

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

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Los Angeles Regional Water Quality Control Board

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

**WATER QUALITY ORDER R4-2022-0238
NPDES NUMBER CA0000680, CI NUMBER 5424**

**WASTE DISCHARGE REQUIREMENTS
FOR THE TESORO REFINING & MARKETING COMPANY LLC
TESORO LOS ANGELES REFINERY – CARSON OPERATIONS**

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:	Tesoro Los Angeles Refinery – Carson Operations
Facility Address:	2350 East 223rd Street, Carson, CA 90810 Los Angeles County

Table 2. Discharge Location for Low Volume Wastes consisting of Steam Condensate, Service Water, Irrigation Runoff, and Fire Water Testing

Discharge Point	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	33.821389°	-118.240833°	Dominguez Channel Estuary
002	33.819444°	-118.240278°	Dominguez Channel Estuary
003	33.817500°	-118.240000°	Dominguez Channel Estuary
004	33.817222°	-118.240000°	Dominguez Channel Estuary
005	33.832500°	-118.234167°	Dominguez Channel Estuary

Table 3. Discharge Location for Process Wastewater Commingled with Stormwater and Boiler Blowdown

Discharge Point	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
003	33.817500°	-118.240000°	Dominguez Channel Estuary
004	33.817222°	-118.240000°	Dominguez Channel Estuary

Table 4. Administrative Information

This Order was adopted on:	July 14, 2022
This Order shall become effective on:	September 1, 2022
This Order shall expire on:	August 31, 2027
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a NPDES permit no later than:	180 days prior to the Order expiration date
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board have classified this discharge as follows:	Major

I, Renee Purdy, 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 **the date indicated above**.

Renee Purdy, Executive Officer

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1. FACILITY INFORMATION

Information describing the Tesoro Los Angeles Refinery – Carson Operations Facility (Facility) is summarized in Table 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility’s permit application.

2. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), finds:

- 2.1. **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 United States Environmental Protection Agency (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.
- 2.2. **Background and Rationale for Requirements.** The Los Angeles Water Board developed the requirements in this Order based on information submitted as part of the application and through the Discharger’s monitoring and reporting program along with 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 are also incorporated into this Order.
- 2.3. **Notification of Interested Parties.** The Los Angeles 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.
- 2.4. **Consideration of Public Comment.** The Los Angeles 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 Order No. R4-2015-0259 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Los Angeles Water Board from taking enforcement action for violations of the previous Order.

3. DISCHARGE PROHIBITIONS

- 3.1. Wastes discharged shall be limited to a maximum of 0.045 million gallons per day (MGD) of low volume wastes and up to 4.4 MGD of process wastewater commingled with stormwater and boiler blowdown from the discharge points described in Tables 2 and 3 above.
- 3.2. The discharge of wastewater at a location other than specifically described in this Order is prohibited. The discharge of wastes from accidental spills or other sources is prohibited.
- 3.3. 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 United States, are prohibited.
- 3.4. The treatment or the discharge of wastes from the Facility shall not cause pollution, contamination, or nuisance as defined by section 13050 of the Water Code.
- 3.5. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life.
- 3.6. The discharge of oil or any residuary product of petroleum to waters of the United States, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited.
- 3.7. The discharge of any radiological, chemical, or biological warfare agent into the waters of the United States is prohibited under Water Code section 13375.
- 3.8. The discharge of trash to surface waters or the deposition of trash where it may be discharged into surface waters is prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE PROHIBITIONS

4.1. Effluent Limitations

4.1.1. Final Effluent Limitations for Low Volume Wastes – Discharge Points 001, 002, 003, 004 and 005

The discharge of low volume wastes shall maintain compliance with the following effluent limitations at Discharge Points 001, 002, 003, 004 and 005 with compliance measured at Monitoring Locations EFF-001, EFFF-002, EFF-003, EFF-004 and EFF-005, as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 5. Final Effluent Limitations for Low Volume Wastes - Discharge Points 001, 002, 003, 004, and 005

Parameter	Units	Average Monthly	Maximum Daily	Notes
pH	standard units	---	6.5 to 8.5	a

Parameter	Units	Average Monthly	Maximum Daily	Notes
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	milligram per liter (mg/L)	20	30	
BOD	pounds per day (lbs/day)	7.5	11	b
Oil and Grease	mg/L	10	15	
Oil and Grease	lbs/day	3.8	5.6	b
Total Suspended Solids (TSS)	mg/L	50	75	c
TSS	lbs/day	19	28	b
Settleable Solids	milliliter per liter (ml/L)	0.1	0.3	
Turbidity	nephelometric turbidity unit (NTU)	50	75	
Temperature	degrees Fahrenheit (°F)	---	86	d
Detergent (MBAS)	mg/L	---	0.5	
MBAS	lbs/day	---	0.2	b
Residual Chlorine	mg/L	---	0.1	
Residual Chlorine	lbs/day	---	0.04	b
Sulfides	mg/L	---	1.0	
Sulfides	lbs/day	---	0.4	b
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	e
Cadmium, Total Recoverable (TR)	µg/L	7.6	15.4	c
Cadmium, TR	lbs/day	0.003	0.006	b
Copper, TR	µg/L	3.1	6.1	c
Copper, TR	lbs/day	0.001	0.002	b
Lead, TR	µg/L	7	14	c
Lead, TR	lbs/day	0.003	0.005	b
Nickel, TR	µg/L	6.7	13	
Nickel, TR	lbs/day	0.0025	0.005	b
Selenium, TR	µg/L	58	117	
Selenium, TR	lbs/day	0.022	0.044	b
Zinc, TR	µg/L	70	141	c
Zinc, TR	lbs/day	0.02	0.05	b
Cyanide	µg/L	0.5	1.0	
Cyanide	lbs/day	0.0002	0.0004	b
Methylene Chloride	µg/L	1,600	3,210	
Methylene Chloride	lbs/day	0.60	1.2	b

Parameter	Units	Average Monthly	Maximum Daily	Notes
Pentachlorophenol	µg/L	6.5	13	
Pentachlorophenol	lbs/day	0.0024	0.005	b
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	
Bis(2-Ethylhexyl)Phthalate	lbs/day	0.002	0.004	b
Fluoranthene	µg/L	42	742	
Fluoranthene	lbs/day	0.016	0.3	b
Aldrin	µg/L	0.00014	0.00028	
Aldrin	lbs/day	0.00000005	0.0000001	b
Chlordane	µg/L	0.00059	0.0012	
Chlordane	lbs/day	0.0000002	0.0000005	b
Dieldrin	µg/L	0.00014	0.00028	f
Dieldrin	lbs/day	0.00000005	0.0000001	b
4,4'-DDT	µg/L	0.00059	0.0012	c and f
4,4'-DDT	lbs/day	0.0000002	0.0000005	b
Total PCBs	µg/L	0.00017	0.0003	c, f and g
Total PCBs	lbs/day	0.00000006	0.0000001	b
Heptachlor Epoxide	µg/L	0.00011	0.00022	
Heptachlor Epoxide	lbs/day	0.00000004	0.00000008	b
Benzo(a)anthracene	µg/L	0.049	0.1	c and f
Benzo(a)anthracene	lbs/day	0.00002	0.00004	b
Benzo(a)pyrene	µg/L	0.049	0.1	c and f
Benzo(a)pyrene	lbs/day	0.00002	0.00004	b
Chrysene	µg/L	0.049	0.1	c and f
Chrysene	lbs/day	0.00002	0.00004	b
Pyrene	µg/L	11000	22068	c and f
Pyrene	lbs/day	4.13	8.25	b

Footnotes for Table 5

- a. The effluent limitations for pH are 6.5 as an Instantaneous Minimum and 8.5 as an Instantaneous Maximum.
- b. The mass (lbs/day) limitations are based on a maximum flow of 0.045 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- c. During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, copper, lead, zinc, chlordane, dieldrin, 4,4'-DDT, total PCB's, benzo(a)pyrene, benzo(a)anthracene, pyrene or chrysene, implementation of the effluent sediment monitoring program is required for these pollutants. The effluent sediment monitoring shall begin during the next regular monitoring event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment waste load allocations in Table 7 of this Order, demonstrates attainment with the applicable sediment allocation and additional sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the final 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 sediment monitoring results is at or below the final sediment allocation.

- d. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20°F.
- e. The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”. The MDEL is exceeded when a toxicity test results in a “Fail,” and the percent effect is greater than or equal to 0.50.
- f. Samples analyzed for chlordane, 4,4'-DDT, dieldrin, PCB total, benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene must be unfiltered samples.
- g. Total PCBs (polychlorinated biphenyls) 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.

End of Footnotes for Table 5

4.1.2. Final Effluent Limitations for Process Wastewater Commingled with Stormwater and Boiler Blowdown – Discharge Points 003 and 004.

The discharge of refinery process wastewater commingled with stormwater and boiler blowdown shall maintain compliance with the following effluent limitations at Discharge Points 003 and 004, with compliance measured at Monitoring Location EFF-003 and EFF-004, as described in the attached MRP (Attachment E):

Table 6. Final Effluent Limitations for Process Wastewater Commingled with Stormwater and Boiler Blowdown - Discharge Points 003 and 004

Parameter	Units	Average Monthly	Maximum Daily	Notes
pH	standard units	---	6.5 to 8.5	a
BOD	mg/L	89	164	
BOD	lbs/day	3,259	6,025	b
Oil and Grease	mg/L	29	53	
Oil and Grease	lbs/day	1,047	1,955	b
TSS	mg/L	74	116	c
TSS	lbs/day	2,701	4,249	b
Ammonia as N	mg/L	41	89	
Ammonia as N	lbs/day	1,507	3,272	b
Chemical Oxygen Demand (COD)	mg/L	539	1,045	
COD	lbs/day	19,766	38,349	d
Residual Chlorine	mg/L	---	0.1	
Residual Chlorine	lbs/day	---	3.7	b
MBAS	mg/L	---	0.5	
MBAS	lbs/day	---	18	b
Chromium, Total	µg/L	488	1,386	

Parameter	Units	Average Monthly	Maximum Daily	Notes
Chromium, Total	lbs/day	18	51	b
Phenols (4AAP)	µg/L	403	1,182	
Phenols (4AAP)	lbs/day	15	43	b
Sulfide	µg/L	378	856	
Sulfide	lbs/day	14	31.4	b
Settleable Solids	ml/L	0.1	0.3	
Temperature	°F	---	86	e
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	f
Cadmium, TR	µg/L	7.7	15.4	c
Cadmium, TR	lbs/day	0.3	0.6	d
Chromium (VI)	µg/L	46	104	
Chromium (VI)	lbs/day	1.7	3.8	d
Copper, TR	µg/L	3.1	6.1	c
Copper, TR	lbs/day	0.1	0.24	d
Lead, TR	µg/L	7	14	c
Lead, TR	lbs/day	0.25	0.5	d
Selenium, TR	µg/L	58.3	117	
Selenium, TR	lbs/day	2.2	4.3	d
Zinc, TR	µg/L	70	141	c
Zinc, TR	lbs/day	2.6	5.2	d
Cyanide	µg/L	0.5	1.0	
Cyanide	lbs/day	0.02	0.04	d
1,1-Dichloroethylene	µg/L	3.2	6	
1,1-Dichloroethylene	lbs/day	0.1	0.2	d
Pentachlorophenol	µg/L	6.5	13	
Pentachlorophenol	lbs/day	0.2	0.5	d
Hexachlorobenzene	µg/L	0.0007	0.0015	
Hexachlorobenzene	lbs/day	0.00003	0.00006	d
Aldrin	µg/L	0.00014	0.0003	d and f
Aldrin	lbs/day	0.000005	0.00001	d
Chlordane	µg/L	0.00059	0.001	g
Chlordane	lbs/day	0.00002	0.00004	d
Dieldrin	µg/L	0.00014	0.0003	g
Dieldrin	lbs/day	0.000005	0.00001	d
4,4'-DDT	µg/L	0.00059	0.001	c and g

Parameter	Units	Average Monthly	Maximum Daily	Notes
4,4'-DDT	lbs/day	0.00002	0.00004	d
Total PCBs	µg/L	0.00017	0.0003	c, g, and h
Total PCBs	lbs/day	0.000006	0.00001	d
alpha-BHC	µg/L	0.013	0.026	d
alpha-BHC	lbs/day	0.0005	0.001	d
beta-BHC	µg/L	0.05	0.09	d
beta-BHC	lbs/day	0.0017	0.003	d
gamma-BHC	µg/L	0.06	0.13	d
gamma-BHC	lbs/day	0.002	0.005	d
Benzo(a)anthracene	µg/L	0.049	0.1	c and g
Benzo(a)anthracene	lbs/day	0.002	0.004	d
Benzo(a)pyrene	µg/L	0.049	0.1	c and g
Benzo(a)pyrene	lbs/day	0.002	0.004	d
Chrysene	µg/L	0.049	0.1	c and g
Chrysene	lbs/day	0.002	0.004	d
Pyrene	µg/L	11000	22,068	c and g
Pyrene	lbs/day	402	806	d

Footnotes for Table 6

- a. The effluent limitations for pH are 6.5 as an Instantaneous Minimum and 8.5 as an Instantaneous Maximum.
- b. ELG mass-based effluent limitations based upon a refinery production of 300,000 bbls and discharge flow volumes as described in Section 4.2.2. of the Fact Sheet.
- c. During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit for cadmium, copper, lead, zinc, chlordane, dieldrin, 4,4'-DDT, total PCB's, benzo(a)pyrene, benzo(a)anthracene, pyrene or chrysene, implementation of the effluent sediment monitoring program is required for these pollutants. The effluent sediment monitoring shall begin during the next regular monitoring event following the effluent exceedance. An effluent sediment monitoring result at or below the final concentration-based sediment waste load allocations in Table 7 of this Order, demonstrates attainment with the applicable sediment allocation and additional sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the final 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 sediment monitoring results is at or below the final sediment allocation.
- d. Non-ELG mass-based effluent limitations based on a maximum discharge of 4.4 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- e. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20°F.

- f. The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”. The MDEL is exceeded when a toxicity test results in a “Fail,” and the percent effect is greater than or equal to 0.50.
- g. Samples analyzed for chlordane, 4,4'-DDT, dieldrin, PCB total, benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene must be unfiltered samples.
- h. Total PCBs (polychlorinated biphenyls) 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.

End of Footnotes for Table 6

4.1.3 Final Concentration-Based Sediment Waste Load Allocations – Discharge Points 001, 002, 003, 004 and 005.

The following concentration-based sediment waste load allocations (WLAs) for cadmium and the bioaccumulative compounds chlordane and dieldrin are associated with Dominguez Channel Estuary in the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Harbor Toxics TMDL). These WLAs are applicable to low volume wastes and process wastewater comingled with stormwater and boiler blowdown. The Discharger shall maintain compliance with the following effluent sediment limitations at Discharge Points 001, 002, 003, 004 and 005 as described in the attached MRP (Attachment E). Effluent sediment monitoring is only required when triggered by an exceedance in both a TSS effluent limit, and a CTR or TMDL-based effluent limit for cadmium, copper, lead, zinc, chlordane, dieldrin, 4,4'-DDT, total PCBs, benzo(a)pyrene, benzo(a)anthracene, pyrene or chrysene as listed in Tables 4 or 5 of this Order.

Table 7. Final Concentration-Based Sediment Waste Load Allocations – Discharge Points 001, 002, 003, 004 and 005

Pollutant	Sediment, Final Concentration-Based Allocations	Units
Cadmium, TR	1.2	mg/kg dry sediment
Chlordane	0.5	µg/kg dry sediment
Dieldrin	0.02	µg/kg dry sediment

Compliance with the final concentration-based sediment allocation for cadmium (by any of the first three means) and chlordane and dieldrin (by any of the four means) may be demonstrated by:

1. Final sediment allocation of cadmium (1.2 mg/kg), chlordane (0.5 mg/kg) and dieldrin (0.02 mg/kg) is met in the effluent. The Discharger may collect sufficient effluent sample volume to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses. The analytical result of the effluent sediment can be used for the direct comparison with the sediment allocations for cadmium, chlordane, and dieldrin.
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 Provisions of the Water Quality Control Plan for Enclosed Bays and Estuaries of California (Sediment Quality Provisions) is met.

3. Sediment numeric target of 1.2 mg/kg for cadmium, 0.5 mg/kg for chlordane, and 0.02 mg/kg dieldrin is met in bed sediments over a 3-year averaging period.
4. Fish tissue target of 5.6 and 0.46 µg/kg wet weight (µg/kg ww) fish tissue for chlordane and dieldrin, respectively, is met in species resident to the TMDL waterbodies. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Sediment Quality Provisions, as amended to address contaminants in resident finfish and wildlife.

4.1.4 Interim Effluent Limitations – Not Applicable

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications – Not Applicable

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

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

- 5.1.1. The pH of bays or estuaries to be depressed below 6.5 or raised above 8.5 as a result of waste discharges. 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.
- 5.1.2. No discharge shall cause the surface water temperature to be raised more than 4°F above the natural temperature of the receiving waters at any time or place. Nor shall elevated temperature waste discharges either individually or combined with other discharges create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.
- 5.1.3. The Enterococcus concentration shall not exceed a six-week rolling geometric mean of 30 colony forming units (CFU) or most probable number (MPN) per 100 milliliter (mL), calculated weekly, with a statistical threshold value (STV) of 110 CFU or MPN per 100 mL, as a result of wastes discharged. The STV shall not be exceeded by more than 10 percent of the sample collected in a calendar month.
- 5.1.4. The mean annual dissolved oxygen concentration shall not fall below 7.0 mg/L. No single determination of dissolved oxygen shall be less than 5.0 mg/L except when natural conditions cause lesser concentrations.
- 5.1.5. Total ammonia (as N) concentrations shall not exceed the four-day average concentration of unionized ammonia of 0.035 mg/L and the one-hour average concentration of 0.233 mg/L.
- 5.1.6. The wastes discharged shall not result in visible floating particulates including deposited macroscopic particulate matter deposited macroscopic particulate matter, foams, or oil and grease in the receiving waters.

- 5.1.7. 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%.
- 5.1.8. Discharges shall not contain 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.
- 5.1.9. Waters shall not contain suspended or settleable materials, chemical substances, or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
- 5.1.10. Waters shall not contain 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.
- 5.1.11. Toxic pollutants shall not be present at levels that will cause accumulation of bottom deposits or aquatic growths.
- 5.1.12. Waters shall not contain biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
- 5.1.13. Waters shall be free of substances that result in increases of BOD that adversely affect beneficial uses.
- 5.1.14. Waters shall not contain taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources
- 5.1.15. Waters shall not cause alteration of turbidity, or apparent color beyond present natural background levels.
- 5.1.16. Waters shall not cause damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.
- 5.1.17. Waters shall not cause the degradation of surface water communities and populations including vertebrate, invertebrate, and plant species
- 5.1.18. The wastes shall not cause problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests
- 5.1.19. The wastes shall not cause the creation of nuisance conditions, or adversely affect beneficial uses of the receiving water.

5.2. Groundwater Limitations – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

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

- 6.1.2. The Discharger shall comply with the following provisions. If there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
- a. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of wastewater and stormwater to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal stormwater management programs developed to comply with NPDES permits issued by the Los Angeles Water Board to local agencies.
 - b. 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.
 - c. 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.
 - d. 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.
 - e. Collection, treatment, and disposal systems shall be operated in a manner that precludes or impedes public contact with wastewater.
 - f. A copy of these waste discharge requirements shall be maintained at the discharge facility so as to be available at all times to operating personnel.
 - g. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Los Angeles Water Board.
 - h. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not staffed at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
 - i. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 311 of the CWA, related to oil and hazardous substances liability.
 - j. The Discharger shall file with the Los Angeles Water Board a report of waste discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.

- k. The Discharger shall make diligent, protective efforts to reduce Facility infrastructure vulnerability to current and future impacts resulting from climate change, including but not limited to extreme wet weather events, flooding, storm surges, wildfires, and projected sea level rise when the facility is located near the ocean or discharges to the ocean.
- l. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify the Los Angeles 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 Los Angeles Water Board, 30 days prior to taking effect.
- m. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to 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.
- n. 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.
- o. CWC section 13385(h)(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars (\$3,000) for each serious violation. Pursuant to CWC section 13385(h)(2), a “serious violation” is defined as any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant by 20 percent or more, or for a Group I pollutant by 40 percent or more. Appendix A of 40 CFR section 123.45 specifies the Group I and II pollutants. Pursuant to CWC section 13385.1(a)(1), a “serious violation” is also defined as “a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations.”
- p. CWC section 13385(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars (\$3,000) for each violation whenever a person violates a waste discharge requirement effluent limitation in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three non-serious violations within that time period.

