077	0.00077
89	Hexachlorobutadiene	ug/L						50	50.00
90	Hexachlorocyclopentadiene	ug/L						17000	17000
91	Hexachloroethane	ug/L						8.9	8.9
92	Indeno(1,2,3-cd)Pyrene	ug/L	0.6					0.049	0.0490
93	Isophorone	ug/L						600	600.0
94	Naphthalene	ug/L		No Criteria					No Criteria
95	Nitrobenzene	ug/L						1900	1900
96	N-Nitrosodimethylamine	ug/L						8.10	8.10000
97	N-Nitrosodi-n-Propylamine	ug/L						1.40	1.400
98	N-Nitrosodiphenylamine	ug/L						16	16.0
99	Phenanthrene	ug/L	0.6	No Criteria					No Criteria
100	Pyrene	ug/L	0.6					11000	11000
101	1,2,4-Trichlorobenzene	ug/L		No Criteria					No Criteria
102	Aldrin	ug/L			1.30			0.00014	0.00014
103	alpha-BHC	ug/L						0.013	0.0130
104	beta-BHC	ug/L						0.046	0.046
105	gamma-BHC	ug/L			0.16			0.063	0.063
106	delta-BHC	ug/L		No Criteria					No Criteria
107	Chlordane	ug/L	0.6		0.09	0.004		0.00059	0.00059
108	4,4'-DDT *	ug/L	0.6		0.13	0.001		0.00059	0.00059
109	4,4'-DDE (linked to DDT)	ug/L						0.00059	0.00059
110	4,4'-DDD	ug/L						0.00084	0.00084
111	Dieldrin	ug/L	0.6		0.71	0.0019		0.00014	0.00014
112	alpha-Endosulfan	ug/L			0.034	0.0087		240	0.0087
113	beta-Endosulfan	ug/L			0.034	0.0087		240	0.0087
114	Endosulfan Sulfate	ug/L						240	240
115	Endrin	ug/L			0.037	0.0023		0.81	0.0023
116	Endrin Aldehyde	ug/L						0.81	0.81
117	Heptachlor	ug/L			0.053	0.0036		0.00021	0.00021
118	Heptachlor Epoxide	ug/L			0.053	0.0036		0.00011	0.00011
119-125	PCBs sum (2)*	ug/L	0.6			0.03		0.00017	0.00017
126	Toxaphene	ug/L			0.21	0.0002		0.00075	0.0002

Notes:  
 Ud = Undetermined due to lack of data  
 Uc = Undetermined due to lack of CTR Water Quality Criteria  
 C = Water Quality Criteria  
 B = Background receiving water data  
 \* = Having WLAs in Harbor Toxics TMDL.  
 Used as chronic criteria in calculations  
 Tentative: 11/8/2016  
 Adopted: 4/6/2017

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)									
		MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?
60	Benzo(a)Anthracene			N				No detected value of B, Step 7		Ud	No effluent data & no B
61	Benzo(a)Pyrene			N				No detected value of B, Step 7	TMDL WLA	Yes	TMDL
62	Benzo(b)Fluoranthene			N				No detected value of B, Step 7		Ud	No effluent data & no B
63	Benzo(ghi)Perylene	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
64	Benzo(k)Fluoranthene			N				No detected value of B, Step 7		Ud	No effluent data & no B
65	Bis(2-Chloroethoxy)Methane	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
66	Bis(2-Chloroethyl)Ether			N				No detected value of B, Step 7		Ud	No effluent data & no B
67	Bis(2-Chloroisopropyl)Ether			N				No detected value of B, Step 7		Ud	No effluent data & no B
68	Bis(2-Ethylhexyl)Phthalate			N				No detected value of B, Step 7		Ud	No effluent data & no B
69	4-Bromophenyl Phenyl Ether	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
70	Butylbenzyl Phthalate			N				No detected value of B, Step 7		Ud	No effluent data & no B
71	2-Chloronaphthalene			N				No detected value of B, Step 7		Ud	No effluent data & no B
72	4-Chlorophenyl Phenyl Ether	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
73	Chrysene			N				No detected value of B, Step 7	TMDL WLA	Ud	No effluent data & no B
74	Dibenzo(a,h)Anthracene			N				No detected value of B, Step 7		Ud	No effluent data & no B
75	1,2-Dichlorobenzene			N				No detected value of B, Step 7		Ud	No effluent data & no B
76	1,3-Dichlorobenzene			N				No detected value of B, Step 7		Ud	No effluent data & no B
77	1,4-Dichlorobenzene			N				No detected value of B, Step 7		Ud	No effluent data & no B
78	3,3 Dichlorobenzidine			N				No detected value of B, Step 7		Ud	No effluent data & no B