- q. Pursuant to CWC section 13385.1(d), for the purposes of section 13385.1 and subdivisions (h), (i), and (j) of section 13385, “effluent limitation” means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim and may be expressed as a prohibition. An effluent limitation, for these purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.
- r. CWC section 13387(e) 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, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order shall be punished by a fine of not more than twenty-five thousand dollars (\$25,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. For a subsequent conviction, such a person shall be punished by a fine of not more than twenty-five thousand dollars (\$25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.
- 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 Manager of the Watershed Regulatory Section at the Los Angeles Water Board by telephone at (213) 576-6616 or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Los Angeles Water Board within five days, unless the Los Angeles 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. The written notification shall also be submitted via email with reference to NPDES No. 0000680, CI-5424 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- t. 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.
- u. Violation of any of the provisions of this Order may subject the violator to any of the civil liability or penalties described herein, or any combination thereof, at the discretion of the prosecuting authority, except that only one kind of liability or penalty may be applied for each kind of violation.

6.2. Monitoring and Reporting Program (MRP) Requirements

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

6.3. Special Provisions

6.3.1. Reopener Provisions

- a. This Order may be modified, revoked and reissued, or terminated 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 by failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.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. 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 testing, monitoring of 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.
- c. This Order may be modified, in accordance with the provisions set forth in title 40 of the Code of Federal Regulations (40 CFR) parts 122 and 124 to include requirements for the implementation of a watershed protection management approach.
- d. The Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have reasonable potential to cause, or contribute to adverse impacts on beneficial uses or degradation of water quality of the receiving waters.
- e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 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, 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.
- f. This Order may be modified, in accordance with the provisions set forth in 40 CFR parts 122 to 124, to include new minimum levels (MLs).
- g. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Los Angeles

Water Board may institute proceedings under these regulations to modify or revoke and reissue the Orders to conform to the toxic effluent standard or prohibition.

- h. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments, thereto, the Los Angeles Water Board will revise and modify this Order in accordance with such standards.
- i. This Order may be reopened and modified to revise effluent limitations as a result of future additions or amendments to a statewide water quality control plan or the Los Angeles Region's Basin Plan or the adoption or revision of a TMDL for the Dominguez Channel Estuary.
- j. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to incorporate all elements contained in the State Water Board adopted Toxicity Plan promptly after U.S. EPA-approval of such Plan to be consistent with the State Water Board precedential decisions, new policies, a new state-wide plan, new laws, or new regulations.
- k. This Order will be reopened and modified to the extent necessary, to be consistent with new policies, new state-wide plans, new laws, or new regulations.

6.3.2. **Special Studies, Technical Papers and Additional Monitoring Requirements**

a. **Updated Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan**

The Discharger shall submit to the Los Angeles Water Board an updated Initial Investigation TRE workplan **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 5.6 of the Monitoring and Reporting Program (Attachment E) for an overview of Toxicity Reduction Evaluation (TRE) requirements.

b. **Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary**

Consistent with the amendment to the Basin Plan, incorporating the Harbor Toxics TMDL, the Discharger is an "irregular discharger" and is responsible for compliance with the concentration based Waste Load Allocations (WLAs) in the TMDL. In the event that the discharge from the Facility exceeds the TSS effluent limitation and either the copper, lead or zinc effluent limitations, then the Discharger is also responsible for implementing the 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 the Water Quality Control Plan, Los Angeles Region (Basin Plan) Chapter 7, Section 7-40. The Harbor Toxics TMDL requires that the Monitoring Plan and Quality Assurance Project Plan (QAPP) shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. The Discharger

submitted a site-specific Monitoring Plan and QAPP on August 21, 2018 for review, which is pending approval.

The Discharger shall implement the site-specific Monitoring Plan, when approved, with QAPP when a discharge from the Facility occurs. If any changes are made to the site-specific Monitoring Plan and QAPP, the Discharger shall notify the Los Angeles Water Board within 90 days of the modification of the Plans and resubmit the Plans to the Los Angeles Water Board for EO approval. If the Discharger decides to join a group already formed, the Discharger shall notify the Los Angeles 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. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring. The Discharger shall submit the annual monitoring report to the Los Angeles Water Board by the specified date in the Monitoring Plan. The annual monitoring report shall indicate compliance and non-compliance with effluent limitations in Tables 5 and 6 that implement applicable waste load and/or load allocations. At a minimum, monitoring shall continue to be conducted at the locations and for the constituents listed in the sections below for the water column, total suspended solids, and bed sediments. Table 8 below provides the summary of established monitoring stations and their parameters.

Table 8. Monitoring Stations

Station ID	Station	Station Location	Parameters	Notes
001	Monitoring Station 001	33.821564° -118.241144°	Water Column: Copper, Lead, Zinc, PCBs, DDT, temperature, dissolved oxygen, pH, salinity, TSS and receiving water flow	a
002	Monitoring Station 002	33.819489° -118.240617°	Water Column: Copper, Lead, Zinc, PCBs, DDT, temperature, dissolved oxygen, pH, salinity, TSS and receiving water flow Sediment: Sediment chemistry, sediment toxicity, benthic community effect	a and b
003	Monitoring Station 003	33.817683° -118.240208°	Water Column: Copper, Lead, Zinc, PCBs, DDT, temperature, dissolved oxygen, pH, salinity, TSS and receiving water flow	a
004	Monitoring Station 004	33.817444° -118.240094°	Water Column: Copper, Lead, Zinc, PCBs, DDT, temperature, dissolved oxygen, pH, salinity, TSS and receiving water flow	a
005	Monitoring Station 005	33.81605° -118.234561°	Water Column: Copper, Lead, Zinc, PCBs, DDT, temperature, dissolved oxygen, pH, salinity, TSS and receiving water flow Sediment: Sediment chemistry, sediment toxicity, benthic community effect	a and b

Station ID	Station	Station Location	Parameters	Notes
006	Monitoring Station 006	33.77804° -118.240003°	Fish Tissue: chlordane, dieldrin, toxaphene, DDT, and PCBs	c

Footnotes for Table 8

- a. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment.
- b. Sediment chemistry samples shall be collected at Station 002 and Station 005. Sediment chemistry samples shall be analyzed for the full chemical suite as included in Attachment A-7 of the Water Quality Control Plan for Enclosed Bays and Estuaries (Sediment Quality Provisions).
- c. The fish tissue sampling location is subject to change depending on receiving water conditions. If no fish are available within the Dominguez Channel Estuary during a sampling event, the monitoring station may be moved downstream within close proximity to the Estuary.

End of Footnotes for Table 8

The Compliance Monitoring Program includes the following components:

- i. **Water Column Monitoring.** At the Station IDs 001, 002, 003, 004 and 005 in Table 8, parameters in the water column shall continue to be monitored three times per year, during two wet weather events and one dry weather event. TSS shall be collected at several depths during wet weather events. Wet weather monitoring must include the first large storm event of the wet season. In addition, general water chemistry (temperature, dissolved oxygen, pH, and salinity) and receiving water flow shall be monitored at each sampling event.
- ii. **Sediment Monitoring.** Sediment samples shall be collected in the estuary. Sediment quality objective evaluation as detailed in the Sediment Quality Provisions (sediment triad sampling) shall continue to be performed every five years, preferably in coordination with the Biological Baseline and Bight regional monitoring programs. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in SQO Part 1 shall be conducted and evaluated. If moderate toxicity as defined in the SQO Part 1 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 to be approved by the Executive Officer. The sampling design shall be in compliance with the Sediment Quality Provisions.
- 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 shall continue to be implemented 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 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. The QAPP shall be updated if any changes are made to this information. All samples shall be collected in accordance with Surface Water Ambient Monitoring Program (SWAMP) protocols.

6.3.3. **Best Management Practices and Pollution Prevention**

a. **Stormwater Pollution Prevention Plan (SWPPP)**

Within 90 days of the effective date of this Order, the Discharger is required to update and submit the SWPPP for the Facility using Attachment G of this Order as guidance. An updated SWPPP that describes site-specific management practices for minimizing contamination of stormwater runoff and for preventing contaminated stormwater runoff from being discharged directly to waters of the State. The SWPPP shall accurately reflect current facility conditions and incorporate changes in discharge practices.

b. **Best Management Practice Plan (BMPP)**

Within 90 days of the effective date of this Order, the Discharger is required to update and submit the BMPP for the Facility using Attachment G of this Order as guidance. An updated 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 from being discharged to waters of the State. Further, the Discharger shall ensure that the stormwater discharges from the Facility would neither cause, nor contribute to the exceedance of water quality standards and objectives, nor create conditions of 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 discharge to surface waters

c. **Spill Contingency Plan (SCP)**

Within 90 days of the effective date of this Order, the Discharger is required to update and submit the SCP for the Facility, that 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. The SCP may be substituted with an updated version 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 stormwater runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of stormwater. The plans shall be reviewed annually and at the same time.

The Discharger shall implement the SWPPP, BMPP, and SCP (or SPCC Plan) within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Los Angeles Water Board, whichever comes first. The plans shall be reviewed annually and at the same time. Updated information shall be submitted to the Los Angeles Water Board within 30 days of revisions.

6.3.4. 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.

a. Climate Change Effects Vulnerability Assessment and Mitigation Plan.

The Discharger shall consider the impacts of climate change as they affect the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the facility's operation, water supplies, and water quality, and beneficial uses. For facilities that discharge to the ocean including desalination plants, the Climate Change Plan shall also include the impacts from sea level rise. The Climate Change Plan is due 12 months after the effective date of this Order.

6.3.5. Other Special Provisions – Not Applicable

6.3.6. Compliance Schedules – Not Applicable

7. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section 4 of this Order will be determined as specified below:

7.1. General

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

7.2. Multiple Sample Data

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall

compute the median in place of the arithmetic mean in accordance with the following procedure:

- 7.2.1. 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.
- 7.2.2. 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.

7.3. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 7.2 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 for the purpose of calculating mandatory minimum penalties, though the Discharger may 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) in cases where discretionary administrative civil liabilities are appropriate. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger may be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to the AMEL.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of 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.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

7.4. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

7.5. 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 potential 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).

7.6. 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 potential 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).

7.7. 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 non-compliance 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.

7.8. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1. The null hypothesis (H_0) for the TST statistical approach is: Mean discharge In-stream Waste Concentration (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:

$$((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100.$$

This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)).

The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail" and the "Percent Effect" is ≥ 0.50 .

The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in "Fail." The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (H_0) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995)*. The Los Angeles Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the U.S. EPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the Los Angeles Water Board (40 CFR section 122.41(h)). The Los Angeles Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, the U.S. EPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program (ELAP) as needed. The Board may consider the results of any TIE/TRE studies in an enforcement action.

7.9. Mass and Concentration Limitations

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

7.10. Compliance with Single Constituent Effluent Limitations

Permittees may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section B “Multiple Sample Data Reduction” above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

7.11. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB’s) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

7.12. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$
$$\text{Mass emission rate (kg/day)} = \frac{3.79}{N} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. 'Qi' and 'Ci' are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be taken in any calendar day. If a composite sample is taken, 'Ci' is the concentration measured in the composite sample and 'Qi' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$\text{Daily concentration} = \frac{1}{Q_t} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of component waste streams. 'Qi' and 'Ci' are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Qt' is the total flow rate of the combined waste streams.

7.13. Bacterial Standards and Analysis

The geometric mean used for determining compliance with bacterial standards is calculated with the following equation: 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. Only the geometric mean values shall be applied based on a statistically sufficient number of samples, which is generally not less than five samples distributed

over a six-week period. However, if a statistically sufficient number of samples is not available to calculate the geometric mean, then attainment of the water quality standard shall be determined based only on the STV.

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 methods used for each analysis shall be reported with the results of the analyses.

Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved by U.S. EPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or U.S. EPA.

Detection methods used for enterococcus shall be those presented in Table 1A of 40 CFR part 136 or in the U.S. EPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer and/or U.S. EPA to be appropriate.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

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

Biosolids

Sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulators as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. Part 503.

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.

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 wasteload 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.

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 $n/2+1$).

Median Monthly Effluent Limitation (MMEL)

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

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

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.

PAHs (polynuclear aromatic hydrocarbons)

The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) as Aroclors

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.

PCBs as Congeners

The sum of the following 41 individually quantified PCB congeners or mixtures of isomers of a single congeners in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

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 Los Angeles 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 Los Angeles 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 Los Angeles 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.

Source of Drinking Water

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

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows: Standard Deviation (σ) = $\sqrt{\sum(x-\mu)^2/(n-1)}$, where: x is the observed value; μ is the arithmetic mean of the observed values; and n is the number of samples.

Statistical Threshold Value (STV)

The STV for the bacteria water quality objectives is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population.

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

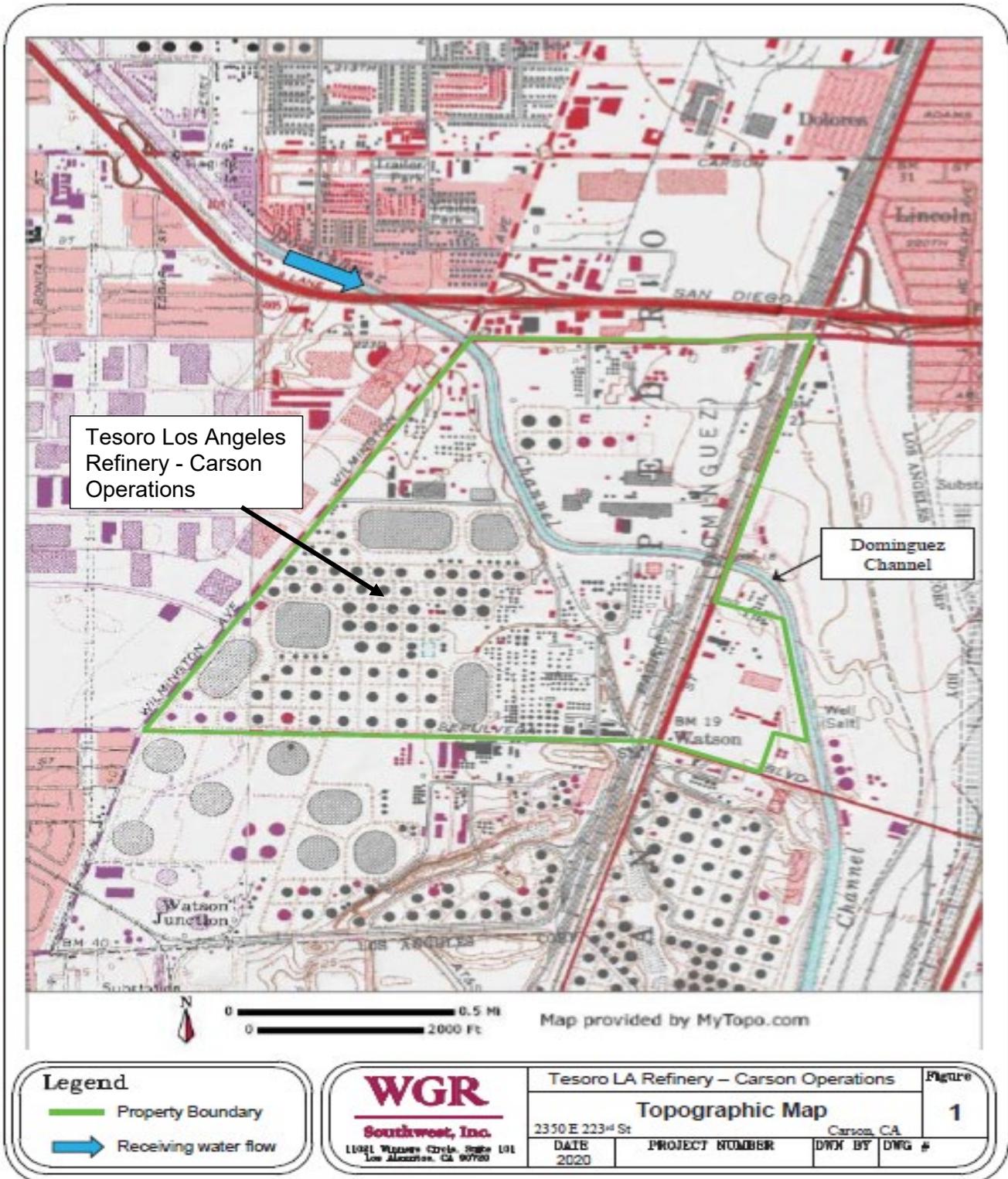
All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural material.

ACRONYMS AND ABBREVIATIONS

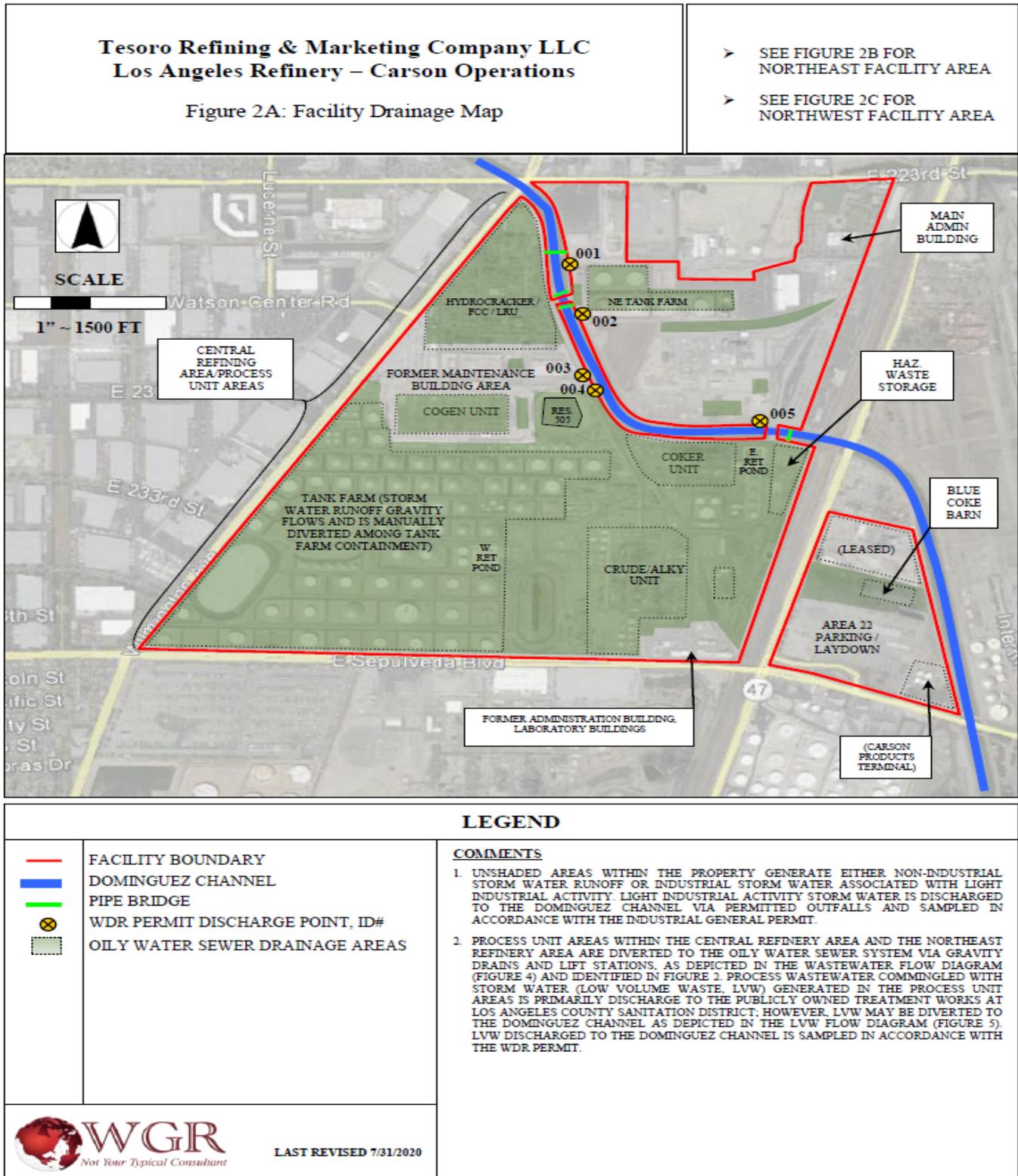
AMEL	Average Monthly Effluent Limit
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	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
CFU	Colony Forming Units
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	Tesoro Refining and 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	Tesoro Los Angeles Refinery – Carson Operations
gpd	gallons per day
IC	Inhibition Coefficient
IC15	Concentration at which the organism is 15% inhibited
IC25	Concentration at which the organism is 25% inhibited
IC40	Concentration at which the organism is 40% inhibited
IC50	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LACSD	Los Angeles County Sanitation Districts
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MMEL	Median Monthly Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MPN	Most Probable Number

MRP	Monitoring and Reporting Program
ND	Not Detected
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
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	Water Quality Control Plan for Ocean Waters of California
Los Angeles Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
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	Stormwater Pollution Prevention Plan
TAC	Test Acceptability Criteria
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
TST	Test of Significant Toxicity
TSS	Total Suspended Solid
TUc	Chronic Toxicity Unit
U.S.EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Wasteload Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