79	Diethyl Phthalate			N				No detected value of B, Step 7		Ud	No effluent data & no B
80	Dimethyl Phthalate			N				No detected value of B, Step 7		Ud	No effluent data & no B
81	Di-n-Butyl Phthalate			N				No detected value of B, Step 7		Ud	No effluent data & no B
82	2,4-Dinitrotoluene			N				No detected value of B, Step 7		Ud	No effluent data & no B
83	2,6-Dinitrotoluene	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
84	Di-n-Octyl Phthalate	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
85	1,2-Diphenylhydrazine			N				No detected value of B, Step 7		Ud	No effluent data & no B
86	Fluoranthene			N				No detected value of B, Step 7		Ud	No effluent data & no B
87	Fluorene			N				No detected value of B, Step 7		Ud	No effluent data & no B
88	Hexachlorobenzene			N				No detected value of B, Step 7		Ud	No effluent data & no B
89	Hexachlorobutadiene			N				No detected value of B, Step 7		Ud	No effluent data & no B
90	Hexachlorocyclopentadiene			N				No detected value of B, Step 7		Ud	No effluent data & no B
91	Hexachloroethane			N				No detected value of B, Step 7		Ud	No effluent data & no B
92	Indeno(1,2,3-cd)Pyrene			N				No detected value of B, Step 7		Ud	No effluent data & no B
93	Isophorone			N				No detected value of B, Step 7		Ud	No effluent data & no B
94	Naphthalene	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
95	Nitrobenzene			N				No detected value of B, Step 7		Ud	No effluent data & no B
96	N-Nitrosodimethylamine			N				No detected value of B, Step 7		Ud	No effluent data & no B
97	N-Nitrosodi-n-Propylamine			N				No detected value of B, Step 7		Ud	No effluent data & no B
98	N-Nitrosodiphenylamine			N				No detected value of B, Step 7		Ud	No effluent data & no B
99	Phenanthrene	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
100	Pyrene			N				No detected value of B, Step 7		Ud	No effluent data & no B
101	1,2,4-Trichlorobenzene	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
102	Aldrin			N				No detected value of B, Step 7		Ud	No effluent data & no B
103	alpha-BHC			N				No detected value of B, Step 7		Ud	No effluent data & no B
104	beta-BHC			N				No detected value of B, Step 7		Ud	No effluent data & no B
105	gamma-BHC			N				No detected value of B, Step 7		Ud	No effluent data & no B
106	delta-BHC	No Criteria	No Criteria	N				No Criteria	No Criteria	Uc	No Criteria
107	Chlordane			N				No detected value of B, Step 7		Ud	No effluent data & no B
108	4,4'-DDT *			N				No detected value of B, Step 7	TMDL WLA	Yes	TMDL
109	4,4'-DDE (linked to DDT)			N				No detected value of B, Step 7		Ud	No effluent data & no B
110	4,4'-DDD			N				No detected value of B, Step 7		Ud	No effluent data & no B
111	Dieldrin			N				No detected value of B, Step 7		Ud	No effluent data & no B
112	alpha-Endosulfan			N				No detected value of B, Step 7		Ud	No effluent data & no B
113	beta-Endosulfan			N				No detected value of B, Step 7		Ud	No effluent data & no B
114	Endosulfan Sulfate			N				No detected value of B, Step 7		Ud	No effluent data & no B
115	Endrin			N				No detected value of B, Step 7		Ud	No effluent data & no B
116	Endrin Aldehyde			N				No detected value of B, Step 7		Ud	No effluent data & no B
117	Heptachlor			N				No detected value of B, Step 7		Ud	No effluent data & no B
118	Heptachlor Epoxide			N				No detected value of B, Step 7		Ud	No effluent data & no B
119-125	PCBs sum (2)*			N				No detected value of B, Step 7	TMDL WLA	Yes	TMDL
126	Toxaphene			N				No detected value of B, Step 7		Ud	No effluent data & no B

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Tesoro Refining Marketing Company LLC, Los Angeles Refinery - Wilmington  
(NPDES CA0003778), Discharge Points 001  