ATTACHMENT B1 – TOPOGRAPHIC MAP



ATTACHMENT B2 – FACILITY DRAINAGE MAP



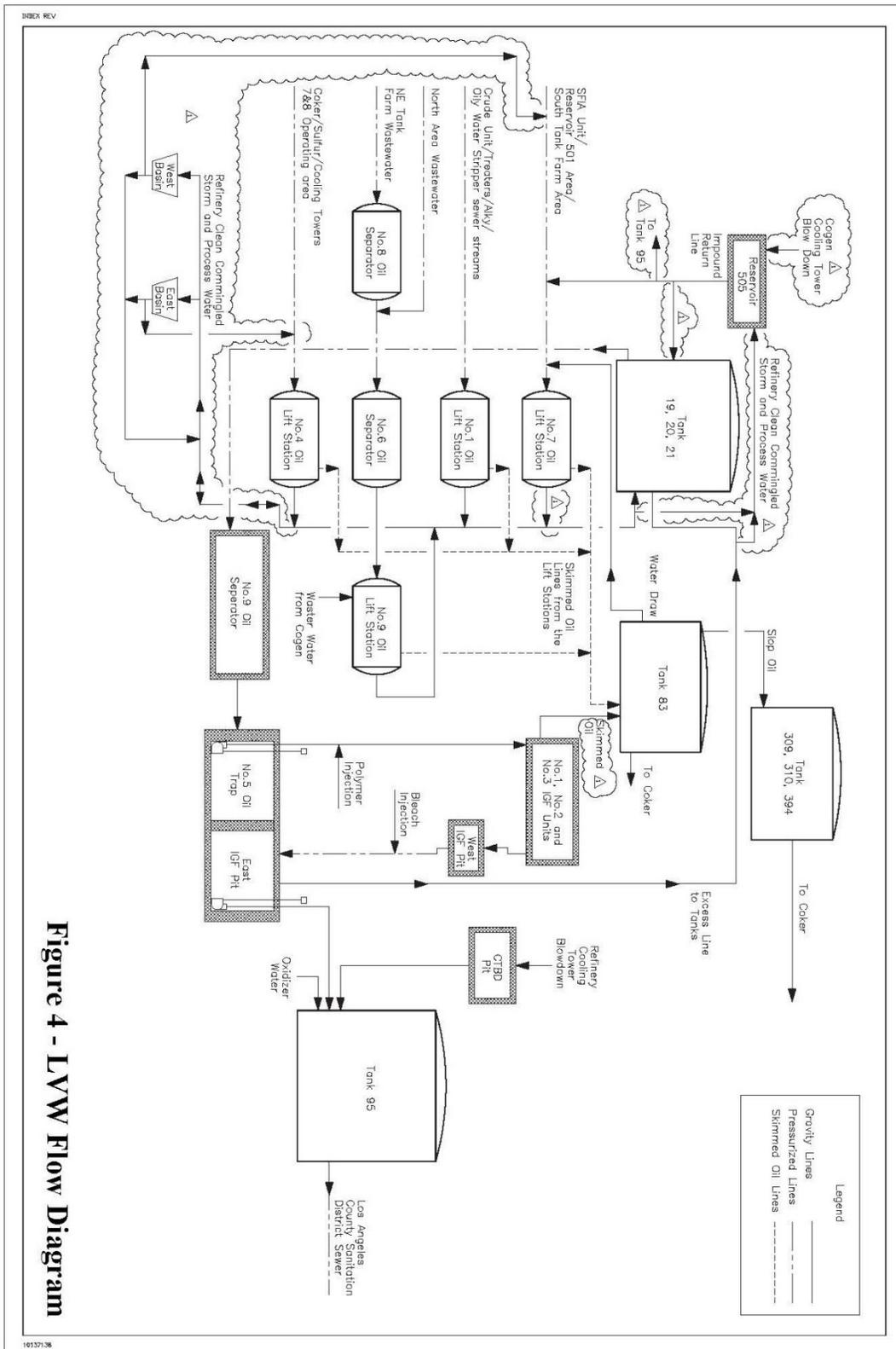
ATTACHMENT B3 – EFFLUENT OUTFALLS AND RECEIVING WATER SAMPLING LOCATION



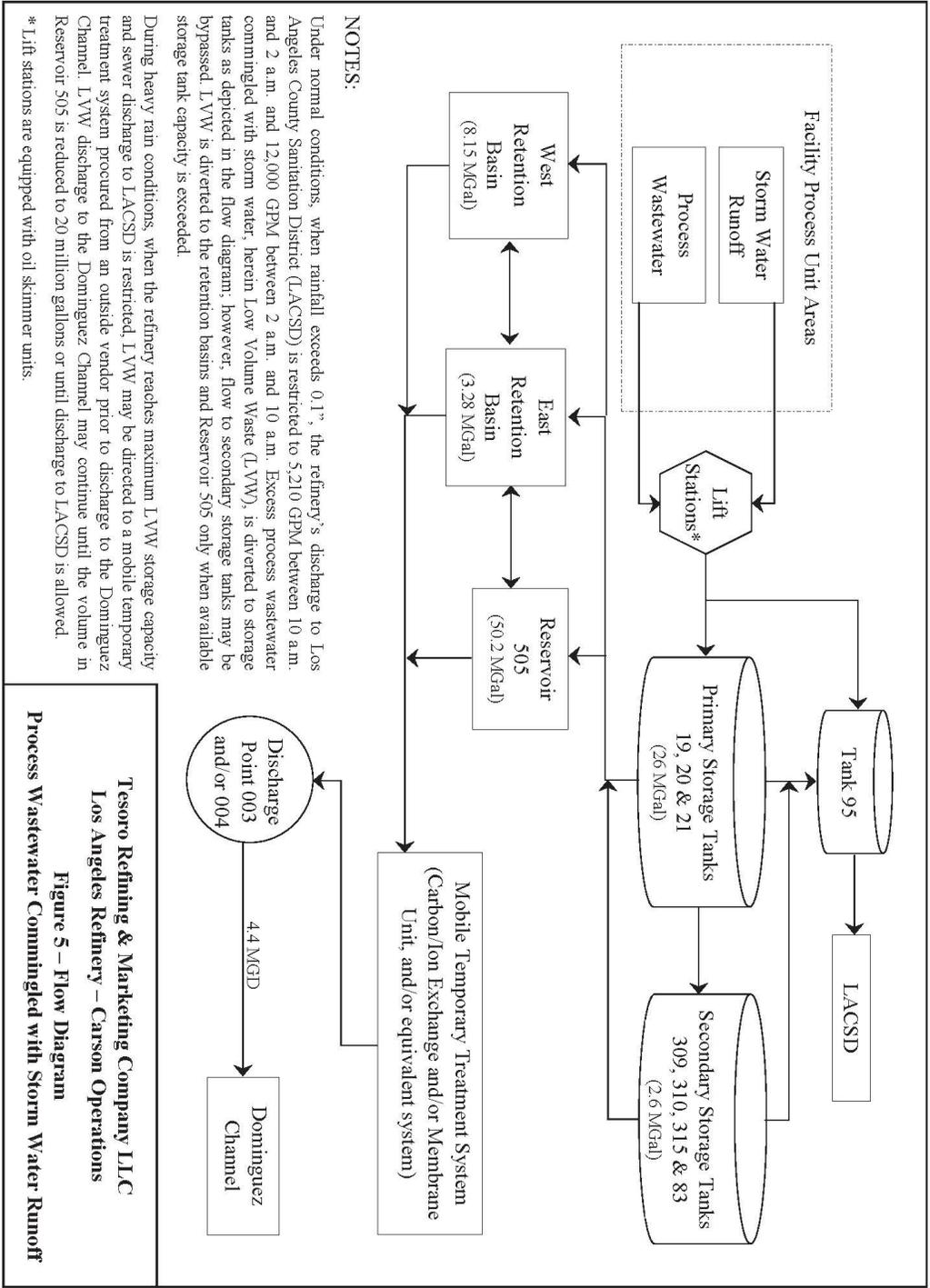
- Receiving Water Sampling Location
- Storm Water Discharge Point

Tesoro Los Angeles Refinery - Carson Operations
Effluent Outfalls and Receiving Water Sampling Locations

ATTACHMENT C1 – LOW VOLUME WASTES FLOW SCHEMATIC



**ATTACHMENT C2 – PROCESS WASTEWATER COMMINGLED WITH STORMWATER
 RUNOFF FLOW SCHEMATIC**



ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

- 1.1.1. The Discharger must comply with all 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. (Title 40 of the Code of Federal Regulations (40 CFR) § 122.41(a); California Water Code (CWC), §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
- 1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

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

1.3. Duty to Mitigate

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

1.4. Proper Operation and Maintenance

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

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)
- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow the Los Angeles 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)(B); 40 CFR § 122.41(i); CWC, §§ 13267, 13383):

- 1.6.1. 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)(B)(i); 40 CFR § 122.41(i)(1); CWC, §§ 13267, 13383);
- 1.6.2. 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)(B)(ii); 40 CFR § 122.41(i)(2); CWC, §§ 13267, 13383);
- 1.6.3. 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)(B)(ii); 40 CFR § 122.41(i)(3); CWC, §§ 13267, 13383); and
- 1.6.4. 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)(B); 40 CFR § 122.41(i)(4); CWC, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

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

1.7.2. 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 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

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

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

- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Los Angeles Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)
- 1.7.4. The Los Angeles Water Board may approve an anticipated bypass, after considering its adverse effects, if the Los Angeles Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. 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. As of December 21, 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). As of December 21, 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

1.8. Upset

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

- 1.8.1. 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 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)
- 1.8.2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly

signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

- a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
- b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

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

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

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

2.2. Duty to Reapply

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

2.3. Transfers

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

3. STANDARD PROVISIONS – MONITORING

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

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or

pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

- 3.2.1. 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
- 3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

4.1. 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 Los Angeles Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

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

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

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

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the Los Angeles Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Los Angeles 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 Los Angeles Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); CWC, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. All applications, reports, or information submitted to the Los Angeles Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)

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

5.2.3. All reports required by this Order and other information requested by the Los Angeles Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting 5.2.2 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 5.2.2 above (40 CFR § 122.22(b)(1));
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and
- c. The written authorization is submitted to the Los Angeles Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 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 5.2.3 above must be submitted to the Los Angeles Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)

- 5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above shall make the following certification:

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

- 5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)
- 5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Los Angeles Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)
- 5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Los Angeles Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)
- 5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

5.4. Compliance Schedules

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

5.5. Twenty-Four Hour Reporting

5.5.1. 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, 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10. The reports shall comply with 40 CFR part 3, 40 C.F.R. section 122.22, and 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

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

5.5.3. The Los Angeles 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 CFR § 122.41(l)(6)(ii)(B).)

5.6. Planned Changes

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

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

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

5.7. Anticipated Noncompliance

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

5.8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 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 5.5 and the applicable required data in appendix A to 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

5.9. 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 Los Angeles Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

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

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Los Angeles 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.

- 6.2. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, 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 CWA, 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 CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one 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 years, or both. Any person who *knowingly* violates 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 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 6 years, or both. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, 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 (40 CFR § 122.41(a)(2); CWC section 13385 and 13387).
- 6.3. Any person may be assessed an administrative penalty by the Administrator of U.S. EPA, the Los Angeles Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. 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 CFR § 122.41(a)(3)).
- 6.4. 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 permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two 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 four years, or both. (40 CFR § 122.41(j)(5)).

- 6.5. 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 permit, including monitoring reports or reports of compliance or non-compliance 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 CFR § 122.41(k)(2)).

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Los Angeles Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

- 7.1.1. 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. section 122.42(a)(1)):
- a. 100 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. section 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 (mg/L) for antimony (40 C.F.R. section 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. section 122.42(a)(1)(iii)); or
 - d. The level established by the Los Angeles Water Board in accordance with section 122.44(f). (40 C.F.R. section 122.42(a)(1)(iv).)
- 7.1.2. 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. section 122.42(a)(2)):
- a. 500 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. section 122.42(a)(2)(i));
 - b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. section 122.42(a)(2)(ii));
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. section 122.42(a)(2)(iii)); or
 - d. The level established by the Los Angeles Water Board in accordance with section 122.44(f). (40 C.F.R. section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (CI NO. 5424)
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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 5424

Section 308(a) of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) section 13383 also authorizes the Los Angeles Water Board to establish monitoring, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

- 1.1. Effluent sampling stations shall be established for the points of discharge (Discharge Points 001, 002, 003, 004, and 005) and shall be located where representative samples of effluent can be obtained.
- 1.2. Effluent samples shall be taken downstream of any treatment works and prior to mixing with the receiving waters.
- 1.3. The Los Angeles Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- 1.4. Pollutants shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5 (revised August 28, 2017); or where no methods are specified for a given pollutant, by methods approved by this Los Angeles Water Board or the State Water Resources Control Board (State Water Board).
- 1.5. **Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board, Division of Drinking Water (DDW) 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.
- 1.6. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR 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 Los Angeles 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.
- 1.7. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to ensure accuracy of measurements or shall ensure that both equipment activities will be conducted.
- 1.8. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (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.
- 1.9. Each monitoring report must affirm in writing that *“all analyses were conducted at a laboratory certified for such analyses by the State Water Board, DDW, ELAP or*

approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP.”

- 1.10. 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:
 - 1.10.1. An actual numerical value for sample results greater than or equal to the ML; or
 - 1.10.2. “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s MDL but less than the ML; or,
 - 1.10.3. “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 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*, (State Implementation Policy or SIP), February 24, 2005, Appendix 4.

- 1.11. 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 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. If the ML value is not below the effluent limitation, 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.
- 1.12. 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 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 CFR 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 MDLs.

The Los Angeles Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Appendix 4 of the SIP to be included in the Discharger’s permit in any of the following situations:

- 1.12.1. When the pollutant under consideration is not included in Appendix 4 of the SIP;

- 1.12.2. When the Discharger and Los Angeles Water Board agree to include in the permit a test method that is more sensitive than that specified in part 136 (revised August 28, 2017);
 - 1.12.3. When the Discharger agrees to use an ML that is lower than that listed in Appendix 4 of the SIP;
 - 1.12.4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 of the SIP, and proposes an appropriate ML for their matrix; or,
 - 1.12.5. 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 Los Angeles 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.
- 1.13. Field analyses with short sample holding time such as pH, total chlorine residual, 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 CFR 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 Los Angeles 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 Los Angeles Water Board as part of the corresponding regular monitoring report.
- 1.14. 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.
- 1.15. 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 is 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.
- 1.16. For parameters that both average monthly and daily maximum 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 shall 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.

- 1.17. The Discharger shall ensure 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

- 1.18. In the event stormwater or spills in the areas permitted by this Order are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

- 1.18.1. Type of stormwater and spilled wastes and quantity of each;
- 1.18.2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
- 1.18.3. Location of the final point(s) of disposal for each type of waste.

If no stormwater or spilled wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

- 1.19. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

2. 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 (latitude and longitude information in Table E-1 is approximate for administrative purposes):

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	The effluent sampling station shall be located at Discharge Point 001: Latitude 33.821389° Longitude -118.240833°
002	EFF-002	The effluent sampling station shall be located at Discharge Point 002: Latitude 33.819444° Longitude -118.240278°

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
003	EFF-003	The effluent sampling station shall be located at Discharge Point 003: Latitude 33.817500° Longitude -118.240000°
004	EFF-004	The effluent sampling station shall be located at Discharge Point 004: Latitude 33.817222° Longitude -118.240000°
005	EFF-005	The effluent sampling station shall be located at Discharge Point 005: Latitude 33.832500° Longitude -118.234167°
---	RSW-001A, RSW-002A, RSW-003A, RSW-004A, and RSW-005A	The receiving water sampling station shall be located midstream in Dominguez Channel at a point within 50 feet from the center of the discharge point line in the opposite direction of tidal flow at the time of sampling. If sampled at slack tide, this station shall be located opposite of where the channel waters have been influenced by the discharge.
---	RSW-001B, RSW-002B, RSW-003B, RSW-004B, and RSW-005B	The receiving water sampling station shall be located midstream in Dominguez Channel at a point approximately 50 feet from the center of the discharge point line in the direction of tidal flow at the time of sampling. If sampled at slack tide, this station shall be located in the direction where the channel waters have been influenced by the discharge.
---	SED-001	The sediment sampling station shall be located at Anaheim Road.
---	SED-002	The sediment sampling station shall be located at Pacific Coast Highway.
---	SED-003	The sediment sampling station shall be located at Sepulveda Boulevard.
---	SED-004	The sediment sampling station shall be located at Alameda Street.
---	SED-005	The sediment sampling station shall be located at Wilmington Avenue.
---	SED-006	The sediment sampling station shall be located at Avalon Boulevard.
---	SED-007	The sediment sampling station shall be located at Main Street.

3. INFLUENT MONITORING REQUIREMENTS – Not Applicable

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Locations EFF-001, EFF-002, EFF-003, EFF-004, EFF-005 (Low Volume Waste)

The Discharger shall monitor discharges of low volume waste (Waste Stream 1) prior to discharge through Discharge Points 001, 002, 003, 004 and 005 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. Low Volume Waste - Monitoring Locations EFF-001, EFF-002, EFF-003, EFF-004, and EFF-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Flow, Total	MGD	Meter	Daily	a
Biochemical Oxygen Demand @20°C (BOD)	mg/L	Grab or Composite	1/Discharge Event	b, c and d
Oil and Grease	mg/L	Grab	1/Discharge Event	c and d
pH	standard unit	Grab	1/Discharge Event	c and d
Total Suspended Solids (TSS)	mg/L	Grab or Composite	1/Discharge Event	b, c, and d
Hardness (as CaCO ₃)	mg/L	Grab	1/Discharge Event	c and d
Settleable Solids	ml/L	Grab or Composite	1/Discharge Event	b, c, and d
Sulfides	mg/L	Grab	1/Discharge Event	c and d
Temperature	°F	Grab	1/Discharge Event	c and d
Turbidity	NTU	Grab or Composite	1/Discharge Event	b, c, and d
Chronic Toxicity	Pass or Fail and % Effect	Grab or Composite	1/Discharge Event	b, c, and e
Chlorine, Residual	mg/L	Grab	1/Discharge Event	c and d
Detergents (as MBAS)	mg/L	Grab	1/Discharge Event	c and d
Enterococcus	CFU or MPN/100 mL	Grab	1/Discharge Event	c and f
Total Organic Carbon	mg/L	Grab	1/Discharge Event	c and d
Total Petroleum Hydrocarbons (TPH) as Gasoline (C ₄ -C ₁₂)	µg/L	Grab	1/Discharge Event	c, d and g

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
TPH as Diesel (C ₁₃ -C ₂₂)	µg/L	Grab	1/Discharge Event	c, d and g
TPH as Waste Oil (C ₂₃ +)	µg/L	Grab	1/Discharge Event	c, d and g
Xylene	µg/L	Grab	1/Discharge Event	c and d
Cadmium, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Copper, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Lead, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Mercury, TR	µg/L	Grab or Composite	1/Discharge Event	b, d and h
Nickel, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Selenium, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Silver, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Zinc, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Cyanide	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Methylene Chloride	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Pentachlorophenol	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Bis (2-Ethylhexyl) Phthalate	µg/L	Grab	1/Discharge Event	c and d
Fluoranthene	µg/L	Grab	1/Discharge Event	c and d
Aldrin	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Chlordane	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Dieldrin	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
4,4'-DDT	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Dieldrin	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Polychlorinated Biphenyls (PCBs), Total	µg/L	Grab or Composite	1/Discharge Event	b, c, d, i and j
Benzo(a)anthracene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Benzo(a)pyrene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Chrysene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Pyrene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Heptachlor Epoxide	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Halomethanes	µg/L	Grab	1/Discharge Event	c, d and k
Tributyltin	µg/L	Grab or Composite	1/Discharge Event	b, c and d
TCDD Equivalents	µg/L	Grab or Composite	1/Year	b, l and m
Remaining Priority Pollutants	µg/L	Grab or Composite	1/Year	b, m, and n

Footnotes for Table E-2

- a. Flow shall be recorded daily during each period of discharge. Periods of no flow shall also be reported.
- b. As per 40 CFR section 122.21(g)(7)(ii), the Discharger has the option to either:
 - i. Collect a grab sample within 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 corresponding quarterly report; or
 - ii. Collect a flow-weighted composite sample for the entire duration of the discharge or for the first three hours of the discharge. The flow-weight composite sample may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of the discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes.

However, grab samples **must** be collected for the analyses of the following parameters: pH, temperature, oil and grease, bacteria (enterococcus), bis(2ethylhexyl)phthalate, and volatile and semi-volatile organics.

- c. A discharge event occurs when there is heavy rainfall and the refinery reaches the maximum Low Volume Waste capacity storage and sewer discharge to LACSD is restricted. During periods of discharge, no more than one sample per week (or 7-day period) is required for pollutants that are monitored once per discharge event. 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.
- d. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the Los Angeles Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

- e. Refer to section 5 below, Whole Effluent Toxicity Testing Requirements. Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). 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, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.
- f. Detection methods used for *Enterococcus* shall be those presented in Table 1A of 40 CFR Part 136, unless alternate methods have been approved by U.S. EPA pursuant to Part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.
- g. For TPH as Gasoline (C₄-C₁₂) use EPA Method 503.1 or 8015B. For TPH as Diesel (C₁₃-C₂₂) and TPH as Kerosene (C₂₃₊) use EPA Method 503.1 or 8015B, or 8270.
- h. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.
- i. Samples analyzed must be unfiltered samples.
- j. Total PCBs (polychlorinated biphenyls) means the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-10166, Arclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1245, Aroclor-1254, and Aroclor-1260.
- k. Halomethanes means the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).
- l. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and 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. The TCDD Equivalents are calculated as follows: Dioxin-TEQ (TCDD equivalents) = Sum of Concentration of dioxin or furan congener_x (C_x) X Toxicity Equivalency Factors (TEFs) for congener_x. The TEFs are listed in the Table below.

Toxicity Equivalency Factors

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

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
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

- m. 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 waters, the Discharger will indicate in the corresponding monitoring report, under statement of perjury, that no effluent was discharged to surface water during the reporting period.
- n. Priority Pollutants as defined in 40 CFR Part 131.

End of Footnotes for Table E-2

4.2. Monitoring Locations EFF-003 and EFF-004 (Process Wastewater Commingled with Stormwater and Boiler Blowdown)

The Discharger shall monitor the discharge of process wastewater commingled with stormwater and boiler blowdown (Waste Streams 2 and 3) through Discharge Points 003 and 004 as follows:

Table E-3. Process Wastewater Commingled with Stormwater and Boiler Blowdown - Monitoring Locations EFF-003 and EFF-004

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Flow, Total	MGD	Meter	Daily	a
BOD	mg/L	Grab or Composite	1/Discharge Event	b, c and d
Oil and Grease	mg/L	Grab	1/Discharge Event	b and c
pH	standard unit	Grab	1/Discharge Event	b and c
Total Suspended Solids (TSS)	mg/L	Grab or Composite	1/Discharge Event	b, c and d
Hardness (as CaCO3)	mg/L	Grab	1/Discharge Event	b and c
Settleable Solids	ml/L	Grab or Composite	1/Discharge Event	b, c and d
Sulfides	µg/L	Grab	1/Discharge Event	b and c

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Temperature	°F	Grab	1/Discharge Event	b and c
Turbidity	NTU	Grab or Composite	1/Discharge Event	b, c and d
Ammonia, Total (as N)	mg/L	Grab or Composite	1/Discharge Event	b, c, and d
Chemical Oxygen Demand (COD)	mg/L	Grab or Composite	1/Discharge Event	b, c, and d
Conductivity@ 25°C	µmhos/cm	Grab	1/Discharge Event	b and c
Phenols (4AAP)	µg/L	Grab	1/Discharge Event	b and c
Chronic Toxicity	Pass or Fail and Percent Effect	Grab or Composite	1/Discharge Event	d and e
Chlorine, Total Residual	mg/L	Grab	1/Discharge Event	b and c
Detergents (as MBAS)	mg/L	Grab	1/Discharge Event	b and c
<i>Enterococcus</i>	CFU or MPN/100 mL	Calculate	1/Discharge Event	b and f
Total Organic Carbon	mg/L	Grab	1/Discharge Event	b and c
Total Petroleum Hydrocarbons (TPH) as Gasoline (C ₄ -C ₁₂)	µg/L	Grab	1/Discharge Event	b and g
TPH as Diesel (C ₁₃ -C ₂₂)	µg/L	Grab	1/Discharge Event	b and g
TPH as Waste Oil (C ₂₃₊)	µg/L	Grab	1/Discharge Event	b and g
Xylene	µg/L	Grab	1/Discharge Event	b and c
Cadmium, TR	µg/L	Grab or Composite	1/Discharge Event	b, c, and d
Chromium (VI)	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Chromium, Total	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Copper, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Lead, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Mercury, TR	µg/L	Grab or Composite	1/Discharge Event	b, d and h
Nickel, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Selenium, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Silver, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Zinc, TR	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Cyanide	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Benzene	µg/L	Grab	1/Discharge Event	b and c
Carbon Tetrachloride	µg/L	Grab	1/Discharge Event	b and c
1,1-Dichloroethane	µg/L	Grab	1/Discharge Event	b and c
1,2-Dichloroethane	µg/L	Grab	1/Discharge Event	b and c
1,1-Dichloroethylene	µg/L	Grab	1/Discharge Event	b and c
Methylene Chloride	µg/L	Grab	1/Discharge Event	b and c
Bis (2-Ethylhexyl) Phthalate	µg/L	Grab	1/Discharge Event	b and c
Tetrachloroethylene	µg/L	Grab	1/Discharge Event	b and c
Trichloroethylene	µg/L	Grab	1/Discharge Event	b and c
Vinyl Chloride	µg/L	Grab	1/Discharge Event	b and c
Pentachlorophenol	µg/L	Grab or Composite	1/Discharge Event	b, c and d
2,4,6-Trichlorophenol	µg/L	Grab or Composite	1/Discharge Event	b, c and d
1,2-Dichlorobenzene	µg/L	Grab or Composite	1/Discharge Event	b, c and d
1,3-Dichlorobenzene	µg/L	Grab or Composite	1/Discharge Event	b, c and d
1,4-Dichlorobenzene	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Fluoranthene	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Hexachlorobenzene	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Aldrin	µg/L	Grab or Composite	1/Discharge Event	b, c, d, and i
Chlordane	µg/L	Grab or Composite	1/Discharge Event	b, c, d, and i

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
4,4'-DDT	µg/L	Grab or Composite	1/Discharge Event	b, c, d, and i
Dieldrin	µg/L	Grab or Composite	1/Discharge Event	b, c, d, and i
Alpha-BHC	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Beta-BHC	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Gamma-BHC	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Polychlorinated Biphenyls (PCBs), Total	µg/L	Grab or Composite	1/Discharge Event	b, c, d, i, and j
Benzo(a)anthracene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Benzo(a)pyrene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Chrysene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Pyrene	µg/L	Grab or Composite	1/Discharge Event	b, c, d and i
Heptachlor Epoxide	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Halomethanes (Note k)	µg/L	Grab	1/Discharge Event	b, c, and k
Methyl tertiary-butyl ether	µg/L	Grab	1/Discharge Event	b and c
Phenolic Compounds	µg/L	Grab or Composite	1/Discharge Event	b, c and d
Tributyltin	µg/L	Grab or Composite	1/Discharge Event	b, c and d
TCDD Equivalents	µg/L	Grab or Composite	1/Year	b, c, d, l and m
Remaining Priority Pollutants	µg/L	Grab or Composite	1/Year	b, c, d, l and m

Footnotes for Table E-3

- a. Flow shall be recorded daily during each period of discharge. Periods of no flow shall also be reported.
- b. A discharge event occurs when there is heavy rainfall and the refinery reaches the maximum Low Volume Waste capacity storage and sewer discharge to LACSD is restricted. During periods of discharge, no more than one sample per week (or 7-day period) is required for pollutants that are monitored once per discharge event. 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.
- c. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no

methods are specified for a given pollutant, the methods must be approved by the Los Angeles Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

- d. As per 40 CFR section 122.21(g)(7)(ii), the Discharger has the option to either:
- i. Collect a grab sample within 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 corresponding quarterly report;
or
 - ii. Collect a flow-weighted composite sample for the entire duration of the discharge or for the first three hours of the discharge. The flow-weight composite sample may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of the discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes.

However, grab samples **must** be collected for the analyses of the following parameters: pH, temperature, oil and grease, bacteria (enterococcus), bis(2ethylhexyl)phthalate, and volatile and semi-volatile organics.

- e. Refer to section 5 below, Whole Effluent Toxicity Testing Requirements. Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). 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, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.
- f. Detection methods used for *Enterococcus* shall be those presented in Table 1A of 40 CFR Part 136, unless alternate methods have been approved by U.S. EPA pursuant to Part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA..
- g. For TPH as Gasoline (C₄-C₁₂) use EPA Method 503.1 or 8015B. For TPH as Diesel (C₁₃-C₂₂) and TPH as Kerosene (C₂₃₊) use EPA Method 503.1 or 8015B, or 8270.
- h. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.
- i. Samples analyzed must be unfiltered samples.
- j. Total PCBs (polychlorinated biphenyls) means the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-10166, Arclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1245, Aroclor-1254, and Aroclor-1260.
- k. Halomethanes means the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).
- l. TCDD equivalents shall be calculated using the following formula, where the minimum levels (MLs) and 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. The TCDD Equivalents are calculated as follows: Dioxin-TEQ (TCDD equivalents) = Sum of Concentration of dioxin or furan congener_x (C_x) X Toxicity Equivalency Factors (TEFs) for congener_x. The TEFs are listed in the Table below.

Toxicity Equivalency Factors

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

- m. 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 waters, the Discharger will indicate in the corresponding monitoring report, under statement of perjury, that no effluent was discharged to surface water during the reporting period.
- n. Priority Pollutants as defined in 40 CFR Part 131

End of Footnotes for Table E-3

4.3. Sediment Monitoring Requirements at Monitoring Locations EFF-001, EFF-002, EFF-003, EFF-004 and EFF-005

Effluent sediment monitoring is only required during years in which any exceedance occurs as described in Footnote a 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 from the Facility.

The Discharger must sample the discharge at the discharge points following final treatment, prior to the discharge entering the receiving water. The Discharger must collect sufficient effluent sample volume to provide an adequate amount of effluent sediments (suspended solids) for sediment analyses.

Table E-4. Sediment Monitoring Requirements at Monitoring Locations EFF-001, EFF-002, EFF-003, EFF-004 and EFF-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Cadmium	mg/kg	Grab	1/Year	a and b
Copper, TR	mg/kg	Grab	1/Year	a and b
Lead, TR	mg/kg	Grab	1/Year	a and b
Mercury, TR	mg/kg	Grab	1/Year	a and b
Zinc, TR	mg/kg	Grab	1/Year	a and b
DDT	mg/kg	Grab	1/Year	a, b and c
PAHs	mg/kg	Grab	1/Year	a, b and d
PCBs	mg/kg	Grab	1/Year	a, b and e
Chlordane	mg/kg	Grab	1/Year	a and b
Dieldrin	mg/kg	Grab	1/Year	a and b

Footnotes for Table E-4

- a. For each monitoring location, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL based effluent limit for cadmium, copper, lead, zinc, chlordane, dieldrin, 4,4'-DDT, total PCB's, benzo(a)pyrene, benzo(a)anthracene, pyrene or chrysene as specified in Tables 4 and 5 of this Order, then the Discharger has not demonstrated attainment with the final sediment allocations stipulated by the Harbor Toxics TMDL, and implementation of the effluent sediment monitoring program is required for these pollutants. Sediment monitoring of the effluent shall begin during the first discharge event following the effluent exceedance. An effluent sediment monitoring result at or below the final sediment allocation in Table 7 of this Order, demonstrates attainment with the final sediment allocation and additional sediment monitoring of the effluent is not required. An effluent sediment monitoring result that exceeds the final 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 sediment monitoring results is at or below the final sediment allocation.
- b. Pollutants shall be analyzed in accordance with USEPA or ASTM methodologies where such methods exist. Where no USEPA or ASTM methods exist, the State Board or Los Angeles Water Board shall approve the use of other methods. Analytical tests shall be conducted by laboratories certified by the State Water Board's Division of Drinking Water Environmental Laboratory Accreditation Program (ELAP) in accordance with California Water Code section 13176.
- c. The Water Quality Control Plan for Enclosed Bays and Estuaries – Sediment Quality Provisions lists chemical analytes needed to characterize sediment contamination exposure and effect. According to Sediment Quality Provisions, 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.
- d. According to Sediment Quality Provisions, 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.
- e. According to Sediment Quality Provisions, 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, 2,3,3',4',6-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',3,4,4',5,5'-heptachlorobiphenyl, 2,2',3,4',5,5',6-heptachlorobiphenyl, 2,2',3,3',4,4',5,6-octachlorobiphenyl.

End of Footnotes for Table E-4

5. CHRONIC WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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

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

5.2. 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 the required toxicity test. For the storm water, sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. 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.

5.3. Chronic Marine and Estuarine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity ≥ 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 static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).
- A static non-renewal toxicity test with the 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).
- A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

5.4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this permit's first required sample collection or when the Facility discharges. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This 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.

5.5. 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.

- 5.5.1. 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) 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 approach is: Mean discharge IWC response $\leq 0.75 \times$ 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: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$.
- 5.5.2. 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.
- 5.5.3. 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.
- 5.5.4. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.
- 5.5.5. All reference toxicant test results should be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR part 136) (EPA 821-B-00-004, 2000).
- 5.5.6. 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).

5.6. Preparation of an Initial Investigation TRE Work Plan

The Discharger shall prepare and submit a copy of the Discharger’s initial investigation TRE work plan to the Executive Officer of the Los Angeles Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use U.S. EPA manual EPA/833B-99/002 (municipal) as guidance, or most current version, or EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989). This work

plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the work plan shall include:

- A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility.
- If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

5.7. Toxicity Reduction Evaluation (TRE) Process

5.7.1. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, U.S. EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) or EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989) and, within 30 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

- Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.
- Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
- A schedule for these actions, progress reports, and the final report.

5.7.2. **TIE Implementation.** The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Chronic TIE Manual: Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *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.

5.7.3. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and stormwater 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.

- 5.7.4. The Discharger shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE process is taking place.
- 5.7.5. The Los Angeles 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.
- 5.7.6. The Board may consider the results of any TIE/TRE studies in an enforcement action.

5.8. 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, "Report Preparation," including:

- The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-9.
- A summary of water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- The statistical analysis used in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1
- TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TIE/TRE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.
- Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
- Tabular data and graphical plots clearly showing the laboratory's performance for the reference toxicant, for each solution, for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation, for each solution, for the previous 12-month period.
- Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Los Angeles Water Board Chief Deputy Executive Officer or the Executive Officer.

6. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

7. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

8. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND SEDIMENT

8.1 Receiving Water Sampling Points - Monitoring Locations RSW-001A, RSW-002A, RSW-003A, RSW-004A and RSW-005A

Receiving water sampling shall be conducted at the same time as the effluent monitoring when there is discharge to surface water. The Discharger shall monitor the Dominguez Channel Estuary at Monitoring Locations RSW-001A, RSW-002A, RSW-003A, RSW-004A and RSW-005A as follows:

Table E-5. Receiving Water Monitoring Requirements – RSW-001A, RSW-002A, RSW-003A, RSW-004A and RSW-005A

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
pH	standard units	Subsurface grab	1/Discharge Event	a, b, c and d
Salinity	g/Kg	Subsurface grab	1/Discharge Event	a, b, c and d
Temperature	°F	Subsurface grab	1/Discharge Event	a, b, c and d
Enterococcus	CFU/100 ml or MPN/100 ml	Subsurface grab	1/Discharge Event	a, b, c and d
Priority Pollutants	µg/L	Subsurface grab	1/Year	a, e and f

Footnotes to Table E-5

- a. A discharge event occurs when there is heavy rainfall and the refinery reaches the maximum Low Volume Waste capacity storage and sewer discharge to LACSD is restricted. Sampling shall be during the first hour of the discharge event. 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 waters, no sampling is required and the Discharger will indicate in the corresponding monitoring report, under statement of perjury, that no effluent was discharged to surface water during the reporting period.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. If no methods are specified for a given pollutant, use methods approved by this Los Angeles Water Board or the State Water Board.
- c. Each separate period of discharge shall be sampled, but no more than one sample per quarter is required.
- d. Receiving water pH, salinity and temperature must be collected at the same time the samples are collected for priority pollutants analysis.
- e. Priority Pollutants as defined 40 CFR Part 131 or the CTR. For mercury analysis, method 1631E shall be used.

- f. Annual samples shall be collected during the first discharge of the year and shall be monitored concurrently with effluent Priority Pollutant monitoring specified in section 4.2 of this MRP (Attachment E). 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. Monitoring is not required during years in which no discharge occurs.

End of Footnotes to Table E-5

8.2 Receiving Water Sampling Points - Monitoring Locations RSW-001B, RSW-002B, RSW-003B, RSW-004B and RSW-005B

Receiving water sampling shall be conducted at the same time as the effluent monitoring when there is discharge to surface water. The Discharger shall monitor the Dominguez Channel Estuary at Monitoring Locations RSW-001B, RSW-002B, RSW-003B, RSW-004B and RSW-005B as follows:

Table E-6. Receiving Water Monitoring Requirements – RSW-001B, RSW-002B, RSW-003B, RSW-004B and RSW-005B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
pH	standard units	Subsurface grab	1/Discharge Event	a, b, c and d
Ammonia, total	mg/L	Subsurface grab	1/Discharge Event	a, b, c and d
Dissolved oxygen	mg/L	Subsurface grab	1/Discharge Event	a, b, c and d
Nitrate (as N)	mg/L	Subsurface grab	1/Discharge Event	a, b, c and d
Salinity	g/Kg	Subsurface grab	1/Discharge Event	a, b, c and d
Temperature	°F	Subsurface grab	1/Discharge Event	a, b, c and d
Enterococcus	CFU/100 ml or MPN/100 ml	Subsurface grab	1/Discharge Event	a, b, c and d

Footnotes to Table E-6

- a. A discharge event occurs when there is heavy rainfall and the refinery reaches the maximum Low Volume Waste capacity storage and sewer discharge to LACSD is restricted. Sampling shall be during the first hour of the discharge event. 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 waters, no sampling is required and the Discharger will indicate in the corresponding monitoring report, under statement of perjury, that no effluent was discharged to surface water during the reporting period.
- b. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. If no methods are specified for a given pollutant, use methods approved by this Los Angeles Water Board or the State Water Board.
- c. Each separate period of discharge shall be sampled, but no more than one sample per quarter is required.
- d. Receiving water samples for ammonia, salinity, pH, and temperature shall be taken concurrently with the effluent sample for ammonia

End of Footnotes to Table E-6

8.3 Visual Monitoring of Receiving Water Sampling Points

8.3.1. A visual observation station shall be established in the vicinity of each discharge point to the receiving water (Dominguez Channel Estuary).

8.3.2. General observations of the receiving water shall be made at each discharge point when discharges occur. During months of no discharge, the receiving water observations shall be made on a monthly basis. All receiving water observations shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be reported. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

- a. Tidal stage, time, and date of monitoring
- b. Weather conditions
- c. Color of water
- d. Appearance of oil films or grease, or floatable materials
- e. Extent of visible turbidity or color patches
- f. Direction of tidal flow
- g. Description of odor, if any, of the receiving water
- h. Presence and activity of California Least Tern and California Brown Pelican.

8.4 Monitoring Locations SED-001, SED-002, SED-003, SED-004, SED-005, SED-006 and SED-007

Table E-7. Sediment Monitoring Requirements – SED-001, SED-002, SED-003, SED-004, SED-005, SED-006 and SED-007

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Cadmium, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Chlordane	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Chromium, Total	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Copper, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Lead, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Mercury, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Nickel, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Zinc, TR	mg/Kg	Surface grab	1/Discharge Event	a, b and c
PCBs	mg/Kg	Surface grab	1/Discharge Event	a, b, c and d
Sediment Grain size	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Chronic Toxicity	mg/Kg	Surface grab	1/Discharge Event	a, b, c and e
DDT	mg/Kg	Surface grab	1/Discharge Event	a, b, c and f
Total Organic Carbon	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Total Petroleum Hydrocarbons	mg/Kg	Surface grab	1/Discharge Event	a, b and c
Tributyltin	mg/Kg	Surface grab	1/Discharge Event	a, b and c
PAHs	mg/Kg	Surface grab	1/Discharge Event	a, b, c and g
Note odor, color and visible aquatic life in sediment	--	Surface grab	1/Discharge Event	a

Footnotes to Table E-7

- a. A discharge event occurs when there is heavy rainfall and the refinery reaches the maximum Low Volume Waste capacity storage and sewer discharge to LACSD is restricted. If there is no discharge to surface waters, no sampling is required and the Discharger will indicate in the corresponding monitoring report, under statement of perjury, that no effluent was discharged to surface water during the reporting period.
- b. Grab samples containing the upper two centimeters of sediment shall be taken from an Ekman grab sampler (or another method approved by the Executive Officer).
- c. Pollutants shall be analyzed in accordance with USEPA or American Society for Testing and Materials (ASTM) methodologies where such methods exist. For priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP and included as Attachment H. If no methods are specified for a given pollutant, use methods approved by this Los Angeles Water Board or the State Water Board.
- d. Sum of Arochlor 1016, Arochlor, 1221, Arochlor 1232, Arochlor 1242, Archlor 1248, Arochlor 1254, and Arochlor 1260.
- e. See Section 5.
- f. Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.
- g. Sum of acenaphthene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo(k)fluoranthene, 1,12-benzoperylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and pyrene.