and 003

CTR#	Parameters	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS								LIMITS		Recommendation	
		Organisms only			Saltwater / Freshwater / Basin Plan								Lowest AMEL	Lowest MDEL		
		AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99				MDEL aq life
60	Benzo(a)Anthracene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	TMDL Limit Applied
61	Benzo(a)Pyrene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	TMDL Limit Applied
62	Benzo(b)Fluoranthene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	Limit
63	Benzo(ghi)Perylene															No Limit
64	Benzo(k)Fluoranthene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	Limit
65	Bis(2-Chloroethoxy)Methane															No Limit
66	Bis(2-Chloroethyl)Ether															No Limit
67	Bis(2-Chloroisopropyl)Ether															No Limit
68	Bis(2-Ethylhexyl)Phthalate															No Limit
69	4-Bromophenyl Phenyl Ether															No Limit
70	Butylbenzyl Phthalate															No Limit
71	2-Chloronaphthalene															No Limit
72	4-Chlorophenyl Phenyl Ether															No Limit
73	Chrysene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	TMDL Limit Applied
74	Dibenzo(a,h)Anthracene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	Limit
75	1,2-Dichlorobenzene															No Limit
76	1,3-Dichlorobenzene															No Limit
77	1,4-Dichlorobenzene															No Limit
78	3,3 Dichlorobenzidine															No Limit
79	Diethyl Phthalate															No Limit
80	Dimethyl Phthalate															No Limit
81	Di-n-Butyl Phthalate															No Limit
82	2,4-Dinitrotoluene															No Limit
83	2,6-Dinitrotoluene															No Limit
84	Di-n-Octyl Phthalate															No Limit
85	1,2-Diphenylhydrazine															No Limit
86	Fluoranthene															No Limit
87	Fluorene	14000	2.01	28086.64820						1.55		3.11		14000	28087	Limit
88	Hexachlorobenzene															No Limit
89	Hexachlorobutadiene															No Limit
90	Hexachlorocyclopentadiene															No Limit
91	Hexachloroethane															No Limit
92	Indeno(1,2,3-cd)Pyrene	0.049	2.01	0.09830						1.55		3.11		0.049	0.098	Limit
93	Isophorone															No Limit
94	Naphthalene															No Limit
95	Nitrobenzene															No Limit
96	N-Nitrosodimethylamine															No Limit
97	N-Nitrosodi-n-Propylamine															No Limit
98	N-Nitrosodiphenylamine															No Limit
99	Phenanthrene															No Limit
100	Pyrene	11000	2.01	22068.08073						1.55		3.11		11000	22068	TMDL Limit Applied
101	1,2,4-Trichlorobenzene															No Limit
102	Aldrin															No Limit
103	alpha-BHC															No Limit
104	beta-BHC															No Limit
105	gamma-BHC															No Limit
106	delta-BHC															No Limit
107	Chlordane	0.00059	2.01	0.00118	0.32	0.03	0.53	0.00	0.00	1.55	0.00	3.11	0.00657068	0.00059	0.00118	Limit
108	4,4'-DDT *	0.00059	2.01	0.00118	0.32	0.04	0.53	0.00	0.00	1.55	0.00	3.11	0.00164267	0.00059	0.00118	TMDL Limit Applied
109	4,4'-DDE (linked to DDT)															No Limit
110	4,4'-DDD															No Limit
111	Dieldrin	0.00014	2.01	0.00028	0.32	0.23	0.53	0.00	0.00	1.55	0.00	3.11	0.00312107	0.00014	0.00028	TMDL Limit Applied
112	alpha-Endosulfan															No Limit
113	beta-Endosulfan															No Limit
114	Endosulfan Sulfate															No Limit
115	Endrin															No Limit
116	Endrin Aldehyde															No Limit
117	Heptachlor															No Limit
118	Heptachlor Epoxide															No Limit
119-125	PCBs sum (2)*	0.00017	2.01	0.00034	0.32		0.53	0.02	0.02	1.55	0.02	3.11	0.04928007	0.00017	0.00034	TMDL Limit Applied
126	Toxaphene															No Limit