End of Footnotes to Table E-7

8.5 Biomonitoring

As required under Section 6.3.2. of this Order, the Discharger shall submit an updated work plan for biomonitoring to the Executive Officer of the Regional Board within 90 days of the effective date of this Order. The work plan shall detail a proposed biomonitoring assessment including, but not limited to, details for: using caged bivalves, specifying species to be used, other parameters of tests (including an acceptable size or age range of organisms), bivalve or sampling locations (including upstream and downstream of discharge), time periods when outplanting will occur, durations of the outplants and analytical parameters.

8.6 Coordinated Monitoring

The Discharger may participate in a coordinated receiving water, biomonitoring, and sediment monitoring program with other dischargers to the Dominguez Channel Estuary in order to provide the Los Angeles Water Board with a comprehensive water and sediment quality database for this water body. Upon approval by the Los Angeles Water Board of such a coordinated water quality and sediment quality monitoring program, provisions of Section 8 of this MRP may be revised, as appropriate.

9. OTHER MONITORING REQUIREMENTS

9.1. Rainfall Monitoring

The Discharger shall measure and record the rainfall on each day of the month or submit the data obtained from the nearest city/county operated rain gauge monitoring station. This information shall be included in the monitoring report for that month.

9.2. Stormwater Visual Observation

The Discharger shall make visual observations of the stormwater discharge location at Discharge Point 004 during at least one storm event per month that produces a significant discharge of stormwater commingled with process wastewater. Observations shall note the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor at the stormwater discharge locations. A “significant stormwater discharge” is a continuous discharge of stormwater commingled with process wastewater for a minimum of one hour, or the intermittent discharge of stormwater commingled with process wastewater for a minimum of 3 hours in a 12-hour period.

9.3. Harbor Toxics TMDL Water Column, Sediment and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral 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 has developed a site-specific plan to comply with this requirement. Details on these requirements are provided in Section 6.3.2.b of the Order.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

- 10.1.1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- 10.1.2. 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.
- 10.1.3. If the Discharger monitors (other than for process/operational control, startup, research, or equipment testing) any influent, effluent, or receiving water constituent 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/Permit.
- 10.1.4. 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.
- 10.1.5. Quarterly analyses shall be performed during the months of February, May, August, and November. Semi-annual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Los Angeles

Water Board, state the reason why the monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of annual analyses shall be reported in the quarterly monitoring report following the analysis.

- 10.1.6. The Discharger shall inform the Los Angeles Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
- 10.1.7. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section 5.1.
- 10.1.8. The Discharger shall electronically submit SMRs using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site:

<http://www.waterboards.ca.gov/ciwqs/index.html>

The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

10.2. Self-Monitoring Reports (SMRs)

- 10.2.1. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3-9. 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.
- 10.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. 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.
- 10.2.3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Daily	Permit Effective Date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with corresponding quarterly SMR

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Once per Discharge Event	Permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Annually	Permit Effective Date	January 1 through December 31	Submit with corresponding quarterly SMR for February 1

10.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory’s MDL, shall be reported as “Detected, but Not Quantified,” or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\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.

10.2.5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A. For purposes of reporting and administrative enforcement by the Los Angeles 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).

10.2.6. **Multiple Sample Data.** When determining compliance with an Average Monthly Effluent Limitation (AMEL), Average Weekly Effluent Limitation (AWEL), or Maximum Daily Effluent Limitation (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.

10.2.7. **SMRs.** 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.

10.3. Discharge Monitoring Reports (DMRs)

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

10.4. Chemical Use Report

- 10.4.1. The Discharger shall submit to the Los Angeles Water Board, together with the first monitoring report required by this Order, an updated list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each.
- 10.4.2. The Discharger shall report annually summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the Facility and which are discharged or have the potential to be discharged.
- 10.4.3. The Discharger shall monitor the chemicals used at the Facility. Prior to any change in the use of chemicals at the Facility, the Discharger must inform the Los Angeles Water Board. No changes in the type or amount of chemicals added to the process water shall be made without the written approval of the Los Angeles Water Board's Executive Officer. The Discharger must submit a complete report of the change to the Los Angeles Water Board before the proposed date of change.

10.5. Other Reports

- 10.5.1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Los Angeles Water Board:
 - a. Initial Investigation TRE workplan.
 - b. Updated SWPPP
 - c. Updated BMPP
 - d. Updated Spill Control Plan (SCP) or SPCC Plan

The SWPPP, BMPP, and 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 discharged from the Facility are addressed. All changes or revisions to the SWPPP, BMPP, and SCP shall be submitted to the Los Angeles Water Board within 30 days of revisions.

- 10.5.2. Within 90 days of the effective date of this Order, the Discharger must submit to the Los Angeles Water Board notification of whether the Discharger will continue to participate with the Collaboration Group or develop a site-specific plan to complete the regional monitoring required by the Harbor Toxics TMDL and included in section 6.3.2.b. of the Waste Discharge Requirements of this Order, or if the Discharger will be developing a site specific plan. The Discharger shall provide proof of joining a collaborating group, or if developing a site-specific plan, that plan is due to the Los Angeles Water Board within 90 days from the effective date of this Order. Los Angeles Water Board staff will review the plan and provide an opportunity for public comment. The Discharger shall begin monitoring after the Monitoring Plan and QAPP are approved by the Executive

Officer and after a discharge from the Facility occurs, unless otherwise directed by the Executive Officer.

- 10.5.3. According to the Harbor Toxics TMDL, the Discharger shall submit an annual monitoring/implementation report to the Los Angeles Water Board. The report shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs. The annual report shall be received by the Los Angeles Water Board by the specified date in the proposed Monitoring Plan.
- 10.5.4. Within 12 months from the effective date of this Order, the Discharger is required to submit a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change related-effects associated with the facility operation, water supplies, collection system, water quality and beneficial uses.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the Los Angeles Water Board incorporates this Fact Sheet as findings of the Los Angeles 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.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B192010008
Discharger	Tesoro Refining & Marketing Company LLC
Name of Facility	Tesoro Los Angeles Refinery – Carson Operations
Facility Address	2350 East 223rd Street, Carson, CA 90810
Facility Contact, Title and Phone	Robert Nguyen, Environmental Manager, (310) 847-5645
Authorized Person to Sign and Submit Reports	Robert Nguyen, Environmental Manager, (310) 847-5645
Mailing Address	2350 East 223rd Street, Carson, CA 90810
Billing Address	2350 East 223rd Street, Carson, CA 90810
Type of Facility	Petroleum Refinery
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Not applicable (N/A)
Recycling Requirements	N/A
Facility Permitted Flow	Up to 0.045 million gallons per day (MGD) low-volume wastes; and 4.4 MGD of process wastewater, stormwater runoff, and boiler blowdown
Facility Design Flow	N/A
Watershed	Dominguez Channel Watershed
Receiving Water	Dominguez Channel Estuary
Receiving Water Type	Estuary

- 1.1. Tesoro Refining & Marketing Company LLC (hereinafter Discharger) is the owner and operator of the Tesoro Los Angeles Refinery – Carson Operations, (hereinafter Facility), a petroleum refining facility. 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.
- 1.2. The Facility discharges wastewater consisting of low-volume wastes, process wastewater, stormwater runoff, and boiler blowdown to the Dominguez Channel Estuary, a water of the United States, within the Dominguez Channel Watershed. The Discharger was previously regulated by Order No. R4-2015-0259, which was adopted on December 10, 2015. The Order expired on January 31, 2021. The terms and conditions of the current Order, as described in finding 1.4 below, have been continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order. The discharge was also regulated under Time Schedule Order (TSO) No. R4-2015-0260, which was also adopted on December 10, 2015, and expired on January 31, 2020. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- 1.3 The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on August 4, 2020. Additional information was submitted on November 23, 2020. The application was deemed complete on December 2, 2020. A site visit was conducted on February 10, 2022 to observe operations and collect additional data to develop permit limitations and conditions.
- 1.4. Federal regulations at 40 CFR section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to 40 CFR section 122.6(d)(1) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

2. FACILITY DESCRIPTION

The Facility operates a petroleum oil refinery which processes an average of 265,000 barrels per day of crude to produce gasoline, diesel fuel, jet fuel, sulfur, coke, liquefied petroleum gas (LPG), and polypropylene.

BP West Coast Products (the previous owner of the refinery) manufactured polypropylene at the Carson Refinery until December 2005. Since that time, the polypropylene operation has been owned and operated by INEOS Polypropylene LLC. The INEOS Polypropylene Plant is geographically located within the facility property on land leased from Tesoro Refining & Marketing Company LLC.

The Facility is equipped with an “oily water drain” system designed to capture stormwater from process areas of the refinery. The Facility also has a “clean water drain” system designed to capture other stormwater, such as stormwater outside of process areas. The discharge of this stormwater under normal conditions is regulated under the Statewide

NPDES General Permit for Stormwater Associated with Industrial Activities (Order No. 2014-0057-DWQ as amended in 2015 and 2018, NPDES Permit No. CAS000001).

The Facility is also regulated by Order No. R4-2015-0259. Under Order No. R4-2015-0259, the Facility is permitted to discharge low volume wastes (steam condensate, service water, irrigation runoff, and fire testing water) and process wastewater commingled with stormwater and boiler blowdown to Dominguez Channel Estuary. Additionally, the Facility was regulated under Time Schedule Order (TSO) No. R4-2015-0260 (the TSO expired on January 31, 2020).

The Facility has attained retention of all commingled process wastewater and stormwater and low volume wastes and was in compliance with the TSO. The semiannual progress report indicates that the Facility's total retention capacity is 80.52 million gallons, which would contain the maximum calculated process area runoff volume of 63.32 million gallons for a 24-hour, 100-year storm. However, the total containment retention capacity includes Tanks 19 and 20. Tanks 19 and 20 are frequently unavailable during storm events; therefore, the conservative total, which is the retention capacity without Tanks 19 and 20, is 71.49 million gallons. The conservative total would still contain the maximum calculated process area runoff volume of 63.32 million gallons for a 24-hour, 100-year storm.

Per 40 CFR 122.2, continuous discharge is defined as a discharge which occurs without interruption throughout the operating hours of the Facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities. Based on this definition of continuous discharge and the following information available at the time of this permit renewal, the Los Angeles Water Board determines that this Facility's discharge is a non-continuous discharge because the Facility has not discharged since 2008 and completed the Tasks required in Time Schedule Order No. R4-2015-0260 to provide necessary storm water storage capacity.

2.1. Description of Wastewater and Treatment or Controls

The refinery processes at the Facility include crude atmospheric distillation, vacuum distillation, chemical treating superfractionation, alkylation/MTBE, catalytic cracking, hydrocracking, hydrotreating, delayed coking, catalytic reforming, hydro-desulfurization, petrochemical production, natural gas liquids production, cogeneration/steam production, gasoline blending, and sulfur recovery. Primary process units include three crude units, a fluid catalytic cracker (FCC), three reformers, two delayed cokers, a hydrocracker, a hydrotreater, an alkylation plant, an isomerization plant, a sulfur tail gas recovery unit, two hydrogen plants and a cogeneration unit.

Petroleum refining is the physical, thermal, and chemical separation of crude oil into its major distillation fractions that are then further processed through a series of separation and conversion steps into finished petroleum products. These processes can be separated into two phases. The first phase includes desalting of crude oil and the subsequent distillation into various components/fractions. The second phase includes downstream processes to convert the distillation fractions into petroleum products through any combination of different cracking, coking, reforming, and alkylation processes.

Desalting – Before separation into fractions, crude oil must first be treated to remove corrosive salts. Desalting involves the mixing of heated crude oil with water so that the salts are dissolved in the water. The water must then be separated from the crude oil in a separating vessel by adding demulsifier chemicals to assist in breaking the emulsion.

Distillation – The desalted crude oil is then heated in a heat exchanger and furnace to about 750°F and fed to a distillation column at atmospheric pressure where most of the feed is vaporized and separated into its various fractions (atmospheric distillation). The light fractions condense and are collected at the top of the column. The heavier fractions are collected at the bottom of the column and are further separated by distillation at a very low pressure to increase volatilization and separation (vacuum distillation).

Cracking – Thermal cracking, or visbreaking, uses heat and pressure to break large hydrocarbon molecules into smaller, lighter molecules. This process has been largely replaced by catalytic cracking that uses catalyst in addition to heat and pressure to break large hydrocarbon molecules into smaller, lighter molecules. Catalytic cracking is able to produce gasoline with higher octane.

Catalytic Hydrocracking – Catalytic hydrocracking utilizes a fixed-bed catalytic reactor under high pressure (1,200 to 2,000 psig) with the presence of hydrogen. This process is used to break crude oil fractions that are the most difficult to crack or cannot be cracked effectively in catalytic cracking units

Coking – Coking is a cracking process used to reduce refinery production of low-value residual fuel oils to gasoline and diesel. Coking also produces petroleum coke, a solid carbon used as a fuel for power plants.

Hydrotreating – Hydrotreating is a process used to remove impurities such as sulfur, nitrogen, oxygen, halides, and trace metal impurities that may deactivate process catalysts. Hydrotreating also increases the quality of fractions by converting olefins and diolefins to paraffins for the purposes of reducing gum formation in fuels.

Alkylation – Alkylation is used to produce a high octane gasoline from isobutane formed primarily during catalytic cracking and coking operations. Alkylation joins an olefin and an isoparaffin compound using either a sulfuric acid or hydrofluoric acid as a catalyst.

Catalytic Reforming – Catalytic reforming uses catalytic reactions to process low octane gasolines and naphthas into high octane aromatics (including benzene). There are four major types of reactions that occur during reforming processes: (1) dehydrogenation of naphthenes to aromatics; (2) dehydrocyclization of paraffins to aromatics; (3) isomerization; and (4) hydrocracking.

Chemical treating – Chemical treating is used to remove or change the undesirable properties associated with sulfur, nitrogen, or oxygen compound contaminants in petroleum products. This can be done by either extraction or oxydation.

Isomerization – Isomerization is used to alter the arrangement of a molecule without adding or removing anything from the original molecule. Typically, paraffins (butane or pentane) are converted to isoparaffins having a much higher octane. The reaction takes place at temperatures in the range of 200 to 400°F with the presence of platinum as a catalyst.

During normal operations, all the wastewater generated from the Refinery process units and stormwater runoff from process areas captured in oily water drains are treated at the centralized wastewater treatment system and discharged to the LACSD sewer system. The Refinery's centralized wastewater treatment system consists of an American Petroleum Institute (API) separator, five lift stations, five tanks and three induced gas flotation (IGF) units.

There are five distinct waste streams discharged from the Facility. Only waste streams 1, 2, and 3 are authorized for discharge to surface waters by this NPDES Permit. Waste streams 4 and 5 are not authorized for discharge to surface waters and are not covered by this NPDES permit. Waste streams 4 and 5 are treated and discharged into the sanitary sewer.

Waste Stream 1 consists of low volume wastes of steam condensate, atmospheric condensate, non-contaminated service water, air conditioning condensate, irrigation runoff and fire testing water. Low Volume Waste discharges are intermittent with flow rates up to 0.045 MGD. During normal operations, low volume wastes are captured in oily water drains treated at the centralized wastewater treatment system and discharged to the LACSD sewer system. In the event of emergency or pump failure, low volume wastes are discharged into Dominguez Channel Estuary through Discharge Points 001, 002, 003, 004 and 005, which are also used during storms of 0.1 inch or more to discharge stormwater captured in clean water drains, as explained more fully in the Refinery's Stormwater Pollution Prevention Plan.

Waste Stream 2 consists of process wastewater from the Refinery and stormwater runoff from process areas while Waste Stream 3 consists of boiler blowdown from boiler feed water in the Refinery and cogeneration facility. The process area wastewater and stormwater are normally captured in oily water drains, treated at the centralized wastewater treatment system and discharged to the LACSD sewer system. However, when rainfall exceeds 0.1 inch, the Refinery is required to divert some of the combined process area wastewater and stormwater flow to storage tanks (Tank Nos. 19, 20, 21, 14, and 35). When the tank capacity is exceeded, the commingled process area wastewater and stormwater are diverted to the two retention basins (East Retention Basin and West Retention Basin) and a 50-million gallon reservoir (Reservoir 505) that hold the water for 24 or more hours. After cessation of the storm, the stored wastewater and stormwater are sent to the sewer during off-peak hours. However, during extended storms when Reservoir 505 is filled to 40 million gallons or more and discharge to the sewer is restricted, the process area wastewater and stormwater in the reservoir may be required to be discharged to Dominguez Channel through Discharge Points 003 and/or 004 at the rate of up to 4.4 MGD. Supplemental information submitted by the Discharger on September 13, 2021, indicates that the discharge composition is estimated to be greater than 90% storm water, less than 10% wastewater, and less than 1% boiler blowdown. The discharge continues until the volume of water in the reservoir is reduced to 20 million gallons or until discharge to the sewer is allowed. This volume allows sufficient impound capacity to accommodate runoff from rainfall in the event there should be successive days of heavy rainfall in excess of 0.1 inch.

Waste Stream 4 consists of cooling tower blowdown from cooling towers in the Refinery, cogeneration facility, and LPG and the INEOS polypropylene manufacturing facility. Waste Stream 5 consists of treated groundwater generated from the groundwater cleanup operation. These waste streams are not authorized for surface water discharge and are not covered by this NPDES permit. These wastes streams are processed through the on-site treatment system and discharged directly to the sewer of the County Sanitation Districts of Los Angeles.

2.2. Discharge Points and Receiving Waters

Waste Stream 1 consisting of low volume wastes is discharged intermittently through Discharge Points 001, 002, 003, 004, and 005 to the Dominguez Channel Estuary. Waste Stream 2 consisting of process wastewater commingled with stormwater and Waste Stream 3 consisting of boiler blowdown are discharged intermittently through Discharge Point 004 to the Dominguez Channel Estuary. The Facility discharged process wastewater commingled with stormwater once during the first quarter of 2008.

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

The Discharger has not discharged since 2008. The monitoring data below was collected during the permit term of R4-2007-0015. Effluent limitations contained in Order No. R4-2015-0259 for discharges of low volume wastes during the term of Order No. R4-2015-0259 are summarized below with the monitoring data from the first quarter of 2008.

Table F-2. Historic Effluent Limitations and Monitoring Data – Low Volume Wastes- Discharge Points 001, 002, 003, 004 and 005

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
pH	standard units	---	6.5 to 8.5	8.16	---
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	mg/L	20	30	48	---
BOD	lbs/day	7.5	11	0.05	---
Oil and Grease	mg/L	10	15	3	---
Oil and Grease	lbs/day	3.8	5.6	0.036	---
Total Suspended Solids (TSS)	mg/L	50	75	33	---
TSS	lbs/day	19	28	0.0006	---
Settleable Solids	ml/L	0.1	0.3	0.2	---
Turbidity	NTU	50	75	29	---
Temperature	°F	---	86	76	---
Detergent (MBAS)	mg/L	---	0.5	220	---
MBAS	lbs/day	---	0.2	1.06	---

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
Residual Chlorine	mg/L	---	0.1	<0.1	---
Residual Chlorine	lbs/day	---	0.04	---	---
Sulfides	mg/L	---	1.0	67	---
Sulfides	lbs/day	---	0.4	0.009	---
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	---	---
Cadmium, TR	µg/L	7.6	15.4	0.15	---
Cadmium, TR	lbs/day	0.003	0.007	---	---
Copper, TR	µg/L	3.1	6.1	9.5	---
Copper, TR	lbs/day	0.001	0.002	0.113	---
Lead, TR	µg/L	7	14	5.8	---
Lead, TR	lbs/day	0.003	0.005	---	---
Nickel, TR	µg/L	6.7	13	11	---
Nickel, TR	lbs/day	0.0025	0.005	0.0416	---
Selenium, TR	µg/L	58	117	1.5	---
Selenium, TR	lbs/day	0.022	0.044	---	---
Zinc, TR	µg/L	70	141	620	---
Zinc, TR	lbs/day	0.02	0.05	7.37	---
Cyanide	µg/L	0.5	1.0	27	---
Cyanide	lbs/day	0.0002	0.0004	---	---
Methylene Chloride	µg/L	1,600	3,210	<0.095	---
Methylene Chloride	lbs/day	0.60	1.2	---	---
Pentachlorophenol	µg/L	6.5	13	<3.3	---
Pentachlorophenol	lbs/day	0.0024	0.005	---	---
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	6.2	---
Bis(2-Ethylhexyl)Phthalate	lbs/day	0.002	0.004	---	---
Fluoranthene	µg/L	42	742	<2.8	---
Fluoranthene	lbs/day	0.016	0.3	---	---
Aldrin	µg/L	0.00014	0.00028	<0.00015	---
Aldrin	lbs/day	0.00000005	0.0000001	---	---
Chlordane	µg/L	0.00059	0.0012	---	a
Chlordane	lbs/day	0.0000002	0.0000005	---	---
Dieldrin	µg/L	0.00014	0.00028	---	a
Dieldrin	lbs/day	0.00000005	0.0000001	---	---
4,4'-DDT	µg/L	0.00059	0.0012	---	a
4,4'-DDT	lbs/day	0.0000002	0.0000005	---	---
Total PCBs	µg/L	0.00017	0.0003	---	a

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
Total PCBs	lbs/day	0.00000006	0.0000001	---	---
Heptachlor Epoxide	µg/L	0.00011	0.00022	<0.00025	---
Heptachlor Epoxide	lbs/day	0.00000004	0.00000008	---	---
Benzo(a)anthracene	µg/L	0.049	0.1	<1.9	---
Benzo(a)anthracene	lbs/day	0.00002	0.00004	---	---
Benzo(a)pyrene	µg/L	0.049	0.1	---	a
Benzo(a)pyrene	lbs/day	0.00002	0.00004	---	---
Chrysene	µg/L	0.049	0.1	<2.4	---
Chrysene	lbs/day	0.00002	0.00004	---	---
Pyrene	µg/L	11000	22068	0.051	---
Pyrene	lbs/day	4.13	8.25	---	---

Footnotes for Table F-2

a. Parameter was not an effluent limitation for Order No. R4-2007-0015 when monitoring data was collected.

End of Footnotes for Table F-2

Table F-3. Historic Effluent Limitations and Monitoring Data – Process Wastewater Commingled with Stormwater and Boiler Blowdown - Discharge Points 003 and 004

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
pH	standard units	---	6.5 to 8.5	7.23	a
BOD	mg/L	89	164	1600	a
BOD	lbs/day	3,259	6,025	---	b
Oil and Grease	mg/L	29	53	150	a
Oil and Grease	lbs/day	1,047	1,955	---	b
TSS	mg/L	74	116	51	a
TSS	lbs/day	2,701	4,249	---	b
Ammonia as N	mg/L	41	89	NS	a
Ammonia as N	lbs/day	1501	3269	---	b
COD	mg/L	539	1,045	33	a
COD	lbs/day	19,766	38,349	---	b
Residual Chlorine	mg/L	---	0.1	<100	a
Residual Chlorine	lbs/day	---	3.7	---	b
MBAS	mg/L	---	0.5	180	a

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
MBAS	lbs/day	---	18	---	b
Chromium, Total	µg/L	488	1,386	<0.004	a
Chromium, Total	lbs/day	18	51	---	b
Phenols (4AAP)	µg/L	403	1,182	NS	a
Phenols (4AAP)	lbs/day	15	43	---	b
Sulfide	µg/L	378	893	68	a
Sulfide	lbs/day	14	33	---	b
Settleable Solids	ml/L	0.1	0.3	0.3	
Temperature	°F	---	86	NS	
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	NS	
Cadmium, TR	µg/L	7.7	15.4	0.51	a
Cadmium, TR	lbs/day	0.3	0.6	---	b
Chromium (VI)	µg/L	46	104	3.5	a
Chromium (VI)	lbs/day	1.7	3.8	---	b
Copper, TR	µg/L	3.1	6.1	16	a
Copper, TR	lbs/day	0.1	0.24	---	b
Lead, TR	µg/L	7	14	4.5	a
Lead, TR	lbs/day	0.25	0.5	---	b
Selenium, TR	µg/L	58.3	117	0.56	a
Selenium, TR	lbs/day	2.2	4.3	---	b
Zinc, TR	µg/L	70	141	560	a
Zinc, TR	lbs/day	2.6	5.2	---	b
Cyanide	µg/L	0.5	1.0	<2.2	a
Cyanide	lbs/day	0.02	0.04	---	b
1,1-Dichloroethylene	µg/L	3.2	6	<0.42	a
1,1-Dichloroethylene	lbs/day	0.1	0.2	---	b
Pentachlorophenol	µg/L	6.5	13	<18	a
Pentachlorophenol	lbs/day	0.2	0.5	---	b
Hexachlorobenzene	µg/L	0.0007	0.0015	<6	a
Hexachlorobenzene	lbs/day	0.00003	0.00006	---	b
Aldrin	µg/L	0.00014	0.0003	---	c
Aldrin	lbs/day	0.000005	0.00001	---	---
Chlordane	µg/L	0.00059	0.001	---	c
Chlordane	lbs/day	0.00002	0.00004	---	---
Dieldrin	µg/L	0.00014	0.0003	---	c
Dieldrin	lbs/day	0.000005	0.00001	---	---

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Highest Daily Discharge	Notes
4,4'-DDT	µg/L	0.00059	0.001	---	c
4,4'-DDT	lbs/day	0.00002	0.00004	---	---
Total PCBs	µg/L	0.00017	0.0003	---	c
Total PCBs	lbs/day	0.000006	0.00001	---	---
alpha-BHC	µg/L	0.013	0.026	<0.0024	a
alpha-BHC	lbs/day	0.0005	0.001	---	b
beta-BHC	µg/L	0.05	0.09	<0.0038	a
beta-BHC	lbs/day	0.0017	0.003	---	b
gamma-BHC	µg/L	0.06	0.13	<0.0028	a
gamma-BHC	lbs/day	0.002	0.005	---	b
Benzo(a)anthracene	µg/L	0.049	0.1	---	c
Benzo(a)anthracene	lbs/day	0.002	0.004	---	---
Benzo(a)pyrene	µg/L	0.049	0.1	---	c
Benzo(a)pyrene	lbs/day	0.002	0.004	---	---
Chrysene	µg/L	0.049	0.1	---	c
Chrysene	lbs/day	0.002	0.004	---	---
Pyrene	µg/L	11000	22068	---	c
Pyrene	lbs/day	402	806	---	---

Footnotes for Table F-3

- a. One rain event (February 25, 2008) caused the discharge of process wastewater comingled with stormwater and boiler blowdown through two outfalls (Discharge Points 003 and 004). NS = No Sample
- b. The mass of pollutants discharged during this event was not calculated due to the small volume discharged, 3.75 gallons.
- c. Parameter was not an effluent limitation for Order No. R4-2007-0015 when monitoring data was collected.

End of Footnotes for Table F-3

2.4. Compliance Summary

The Discharger submitted a letter requesting a Time Schedule Order (TSO) on September 30, 2014 based on prior exceedances of the effluent limitations for aldrin, benzo(a)anthracene, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, copper, chrysene, cyanide, dieldrin, 4,4-DDT, heptachlor epoxide, nickel, pyrene and total PCBs. The letter also summarized the Discharger’s planned actions to achieve full compliance with the effluent limitations for these pollutants in Order No. R4-2015-0259. The Los Angeles Water Board found that Tesoro was making diligent efforts to bring its waste discharge into compliance with the effluent limitations and issued the TSO based on their request. The Discharger complied with TSO No. R4-2015-0260, which provided interim effluent limitations for aldrin, benzo(a)anthracene, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, copper, chrysene, cyanide, dieldrin, heptachlor

epoxide, and total PCBs and a time schedule that included five tasks. The tasks required in the TSO were as follows: (1) conduct a study to determine the required and available retention capacity of the refinery; and (2) conduct a feasibility study for providing necessary stormwater storage capacity to retain rainfall volumes determined in Task 1. (3) If retention of stormwater on-site is not feasible as determined in Task 2 evaluate treatment options to include recycle and reuse of treated wastewater and stormwater. (4) Prepare scope and schedule to implement required actions to achieve compliance. (5) Achieve compliance. Task 1 was completed on October 12, 2016 and Task 2 on December 18, 2017. Task 2 determined there is sufficient stormwater retention capacity on-site to retain rainfall volumes determined in Task 1. Due to completion of Tasks 1 and 2, Tasks 3 - 5 are not applicable to achieve compliance with the TSO. The Discharger has retained all commingled process wastewater and stormwater (Low Volume Waste) since February 2008. The Discharger has not discharged since 2008.

2.5. Planned Changes

There has been no indication of planned changes at the Facility.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1. 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.

3.2. California Environmental Quality Act (CEQA)

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

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

3.3.1. **Water Quality Control Plan.** The Water Quality Control Plan for the Los Angeles Region (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), 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. Beneficial uses applicable to Dominguez Channel Estuary are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel Estuary	<p><u>Existing:</u> Water contact recreation (REC-1); non-contact water recreation (REC-2); commercial sport and fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD); rare, threatened or endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development (SPWN).</p> <p><u>Potential:</u> Navigation (NAV).</p>

3.3.2. **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 Board as Resolution No. 95-84 on November 16, 1995, states that:

"It is the policy of the State Water 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."

Discharges to the Dominguez Channel Estuary would occur during heavy precipitation events. The Discharger typically directs discharges to the Los Angeles County Sanitation District's sewer system, but when rainfall exceeds 0.1 inch, flow is directed to on-site storage tanks and retention basins; after cessation of the storm, the stored wastewater and stormwater is sent to the sewer system. However, during an extended storm when discharge to the sewer system is restricted, the wastewater and stormwater in the reservoir is treated (carbon absorption filter/ion exchange or membrane unit) and discharged to the Dominguez Channel Estuary. If and when a discharge occurs, it would be comprised mostly of stormwater runoff (approximately 90% of the flow is stormwater). This Order contains provisions necessary to protect the beneficial uses of the receiving water.

3.3.3. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009 (Sediment Quality Provisions). The State Water Board amended the sediment quality provisions of the Enclosed Bays and Estuaries Plan through Resolution No. 2018-0028; these amendments became effective upon approval by U.S. EPA on March 11, 2019.

The Enclosed Bays and Estuaries Plan supersedes other narrative sediment quality objectives and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement sediment quality objectives of the Enclosed Bays and Estuaries Plan.

3.3.4 Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California – Part 3 Bacteria Provisions (Bacteria Provisions).

On August 7, 2018, the State Water Board adopted Resolution No. 2018-0038, bacteria provisions and a water quality variance policy as (1) *Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California*; and (2) an amendment to the *Water Quality Control Plan for Ocean Waters of California*. The goals of the Bacteria Provisions are to (1) establish a beneficial use definition of limited water contact recreation (LREC-1); (2) establish new statewide numeric water quality objectives for bacteria to protect primary contact recreation (REC-1) beneficial use; (3) include implementation elements; and (4) create a water quality standards variance framework under provisions established by the U.S. EPA. OAL approved the regulatory action on February 4, 2019. On March 22, 2019 U.S. EPA approved the Bacteria Provisions and they became effective. This permit implements the objectives for estuaries included in the Bacteria Provisions.

3.3.5 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 (Resolution No. 75-89). This plan contains temperature objectives for coastal and interstate waters and enclosed bays and estuaries of California. For estuaries, the provisions of 5A(1) of Thermal Plan include the following specific water quality objectives for this type of discharge:

- a. The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.
- b. Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.
- c. No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.
- d. Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

In addition to the Thermal Plan, Los Angeles Water Board staff prepared a study entitled, *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region* (White Paper). The White Paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel; typical aquatic life species

present in tidal estuaries and enclosed bays in the Los Angeles Region. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life. The Facility discharges to the Dominguez Channel Estuary. This Order establishes a multi-part effluent limitation that includes a maximum of 86°F, consistent with the Thermal Plan, and an effluent limit that requires that the effluent not be more than 20 degrees more than the receiving water, considering increasing water temperatures due to climate change.

- 3.3.6 **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. Requirements of this Order implement these criteria.
- 3.3.7. **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 Los Angeles 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.
- 3.3.8. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("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 Los Angeles Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16 as discussed in finding 4.4.2 of this Fact Sheet.
- 3.3.9. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a

reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order complies with anti-backsliding provisions as discussed in finding 4.4.1 of this Fact Sheet.

3.3.10. **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. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.11. **Mercury Provisions.** The State Water Board adopted “*Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California-Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions*” (Mercury Provisions) through Resolution No. 2017-0027, which was approved by OAL on June 28, 2017 and became effective upon U.S. EPA approval on July 14, 2017. The Mercury Provisions established one narrative and four numeric water quality objectives for mercury and three new beneficial use definitions. These provisions must be implemented through NPDES permits issued pursuant to CWA section 402, waste discharge requirements, or waivers of waste discharge requirements. The Mercury Provisions include specific implementation provisions for individual non-stormwater NPDES permits for municipal and industrial dischargers; stormwater discharges regulated by Municipal Separate Storm Sewer System (MS4) permits and the Industrial General Permit; as well as for stormwater from mine site remediation sites; dredging activities; wetland projects and nonpoint source discharges.

The Mercury Provisions prescribe specific implementation provisions for individual industrial permittees based on waterbody type. Because this permit regulates the discharge of treated stormwater, the Los Angeles Water Board evaluated whether a water quality based effluent limitation (WQBEL) was necessary for mercury in accordance with section IV.D.2.c.1 of the Mercury Provisions. The Mercury Provisions convert the fish tissue-based water quality objectives into water column values to be used for reasonable potential analysis and development of effluent limitations. Table 1 of the Mercury Provisions establishes mercury water quality objective of 12 ng/L (0.012 µg/L) for flowing water bodies with MAR and/or WILD beneficial use designations such as Dominguez Channel Estuary. The data reported for mercury was reported as “non-detect” with the detection limit of 0.035 µg/L (35 ng/l). According to the Mercury Provisions, “non-detect” data with the detection limit higher than 4 ng/l are not suitable for the analysis. Since the collected data did not meet the minimum detection limit stated by the Mercury Provisions, those data were not qualified to be evaluated and be used for the purposes of performing RPA. Therefore, no effluent limitations were set in this Order. However, a monitoring

requirement for mercury in effluent is included in Attachment E with a new detection limit of 0.5 ng/l.

3.3.12. Trash Amendments. 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 No. 2015-0019, which was approved by the Office of Administrative Law (OAL) on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments established a narrative water quality objective and a prohibition on the discharge of trash, to be implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements.

The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Water Board where trash or debris Total Maximum Daily Loads (TMDLs) are in effect prior to the effective date of the Trash Provisions. There are currently no Trash TMDLs for the Dominguez Channel Estuary therefore the discharges described in this Order are subject to the Trash Amendments. This Order incorporates the requirements of the Trash Amendments through the prohibition of trash discharges to the discharge points. This Order also requires the Discharger to develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which shall include specific BMPs used as stormwater control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Dominguez Channel Estuary. The Discharger is required to submit to the Los Angeles Water Board the updated SWPPP.

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

The State Water Board proposed the California 2014 and 2016 Integrated Report based on a compilation of the Los Angeles Water Boards’ Integrated Reports. These Integrated Reports contain both the Clean Water Act (CWA) section 305(b) water quality assessment and section 303(d) list of impaired waters. In developing the Integrated Reports, the Water Boards solicit data, information and comments from the public and other interested persons. On October 03, 2017 the State Water Board adopted the CWA Section 303(d) List portion of the State’s 2014 and 2016 Integrated Report (State Water Board Resolution No. 2017-0059). On April 06, 2018, the U.S. EPA approved California’s 2014 and 2016 Integrated Report. The CWA section 303(d) List can be found at the following link:

https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

Certain receiving waters in the Dominguez Channel Watershed do not fully support beneficial uses and therefore have been classified as impaired on the 2014-2016 303(d) list and have been scheduled for TMDL development.

The Facility discharges to the Dominguez Channel Estuary within the Dominguez Channel Watershed. The *2014-16 State Water Resources Control Board (State Water*

Board) California 303(d) List includes the classification of the Dominguez Channel Estuary. The pollutants/stressors of concern include, benthic community effects, benzo(a)pyrene, benzo[a]anthracene, chlordane (tissue), chrysene (C1-C4), indicator bacteria, DDT (tissue and sediment), dieldrin (tissue), lead (tissue), PCBs, phenanthrene, pyrene, toxicity, and copper. Following are summaries of TMDLs for the Dominguez Channel Estuary:

3.4.1. **Harbor Toxics TMDL.** The Los Angeles Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the *Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters Toxic Pollutants TMDL* (Harbor Toxics TMDL). The Harbor Toxic 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, this Order contains effluent limitations and monitoring requirements based on the Harbor Toxics TMDL.

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

- a. Interim Sediment concentration-based allocations (in mg/kg sediment) for copper, lead, zinc, DDT, PAHs, and PCBs (Basin Plan, Chapter 7, Section 7-40, p. 7-499).
- b. Final water column concentration-based WLAs ($\mu\text{g/L}$) for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs (Basin Plan, Chapter 7, Section 7-40, pp. 7-501 - 7-502).
- c. Final concentration-based sediment WLA (in mg/kg dry sediment) for cadmium (Basin Plan, Chapter 7, Section 7-40, p. 7-505).
- d. Final concentration-based sediment WLAs (in mg/kg dry sediment) for bioaccumulative compounds: chlordane and dieldrin (Basin Plan, Chapter 7, Section 7-40, p. 7-509).
- e. Provisions for monitoring discharges and/or receiving waters during the TMDL's 20-year implementation schedule to determine attainment with WLAs.

Implementation of the Harbor Toxics TMDL

The provisions included here are consistent with the assumptions and requirements of the WLAs established in the Harbor Toxics TMDL.

- a. Final WLAs. This Order requires final WQBELs that are statistically-calculated based on saltwater column final concentration-based WLAs that are set equal to the saltwater criteria in the CTR: (in $\mu\text{g/L}$, total metal) for copper (3.73), lead (8.52), zinc (85.6), PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene,] (0.049), chlordane (0.00059), 4,4'-DDT (0.00059), dieldrin (0.00014), and total PCBs (0.00017) (referred to in this Order as CTR TMDL-based WLAs). The TMDL includes provisions for a 20-year implementation schedule when warranted. However, this Order requires final WQBELs. Monitoring data for the term of R4-2015-0259 indicates the

Discharger will be able to comply with final effluent limitations therefore a compliance schedule is not warranted in this Order.

The discharge from the Facility only occurs during or after significant storm events. The Facility has not discharged to surface waters since 2008. As such, the Facility is considered an “irregular discharger” as specified in the Harbor Toxics TMDL and is assigned concentration-based water column waste load allocations equal to the CTR saltwater targets for metals and the CTR human health targets for organic compounds. For these dischargers, the direct application of sediment allocations to the effluent is problematic because the volume of effluent necessary to collect a sufficient amount of TSS for sediment analysis is very large and would require a level of planning that would be infeasible to implement for an irregular discharge. The alternative of analyzing bed sediments in the receiving water to demonstrate compliance with the Harbor Toxics TMDL is also problematic because it is not possible to link bed sediment contaminant levels with the quality of the discharge due to the infrequent nature of the Facility’s discharge in combination with contributions of pollutants from other ongoing discharges. Therefore, this Order includes WQBELs for cadmium, copper, lead, zinc, PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene], chlordane, 4,4’-DDT, dieldrin, and total PCBs based on the water column WLAs.

The Harbor Toxics TMDL assigns a final sediment WLA for cadmium (1.2 mg/kg dry sediment) but does not assign a concentration-based WLA for cadmium in the water portion of the effluent. Therefore, a WQBEL for cadmium [Maximum Daily Effluent Limitation (MDEL) = 15 µg/L] has been derived in this Order using CTR criteria and the SIP procedures. Compliance with this WQBEL for cadmium will be used to demonstrate compliance with the sediment WLA for cadmium since the Discharger is an “irregular discharger”.

The Los Angeles Board has determined that the WQBELs established in this Order (i.e., cadmium, copper, lead, zinc, PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, pyrene], chlordane, 4,4’-DDT, dieldrin, and total PCBs) are consistent with, and constitute equivalency with, the Harbor Toxics TMDL’s water and sediment based WLAs for minor and irregular discharges. The concentration of the pollutants in the effluent provides a measure of the pollutants discharged from the Facility to Dominguez Channel Estuary.

- b. Interim WLAs. The Harbor Toxics TMDL includes interim sediment allocations (in mg/kg dry sediment) for copper (220.0), lead (510.0), zinc (789.0), DDT (1.727), PAHs (31.6) and PCBs (1.490) at the Dominguez Channel Estuary. The Harbor Toxics TMDL also includes final sediment allocations (in µg/kg dry sediment) for cadmium (1.2), chlordane (0.5), and dieldrin (0.02).

Order No. R4-2015-0259 established interim sediment allocation monitoring thresholds based on the Harbor Toxics TMDL’s interim sediment allocations

for cadmium, copper, lead, zinc, DDT, PAHs (i.e., benzo(a)anthracene, benzo(a)pyrene, chrysene, or pyrene), and PCBs, and final sediment allocations for cadmium, chlordane, and dieldrin. This Order removes interim WLAs and establishes the final effluent limitations based on the final sediment allocations for aforementioned pollutants. As discussed above, this Discharger is discharging irregularly and interim WLAs are not applicable. This Order requires the Discharger to collect sediment samples when there is a TSS effluent limit exceedance and a CTR TMDL-based effluent limit exceedance for cadmium, copper, lead, zinc, chlordane, dieldrin, 4,4'-DDT, total PCB's, benzo(a)pyrene, benzo(a)anthracene, pyrene or chrysene, then, implementation of the effluent sediment monitoring program is required for these pollutants.

3.4.2. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Dominguez Channel Estuary Compliance Monitoring Program. In accordance with 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 is required to 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 Compliance Monitoring Program. These plans must follow the “TMDL Element - Monitoring Plan” provisions in the Basin Plan, Chapter 7, Section 7-40. The TMDL required that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL (March 23, 2012) for public review and subsequent Executive Officer approval. During the tenure of Order R4-2015-0259, the Discharger submitted a site-specific Monitoring Plan and QAPP to implement the monitoring and reporting requirements of the Harbor Toxics TMDL. If the Discharger decides to change the site-specific Monitoring Plan with a QAPP, the Discharger is required to notify the Los Angeles Water Board within 90 days of the effective date of the Order and submit them to the Los Angeles Water Board within 12 months of the effective date of the Order for public comment, and subsequently, Los Angeles Water Board approval.

The Discharger is required to implement the Monitoring Plan and QAPP after they are approved by the Executive Officer and after a discharge from the Facility occurs. The compliance monitoring program includes water column, sediment, and fish tissue monitoring. The Discharger is required to submit the annual monitoring report to the Los Angeles Water Board by the specified date in the proposed Monitoring Plan. The annual monitoring report must indicate compliance and non-compliance with applicable WLAs.

3.5. Other Plans, Policies and Regulations

3.5.1. Climate Change Adaptation and Mitigation. On March 07, 2017 the State Water Board adopted a resolution in recognition of the challenges posed by climate change that requires a proactive approach to climate change in all State Water Board actions, including drinking water regulation, water quality protection,

and financial assistance (Resolution No. 2017-0012). The resolution lays the foundation for a response to climate change that is integrated into all State Water Board actions, by giving direction to the State Water Board divisions and encouraging coordination with the Los Angeles Water Board. The Los Angeles Water Board also adopted “A Resolution to Prioritize Actions to Adapt and Mitigate the Impacts of Climate Change on the Los Angeles Region’s Water Resources and Associated Beneficial Uses” (Resolution No. R18-004) on May 10, 2018. The resolution summarizes the steps taken so far to address the impacts of climate change within the Los Angeles Water Board’s programs and lists a series of steps to move forward. These include the identification of potential regulatory adaptation and mitigation measures that could be mitigated on a short-term and long-term basis by each of the Los Angeles Water Board’s programs to take into account, and assist in mitigating where possible, the effects of climate change on water resources and associated beneficial uses. This Order contains provisions to require planning and actions to address climate change impacts in accordance with both the State and Los Angeles Water Boards’ resolutions.

The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) and submit the Climate Change Plan to the Los Angeles Water Board for the Executive Officer’s approval no later than 12 months after the effective date of this Order. The Climate Change Plan shall include an assessment of short and long term vulnerabilities of facilities and operations as well as plans to address vulnerabilities of facilities, treatment systems, and outfalls for predicted impacts in order to ensure that facility operations are not disrupted, compliance with permit conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable), wildfires, storm surges, and back-to-back severe storms which are expected to become more frequent.

4. 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: 40 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The Facility is a petrochemical refinery that processes crude oil into various products, including gasoline, diesel fuel, jet fuel, sulfur, coke, LPG, and polypropylene. The discharges

from the Facility through Discharge Points 001, 002, 003, 004, and 005 consist of low volume wastes of steam condensate, atmospheric condensate, non-contaminated service water, air conditioning condensate, irrigation runoff and fire system water (Waste Stream 1). Typical pollutants of concern in these waste streams may include solids, oil and grease, heat, chlorine, sulfides, detergents, organic compounds, and metals. Solids and parameters contributing to oxygen demand are commonly present in wastewater of industrial facilities and therefore, 5-day biochemical oxygen demand @ 20°C (BOD), total suspended solids (TSS), turbidity, and settleable solids are pollutants of concern. Also, pH, temperature, chlorine, sulfides, detergents (MBAS) may be in the discharge and are of concern because the discharge of these pollutants have the potential to adversely affect the water quality and the aquatic life of the receiving water. These pollutants were regulated in Order R4-2015-0259 and are regulated in this Order.

In addition, these waste streams are a potential source of oil and grease, organic compounds and metals. Copper, nickel, silver, zinc, selenium, cyanide bis(2-ethylhexyl)phthalate pentachlorophenol, benzo(a)anthracene, methylene chloride, fluoranthene, aldrin, chrysene, and 4,4'-DDE were regulated in the existing Order (R4-2015-0259) and are considered pollutants of concern. The Facility operation has not changed significantly since the existing Order was issued. Therefore, these pollutants are also considered pollutants of concern for this Order.

The Facility also discharges process wastewater commingled with stormwater (Waste Stream 2) and of boiler blowdown (Waste Stream 3) through Discharge Points 003 and 004.

BOD, TSS, COD, oil and grease, phenolic compounds, ammonia as N, total chromium and chromium (VI) are regulated under the *Petroleum Refining Point Source Category Subpart B: Petrochemical Subcategory* effluent limitation guidelines and standards (ELGs) as defined in 40 CFR § 419.30. The *Development Document for Effluent Limitations Guidelines and Standards for the Petroleum Refining Point Source Category* (Subpart B: Petrochemical Category) indicates these pollutants are common in the wastewater discharged from these facilities and because the Facility is a petroleum refinery they are considered pollutants of concern. The Facility operation has not changed since Order R4-2015-0259 was issued; therefore, these pollutants are also considered pollutants of concern and are regulated in this Order. In addition, aldrin was regulated in the existing Order (R4-2015-0259) and is considered pollutant of concern. Effluent limitations for these pollutants have been included in this Order for discharges of process wastewater comingled with stormwater and boiler blowdown.

Typical pollutants present in these waste streams may include solids, oxygen demanding substances, chlorine, oil and grease, ammonia, sulfides, detergents, organic compounds, and metals. Solids are commonly present in wastewater of industrial facilities and therefore, TSS and settleable solids are pollutants of concern. Also, pH and temperature are pollutants of concern because the discharge of industrial wastewater and stormwater also has the potential to affect the pH and temperature of the receiving water body. Refinery process wastewater and polluted stormwater commonly contain oxygen-demanding substances and therefore, BOD and chemical oxygen demand (COD) are pollutants of

concern. In addition, the Facility deals with crude oil and refinery products that are a potential source of oil and grease, ammonia, organic compounds, and metals.

Parameters such as sulfides, settleable solids, copper, zinc, pentachlorophenol, methylene chloride, fluoranthene, aldrin, MBAS, and heptachlor epoxide were regulated for low volume waste in Order R4-2015-0259. Because the current discharge of low volume waste through Discharge Points 001, 002, 003, 004, and 005 has not changed and the Facility operation has remained the same, all the above pollutants are still considered pollutants of concern for this Order. Limits for parameters such as copper, zinc, cyanide, 1,1-dichloroethylene, pentachlorophenol, hexachlorobenzene, alpha-BHC, beta-BHC, and gamma-BHC that are included in Order No. R4-2015-0259 for process wastewater mixed with stormwater and boiler blowdown are considered pollutants of concern and are included in this Order because the Facility operation has not changed. This Order also includes effluent limitations for pollutants that have limits in Order No. R4-2015-0259 for both low volume waste (lead, selenium, cyanide, bis(2-ethylhexyl)phthalate, chlordane, 4,4'-DDT, dieldrin, total PCBs, benzo(a)pyrene, and pyrene) and process wastewater mixed with stormwater and boiler blowdown (lead, dieldrin, chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene).

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 CFR 122.45(f)(1) requires that all limitations, standards or prohibitions in the Order 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 limitations in an Order on a case-by-case basis limitations based on mass are infeasible because the mass or 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. This Order includes mass-based effluent limitations, where appropriate, to comply with Section 122.45(f)(1).

The Report of Waste Discharge indicates that the discharge rate of low volume wastes through Discharge Points 001, 002, 003, 004, and 005 is 0.045 MGD. Therefore, the proposed mass-based limitations for discharge of low volume wastes are based on that flow.

The Report of Waste Discharge indicates that the discharge rate of process wastewater comingled with stormwater and boiler blowdown through Discharge Points 003 and 004 is 4.4 MGD. Therefore, the proposed technology-based mass limitations for select parameters for stormwater, boiler blowdown, and process wastewater discharged through Discharge Points 003 and 004 is based on a flow of 4.4 MGD. The discharge through Discharge Points 003 and 004 consists of approximately 90% (4 MGD) stormwater and 10% process wastewater (0.4 MGD) with boiler blowdown contributing to less than 1% (0.044 MGD) of the total discharge. This breakdown is used to calculate applicable ELG TBELs for this discharge.

4.1. Discharge Prohibitions.

Discharge Prohibitions in this Order are based on the federal CWA, the Code of Federal Regulations (CFR), the Basin Plan, the Water Code, State Water Board's plans and

policies, U.S. EPA guidance and regulations, and previous permit provisions. This Order includes a new prohibition for trash in order to implement the statewide Trash Provisions. The discharge prohibitions included in this Order are consistent with the requirements set for other dischargers within the Los Angeles Region that are regulated by NPDES permits.

4.2. Technology-based Effluent Limitations

4.2.1. **Scope and Authority.** Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3.

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

- a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including 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.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

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

the Los Angeles Water Board must consider specific factors outlined in 40 CFR section 125.3.

4.2.2. Applicable Technology-Based Effluent Limitations

Two discharges comprised of three different waste streams are authorized for discharge from the Facility – low volume wastes (Waste Stream 1) and process wastewater commingled with stormwater (Waste Stream 2) and boiler blowdown (Waste Stream 3).

Low Volume Wastes: In accordance with section 125.3, this Order includes technology-based effluent limitations for the discharge of low volume waste (Waste Stream 1) through Discharge Points 001, 002, 003, 004 and 005 based on BCT. The technology-based requirements in this Order are based on case-by-case numeric limitations, developed in Order No. R4-2015-0259, using BPJ. In setting these limitations, the Los Angeles Water Board considered the factors listed in 40 CFR section 125.3(d) and chose to apply BCT for these conventional pollutants. The technology-based effluent limitations are the same limitations included in the Order No. R4-2015-0259 for BOD, oil and grease, and TSS. Pursuant to state and federal anti-backsliding regulations, this Order retains effluent limitations for these pollutants as technology-based effluent limitations. These limitations are consistent with technology-based limitations included in other Orders within the State for similar types of discharges.

A summary of the technology-based effluent limitations for Waste Stream 1 is shown in Table F-5.

Table F-5. Summary of Technology-based Effluent Limitations – Low Volume Waste Discharge Points 001, 002, 003, 004 and 005

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Notes
BOD ₅ @ 20°C	mg/L	20	30	
BOD ₅ @ 20°C	lbs/day	7.5	11	a
TSS	mg/L	50	75	
TSS	lbs/day	19	28	a
Oil and Grease	mg/L	10	15	
Oil and Grease	lbs/day	3.8	5.6	a

Footnote for Table F-5

a. Mass-based effluent limitations based upon a maximum authorized discharge of 0.045 MGD.

End of Footnote for Table F-5

Biochemical Oxygen Demand (BOD5). The 5-day BOD test indirectly measures the amount of readily degradable organic material in water by measuring the residual dissolved

oxygen after a period of incubation (usually 5 days at 20° C). This Order addresses BOD through technology-based effluent limitations.

Total Suspended Solids. The Basin Plan requires that, “Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.” As such, the Los Angeles Water Board implemented an MDEL of 75 mg/L for the implementation of the narrative water quality objective for solids. This limitation is consistent with the limitations in Order No. R4-2015-0259 and is retained as the technology-based effluent limitations for Low Volume Wastes discharge at Discharge Points 001, 002, 003, 004 and 005.

Oil and Grease. Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, and causing death. Oil and grease can also cause nuisance conditions (odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The Basin Plan requires that, “Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.” This narrative objective has been translated into a numeric effluent limitation, based on U.S EPA’s Quality Criteria for Water (commonly known as the “Gold Book”). This Order includes the maximum daily limitation for oil and grease (15 mg/L) as a TBEL, which is equivalent to the numeric water quality effluent limitation that would apply for oil and grease for the discharge of Low Volume Wastes.

Process Wastewater Commingled with Stormwater and Boiler Blowdown: Process wastewater from the refinery commingled with the stormwater runoff from process areas (Waste Stream 2) and boiler blowdown from boiler feed water in the refinery and cogeneration facility (Waste Stream 3) are discharged through Discharge Points 003 and 004. Based on the supplemental information submitted by the Discharger on September 13, 2021, the discharge composition is estimated to be greater than 90% storm water, less than 10% wastewater, and less than 1% boiler blowdown. Two types of technology-based effluent limitations (TBELs) apply to this commingled discharge – effluent limitation guidelines and best professional judgment.

The TBELs for Waste Stream 2 and Waste Stream 3 are calculated based upon the following flow rates:

Table F-6. Determination of Flow Rates Comprising Waste Streams 2 and 3

Total flow through Discharge Point 004 =	4.4 MGD
Waste Stream 3 flow (1% of discharge) =	0.044 MGD
Therefore, Waste Stream 2 flow =	$4.4 - 0.044 = 4.356$ MGD
Stormwater flow in Waste Stream 2 (90% of discharge) =	3.96 MGD
Process wastewater flow in Waste Stream 2 =	$4.356 - 3.96 = 0.396$ MGD

Based on the type of operation, the Facility is categorized as a petrochemical refinery as defined in section 419.30 (Effluent Limitation Guidelines and Standards for the Petroleum Refining Point Source Category, ELGs). The subpart applies to discharges resulting from the manufacture of petroleum products by topping,

cracking, petrochemical operations and any other refinery process, except lube operations. Because Waste Stream 2 consists of process wastewater commingled with contaminated runoff, mass-based effluent limitations established in sections 419.32, 419.33, and 419.34 are applicable to the discharge. Sections 419.32, 419.33, and 419.34 contain the BPT, BAT, and BCT limitations for BOD, TSS, COD, oil and grease, ammonia, sulfides, phenolic compounds, total chromium, and hexavalent chromium (chromium VI) for process wastewater and contaminated stormwater. The effluent limitations for process wastewater and contaminated stormwater are determined separately by selecting the most stringent of the BPT, BAT, and BCT limitations. The application of the ELGs requires that technology-based effluent limitations for Discharge Points 003 and 004 be derived based on refinery production (the total crude oil throughput of the Facility) and the treatment processes used. Based on information provided by the Discharger in the Report of Waste Discharge, the effluent limitations in this permit are based on facility production rates of 300,000 barrels per operating day (BPOD) and the treatment processes used

Limits = Throughput x Size Factor x Process Factor x Effluent Limit (found in 40 CFR).

Where the following was applicable:

- Throughput = 300 (kbbbl/day)
- Size Factor = 1.13
- Process Factor = 1.17

Using BOD as an example, and shown in Table F-7 below, the technology-based effluent limits for process wastewater were calculated as the following:

$$300 \times 1.13 \times 1.17 \times 12.1 = 4,799$$

Table F-7 summarizes the technology-based effluent limitations based on the ELGs for process wastewater discharges that comprise part of Waste Stream 2:

Table F-7. Technology-based Effluent Limitations for Waste Stream 2 – Process Wastewater (Effluent Limit in 40 CFR 419 C)

Parameter	BPT 419.32 Daily Max. (lb/kbbl)	BPT 419.32 30-day Avg. (lb/kbbl)	BAT 419.33 Daily Max. (lb/kbbl)	BAT 419.33 30-day Avg. (lb/kbbl)	BCT 419.34 Daily Max (lb/kbbl)	BCT 419.34 30-day Avg. (lb/kbbl)	Final Limit Daily Max (lb/day)	Final Limit 30-day Avg. (lb/day)	ELG Basis for Final Limit	Notes
BOD ₅	12.1	6.5	---	---	12.1	6.5	4,799	2,578	BPT/ BCT	a
TSS	8.3	5.25	---	---	8.3	5.25	3,292	2,082	BPT/ BCT	a
COD	74	38.4	74	38.4	---	---	29,351	15,231	BPT/ BAT	a
Oil and Grease	3.9	2.1	---	---	3.9	2.1	1,547	833	BPT/ BCT	a
Phenolic Compounds	0.088	0.0425	---	---	0.088	0.0425	35	11	BPT/ BAT	a and b

Parameter	BPT 419.32 Daily Max. (lb/kbbl)	BPT 419.32 30-day Avg. (lb/kbbl)	BAT 419.33 Daily Max. (lb/kbbl)	BAT 419.33 30-day Avg. (lb/kbbl)	BCT 419.34 Daily Max (lb/kbbl)	BCT 419.34 30-day Avg. (lb/kbbl)	Final Limit Daily Max (lb/day)	Final Limit 30-day Avg. (lb/day)	ELG Basis for Final Limit	Notes
Ammonia as N	8.25	3.8	8.25	3.8	---	---	3,272	1,507	BPT/ BAT	a
Sulfide	0.078	0.035	0.078	0.035	---	---	31	14	BPT/ BAT	a
Total Chromium	0.183	0.107	---	---	---	---	36	13	BAT	a and b
Hexavalent Chromium	0.016	0.0072	---	---	---	---	2.3	1.0	BAT	a and b

Footnotes for Table F-7

- a. Final Limits = Throughput x Size Factor x Process Factor x Effluent Limit in ELGs. The feed rate for the Facility is 300; the Size Factor = 1.13; and the Process Factor = 1.17.
- b. See BAT effluent limitation factor for Phenolic Compounds, Total Chromium and Hexavalent Chromium at section 419.23(c).
- c. The pH of the wastes discharged shall at all times be within the range of 6.0 to 9.0 pH units.

End of Footnotes for Table F-7

Per the ELGs, additional incremental limits are permitted for the contaminated stormwater flow that comprises part of Waste Stream 2. Technology-based effluent limitations for contaminated runoff have been calculated based on a stormwater flow of 3.96 MGD. These limits were calculated based on the effluent limitations allocated to contaminated runoff in the ELGs established at BPT 419.32(e); BAT 419.33(f); and BCT 419.34(e).

Limits = Effluent limit (found in 40 CFR) x Contaminated runoff flow

Using BOD as an example, the following is applicable:
 Effluent limit found in ELGs: 0.4 lb/1000 gallons
 Contaminated runoff flow: 3.96 MGD

$$\text{Limit} = 0.4 \times \frac{3960,000 \text{ gallons/day}}{1,000 \text{ gallons}} = 1584 \text{ lb/day}$$

Table F-8 summarizes the contaminated stormwater runoff technology-based effluent limitations based on the ELGs for discharges that comprise part of Waste Stream 2:

Table F-8. Technology-based Effluent Limitations for Waste Stream 2 - Contaminated Stormwater Runoff (Effluent Limit in 40 CFR 419 C)

Parameter	BPT 419.32 (e) Daily Max. (lb/1000 gal)	BPT 419.32 (e) 30-day Avg. (lb/1000 gal)	BAT 419.33 (f) Daily Max. (lb/1000 gal)	BAT 419.33 (f) 30-day Avg. (lb/1000 gal)	BCT 419.44 (e) Daily Max. (lb/1000 gal)	BCT 419.44 (e) 30-day Avg. (lb/1000 gal)	Final Limit Daily Max. (lb/day)	Final Limit 30-day Avg. (lb/day)	ELG Basis for Final Limit	Notes
BOD ₅	0.4	0.22	--	--	0.4	0.22	1,584	871	BPT/ BCT	a
TSS	0.28	0.18	--	--	0.28	0.18	1,109	713	BPT/ BCT	a
COD	3.0	1.5	3.0	1.5	--	--	11,880	5,940	BPT/ BAT	a
Oil and Grease	0.13	0.067	--	--	0.13	0.067	515	265	BPT/ BCT	a
Phenolic Compounds	0.0029	0.0014	0.0029	0.0014	--	--	11.5	5.54	BPT/ BAT	a
Ammonia	--	--	--	--	--	--	--	--	--	
Sulfide	--	--	--	--	--	--	--	--	--	
Total Chromium	0.006	0.0035	0.005	0.0018	--	--	20	7.1	BPT/ BAT	a
Hexavalent Chromium	0.00052	0.0002	0.0005	0.00023	--	--	2	0.91	BPT/ BAT	a

Footnotes for Table F-8

- a. Final Limits = Effluent limit (found in 40 CFR - ELGs established at BPT 419.32(e); BAT 419.33(f); and BCT 419.34(e).) x Contaminated runoff flow.
- b. The pH of the wastes discharged shall at all times be within the range of 6.0 to 9.0 pH units.

End of Footnotes for Table F-8

The final mass-based effluent limitations for Waste Stream 2 are obtained by adding the stormwater mass-based effluent limits to those determined for the process wastewater.

Before discharge, Waste Stream 2 is mixed with boiler blowdown (Waste Stream 3) that constitutes less than 1% of the total discharge. To establish the mass-based effluent limitations for the combined discharge for Waste Stream 2 and Waste Stream 3, BCT mass-based technology-based effluent limitations for BOD, TSS, COD, oil and grease, and sulfide for Waste Stream 3 are determined separately and added to those of Waste Stream 2. The mass-based limits for Waste Stream 3 are determined based on the concentration-based effluent limitations (BCT) summarized below.

Table F-9. Best Conventional Pollutant Control Technology (BCT) Technology-based Effluent Limitations for Waste Stream 3 (Boiler Blowdown)

Parameter	Average Monthly (mg/L)	Maximum Daily (mg/L)	Flow (MGD)	Average Monthly (lbs/day)	Maximum Daily (lbs/day)
BOD	20	30	0.044	7.3	11
TSS	50	75	0.044	18	28
COD	80	120	0.044	29	44

Parameter	Average Monthly (mg/L)	Maximum Daily (mg/L)	Flow (MGD)	Average Monthly (lbs/day)	Maximum Daily (lbs/day)
Oil and Grease	10	15	0.044	4	6
Sulfide	--	1	0.044	--	0.4

The limits are determined using the concentration limits for BOD, TSS, COD, oil and grease, and sulfide for Waste Stream 3 established in Order R4-2015-0259 based on the Los Angeles Water Board’s BCT-technology effluent limitations and a flow of 0.044 MGD (boiler blowdown). The final mass-based technology-based effluent limitations for the process wastewater commingled with stormwater (derived from the ELGs) and boiler blowdown (derived from BCT) are calculated by adding the mass-based effluent limits for Waste Streams 2 and 3.

$$\text{Process}_{ELG} + \text{Stormwater}_{ELG} + \text{Boiler}_{BCT} = \text{Total ELG TBEL}_{Mass}$$

Table F-10. Mass-based ELG Technology-based Effluent Limitations – Process Wastewater Commingled with Stormwater and Boiler Blowdown

Parameter	Units	Process _{ELG} Average Monthly	Process _{ELG} Max. Daily	Storm water _{ELG} Average Monthly	Storm water _{ELG} Max. Daily	Boiler _{BCT} Average Monthly	Boiler _{BCT} Max. Daily	Final Limit Average Monthly	Final Limit Max. Daily	Notes
BOD ₅	lbs/day	2,578	4,799	871	1,584	7.3	11	3,456	6,394	a and b
Oil and Grease	lbs/day	833	1,547	265	515	4	6	1,102	2,068	a and b
TSS	lbs/day	2,082	3,292	713	1,109	18	28	2,813	4,429	a and b
Ammonia as N	lbs/day	1,507	3,272	---	---	---	---	1,507	3,272	a and b
COD	lbs/day	15,231	29,351	5,940	11,880	29	44	21,200	41,275	a and b
Chromium, Total	lbs/day	13	36	7.1	20	---	---	20.1	56	a and b
Chromium (VI)	lbs/day	1.0	2.3	0.91	2	---	---	1.91	4.3	a and b
Phenols (4AAP)	lbs/day	11	35	5.54	11.5	---	---	16.54	48	a and b
Sulfide	lbs/day	14	31	---	---	---	0.4	14	31.4	a and b

Footnotes for Table F-10

- See the *USEPA Guide for the Application of Effluent Limitations Guidelines for the Petroleum Refining Industry* (June 1985) for specific details regarding the development of the ELG technology-based effluent limitations.
- Final Limits is the combined limits for Waste Stream 2 and Waste Stream 3, ($\text{Process}_{ELG} + \text{Stormwater}_{ELG} + \text{Boiler}_{BCT} = \text{Total ELG TBEL}_{Mass}$).

End of Footnotes for Table F-10

Table F-11 summarizes the calculated technology-based effluent limitations based on the ELGs and BCT for the process wastewater commingled with stormwater and boiler blowdown (Waste Streams 2 and 3). The following technology-based effluent limitations are carried over from the existing permit to avoid backsliding, except for the maximum daily effluent limitation for sulfide which is more stringent.

Table F-11. Summary of Technology-based Effluent Limitations – Process Wastewater Commingled with Stormwater and Boiler Blowdown Discharge Points 003 and 004

Parameter	Units	Effluent Limitations Average Monthly	Effluent Limitations Maximum Daily	Notes
BOD	mg/L	94	174	a and b
BOD	lbs/day	3,456	6,394	a and c
Oil and Grease	mg/L	30	56	a and b
Oil and Grease	lbs/day	1,102	2,068	a and c
TSS	mg/L	77	121	a and b
TSS	lbs/day	2,813	4,429	a and c
Ammonia as N	mg/L	41	89	a and b
Ammonia as N	lbs/day	1,507	3,272	a and c
COD	mg/L	578	1,125	a and b
COD	lbs/day	21,200	41,275	a and c
Chromium, Total	µg/L	548	1,526	a and b
Chromium, Total	lbs/day	20.1	56	a and c
Chromium (VI)	µg/L	52	117	a and b
Chromium (VI)	lbs/day	1.91	4.3	a and c
Phenols (4AAP)	µg/L	451	1,308	a and b
Phenols (4AAP)	lbs/day	16.54	48	a and c
Sulfide	µg/L	381	856	a and b
Sulfide	lbs/day	14	31.4	a and c

Footnotes for Table F-11

- a. See the USEPA Guide for the Application of Effluent Limitations Guidelines for the Petroleum Refining Industry (June 1985) for specific details regarding the development of the ELG TBELs.
- b. Concentration based effluent limitations are calculated based upon a maximum authorized discharge flow of 4.4 MGD.
- c. ELG mass-based effluent limitations based upon a refinery production of 300,000 bbls and discharge flow volumes as described above.

End of Footnotes for Table F-11

In addition, Order R4-2015-0259 required the Discharger to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) (Attachment G). This Order requires the Discharger to update and continue to implement, the existing SWPPP. The revised SWPPP will reflect current operations, treatment activities, and staff responsible for implementing and supporting the SWPPP. The SWPPP will outline site-specific management processes for minimizing stormwater runoff contamination and for preventing contaminated stormwater runoff from being discharged directly into the storm drain.

This Order also requires that the Discharger develop and implement a Best Management Practices Plan (BMPP). The BMPP shall include a summary of BMPs aimed at controlling the potential exposure of pollutants to stormwater, inspection practices, schedules of preventive maintenance, housekeeping procedures, vehicle management practices, and spill containment and cleanup procedures. The BMPP should demonstrate the Discharger's continued effective implementation of the SWPPP.

4.3. Water Quality-Based Effluent Limitations (WQBELs)

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

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for water bodies in the Los Angeles region. The beneficial uses applicable to Dominguez Channel Estuary are summarized in section 3.3.1 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 CTR criteria for saltwater, or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations to protect the beneficial uses of the Dominguez Channel Estuary, a water of the United States.

The Facility's last discharge event was during the first quarter of 2008. Due to the lack of discharges to surface water, no effluent or receiving water monitoring has been conducted by the Discharger during the term of Order No. R4-2015-0259.

The table below summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or for receiving water for the individual outfalls evaluated based on data, collected during the first quarter of 2008, submitted to the Los Angeles Water Board. These criteria were used to develop effluent limitations included in this Order.

Table F-12. Applicable Water Quality Criteria

CTR No	Constituent	Selected Criteria (µg/L)	CTR Acute Saltwater Criteria (µg/L)	CTR Chronic Saltwater Criteria (µg/L)	CTR Human Health for Consumption of Organisms only (µg/L)	Harbor Toxics TMDL Waste Load Allocation (µg/L)	Notes
1	Antimony, TR	4,300	---	---	4,300	---	
2	Arsenic, TR	36	69	36	---	---	
4	Cadmium, TR	9.36	42.5	9.36		---	
5b	Chromium VI	50	1,100	50		---	
6	Copper, TR	3.7	5.78	3.73	---	3.73	
7	Lead, TR	8.5	220.82	8.52	---	8.52	
8	Mercury	0.051	---	---	0.051		
9	Nickel, TR	8.3	75	8.3	4,600	---	
10	Selenium, TR	71	291	71	---	---	
13	Zinc, TR	86	95.14	85.62	---	85.6	
14	Cyanide	1.00	1	1	220,000	---	
16	TCDD-Equivalents	1.4x10 ⁻⁸	---	---	1.4x10 ⁻⁸	---	
20	Bromoform	360	--	--	360		
38	Tetrachloroethylene	8.85	--	--	8.85		

CTR No	Constituent	Selected Criteria (µg/L)	CTR Acute Saltwater Criteria (µg/L)	CTR Chronic Saltwater Criteria (µg/L)	CTR Human Health for Consumption of Organisms only (µg/L)	Harbor Toxics TMDL Waste Load Allocation (µg/L)	Notes
39	Toluene	200,000	--	--	200,000		
60	Benzo(a)anthracene	0.049	---	---	0.049	---	
61	Benzo(a)pyrene	0.049	---	---	0.049	---	
68	Bis-2(ethylhexyl) Phthalate	5.9	---	---	5.9	---	
73	Chrysene	0.049	---	---	0.049	----	
	Total PAH	---	---	---	---	0.049	a
107	Chlordane	0.00059	0.09	0.004	0.00059	0.00059	
108	4,4'-DDT	0.00059	0.13	0.001	0.00059	0.00059	
111	Dieldrin	0.00014	0.71	0.0019	0.00014	0.00014	
112	Alpha-Endosulfan	0.0087	0.034	0.0087	240	---	
119 – 125	Polychlorinated biphenyls (PCBs)	0.00017	---	0.03	0.00017	0.00017	b

Footnotes to Table F-12

- a. 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(a)anthracene, benzo(a)pyrene, and chrysene. The CTR criteria for pyrene is 11,000 µg/L.
- b. CTR human health criteria for PCBs applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses. Total PCBs as aroclors 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.

End of Footnotes to Table F-12

Table F-12 above also summarizes the applicable water column TMDL-based WLAs for copper, lead, zinc, PAHs, chlordane, 4,4'-DDT, dieldrin, and total PCBs contained in the Harbor Toxics TMDL applicable to the Dominguez Channel Estuary. These WLAs are applicable to the discharges at Discharge Point 001, 002, 003, 004, and 005 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 to calculate the averaging period in accordance with the Harbor Toxics TMDL.

The Harbor Toxics TMDL assigns a final sediment WLA for cadmium (1.2 mg/kg dry sediment) but does not assign a concentration-based WLA for cadmium in the water portion of the effluent. Therefore, WQBELs for cadmium have been derived in this Order using CTR criteria and the SIP procedures. Compliance with this WQBEL for cadmium will be used to demonstrate compliance with the sediment WLA for cadmium.

4.3.3. Determining the Need for WQBELs

a. Reasonable Potential Analysis (RPA) Methodology

In accordance with section 1.3 of the SIP, the Los Angeles 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 Los Angeles 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:

- 1) Trigger 1 - If the $MEC \geq C$ a limit is needed.
- 2) Trigger 2 - If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.
- 3) Trigger 3 - If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates 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 Los Angeles Water Board to conduct the RPA. Upon review of the data, and if the Los Angeles 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. R4-2015-0259 was available for an RPA. Therefore, no new RPA is conducted in preparing this Order. This section includes information on the RPA conducted during the development of Order No. R4-2015-0259, on which the Los Angeles Water Board based the WQBELs in this Order. The RPA was conducted using effluent monitoring data collected during the term of Order R4-2007-0015. Based on the RPA, pollutants that demonstrate reasonable potential for low volume waste are copper, nickel, selenium, zinc, cyanide and bis(2-ethylhexyl)phthalate and for process wastewater commingled with stormwater and boiler blowdown, the pollutants which demonstrate reasonable potential are copper, mercury, zinc and aldrin.

Tables F-13 and F-14 summarize the results of the RPA in Order No. R4-2015-0259. Since the Discharger hasn't been discharging their waste since 2008, the RPA using data collected pre-2008 has been utilized in this Order.

Table F-13. Summary Reasonable Potential Analysis – Low Volume Waste – Discharge Points 001, 002, 003, 004 and 005

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max. Effluent Conc. (MEC) µg/L	Max. Detected Receiving Water Conc. (B) µg/L	RPA Result - Need Limit?	Reason
1	Antimony	4,300	0.83	--	No	MEC<C
2	Arsenic	36	8.10	--	No	MEC<C
4	Cadmium	9.36	0.15	--	No	MEC<C
5b	Chromium, VI	50.35	2.2	--	No	MEC<C
6	Copper	3.73	9.5	8.4	Yes	MEC>C
7	Lead	8.52	5.8	--	No	MEC<C
9	Nickel	8.28	11	14	Yes	MEC>C
10	Selenium	71.14	1.5	170	Yes	B>C & pollutant detected in effluent
13	Zinc	85.62	620	21	Yes	MEC>C
14	Cyanide	1.00	27	--	Yes	MEC>C
20	Bromoform	360	2.3	--	No	MEC<C
39	Toluene	200,000	2.4	--	No	MEC<C
68	Bis(2-Ethylhexyl)Phthalate	5.9	6.2	--	Yes	MEC>C
94	Napthalene	NC	0.57	--	No	No criteria
99	Phenanthrene	NC	0.04	--	No	No criteria
100	Pyrene	11,000	0.05	--	No	MEC<C

In addition, effluent limitations for silver, methylene chloride, pentachlorophenol, and fluoranthene are carried from Order No. R4-2015-0259 based on other information (Trigger 3) because the Los Angeles Water Board considers these pollutants as pollutants of concern for this type of industrial discharge.

**Table F-14. Summary Reasonable Potential Analysis – Process Wastewater
 Commingled with Stormwater and Boiler Blowdown - Discharge Points 003 and 004**

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc. (B) µg/L	RPA Result - Need Limit?	Reason
1	Antimony	4,300	1.4	0.91	No	MEC<C
2	Arsenic	36	2	2	No	MEC<C & B<=C
4	Cadmium	9.36	0.51	0.12	No	MEC<C
5b	Chromium, VI	50.35	3.5	2.9	No	MEC<C
6	Copper	3.73	16	9.3	Yes	MEC>C
7	Lead	8.52	4.5	3.5	No	MEC<C
8	Mercury	0.051	0.1	--	Yes	MEC>C
9	Nickel	8.28	4.2	2	No	MEC<C
10	Selenium	71.14	0.56	0.41	No	MEC<C
13	Zinc	85.62	569	44	Yes	MEC>C
38	Tetrachloroethylene	8.85	0.56	--	No	MEC<C
39	Toluene	200,000	--	0.38	No	MEC<C
94	Napthalene	NC	6.5	--	No	No criteria
102	Aldrin	0.00014	0.0021	--	Yes	MEC>C

Waste Stream 2 (process wastewater commingled with stormwater) and Waste Stream 3 (boiler blowdown) are mixed prior to discharge through Discharge Points 003 and 004. Cyanide, pentachlorophenol, 1,1-dichloroethylene, hexachlorobenzene, alpha-BHC, beta-BHC, and gamma-BHC, and MBAS for both Waste Stream 2 and Waste Stream 3 are considered pollutants of concern. Effluent limitations for these pollutants were carried over from Order No. R4-2015-0259,

b. Priority Pollutants with a Total Maximum Daily Load (TMDL)

The Los Angeles Water Board developed WQBELs for cadmium, copper, lead, zinc, chlordane, 4,4'- DDT, dieldrin, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene and pyrene that have available WLAs under the Harbor Toxics TMDL. The Los Angeles Water Board developed water quality-based effluent limitations for these pollutants pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a separate reasonable potential analysis during the permitting stage when there is an available WLA for the discharge in a TMDL. Similarly, the SIP at Section 1.3 recognizes that reasonable potential analysis at the permit development stage is not conducted if a TMDL has been developed.

a. **Reasonable Potential Analysis Results for Mercury – Mercury Provisions**

As discussed in section 3.3.11 of this Fact Sheet, this Order implements the Mercury Provisions. Table 1 of the Mercury Provisions establishes water quality objective of 12 ng/L (0.012 µg/L) for flowing water bodies with MAR and/or WILD beneficial use designations such as Dominguez Channel Estuary. The Mercury Provisions outline modified Reasonable Potential Analysis procedures that consist of comparing the highest observed annual average mercury concentration with the Table 1 criteria. Los Angeles Water Board staff reviewed monitoring data from the Facility's last discharge in the first quarter of 2008, and the monitoring data indicated non-detect with a method detection limit of 0.035 µg/L. According to the Mercury Provisions, "non-detect" data with the detection limit higher than 4 ng/l are not suitable for the analysis. Since the collected data did not meet the minimum detection limit stated by the Mercury Provisions, those data did not qualify for evaluation and there were no data available upon which to base a RPA. Therefore, no effluent limitations were set in this Order. However, a monitoring requirement for mercury in effluent is included in Attachment E with a new detection limit of 0.5 ng/l.

4.3.4. **WQBEL Calculations**

- a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. 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 Los Angeles Water Board.
- b. The Harbor Toxics TMDL establishes WLAs for copper, lead, zinc, benzo(a)anthracene, benzo(a)pyrene, chrysene, chlordane, 4,4'-DDT, dieldrin, and total PCBs; WQBELs for these constituents are calculated following the procedures in section 1.4 of the SIP. As mentioned above, the Harbor Toxics TMDL assigns a final sediment WLA for cadmium but does not assign a concentration-based WLA for cadmium in the water portion of the effluent. Therefore, the WQBELs for cadmium are established based on the CTR and SIP procedures.
- c. WQBELs for copper, nickel, selenium, zinc, cyanide and bis(2-ethylhexyl)phthalate for discharges of low volume waste (Waste Stream 1) and WQBELs for copper, mercury, zinc, and aldrin for discharges of process wastewater commingled with stormwater and boiler blowdown (Waste Streams 2 and 3) have been developed for Discharge Points 001, 002, 003, 004, and 005 (Waste Stream 1) and Discharge Points 003 and 004 (Waste

Streams 2 and 3). These WQBELs are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

d. **WQBELs Calculation Example**

Using nickel as an example, the following demonstrates how WQBELs were established for this Order. The development and calculation of all WQBELs for this Order use 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.

Calculation of aquatic life 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:

$$\begin{aligned} \text{ECA} &= C + D(C-B) && \text{when } C > B, \text{ and} \\ \text{ECA} &= C && \text{when } C \leq B, \end{aligned}$$

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit, and

B = The ambient background concentration

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

$$\text{ECA} = C$$

When a WLA has been established through a TMDL for a parameter, the WLA is set equal to the ECA.

For nickel, the applicable water quality criteria are:

$$\text{ECA}_{\text{acute}} = 74.45 \text{ } \mu\text{g/L}$$

$$\text{ECA}_{\text{chronic}} = 8.28 \text{ } \mu\text{g/L}$$

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.

$$\text{LTA}_{\text{acute}} = \text{ECA}_{\text{acute}} \times \text{Multiplier}_{\text{acute}99}$$

$$\text{LTA}_{\text{chronic}} = \text{ECA}_{\text{chronic}} \times \text{Multiplier}_{\text{chronic}99}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. 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 nickel, the following data were used to develop the copper chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier _{acute}	ECA Multiplier _{chronic}
4	0.60	0.32	0.53

$$LTA_{acute} = 74.45 \mu\text{g/L} \times 0.32 = 24.00 \mu\text{g/L}$$

$$LTA_{chronic} = 8.28 \mu\text{g/L} \times 0.53 = 4.37 \mu\text{g/L}$$

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

$$LTA = \text{most limiting of } LTA_{acute} \text{ or } LTA_{chronic}$$

For nickel, the most limiting LTA was the $LTA_{chronic}$

$$LTA = LTA_{chronic} = 4.37 \mu\text{g/L}$$

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 nickel, the following data were used to develop the AMEL and MDEL for aquatic life 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 _{MDEL99}	Multiplier _{AMEL95}
4	0.60	3.11	1.55

$$AMEL_{\text{aquatic life}} = 4.37 \mu\text{g/L} \times 1.55 = 6.78 \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 4.37 \mu\text{g/L} \times 3.11 = 13.61 \mu\text{g/L}$$

Calculation of human health AMEL and MDEL

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

$$AMEL_{\text{human health}} = ECA_{\text{human health}}$$

For nickel:

$$ECA_{\text{human health}} = 4,600 \mu\text{g/L}$$

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of Multiplier_{MDEL} to the Multiplier_{AMEL}. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

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

For nickel, following data were used to develop the $MDEL_{\text{human health}}$:

No. of Samples Per Month	CV	Multiplier _{MDEL 99}	Multiplier _{AMEL 95}	Ratio
4	0.6	3.11	1.55	2.01

$$MDEL_{\text{human health}} = 4,600 \mu\text{g/L} \times 2.01 = 9,228 \mu\text{g/L}$$

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

For nickel:

$AMEL_{\text{aquatic life}}$	$MDEL_{\text{aquatic life}}$	$AMEL_{\text{human health}}$	$MDEL_{\text{human health}}$
6.78 $\mu\text{g/L}$	13.61 $\mu\text{g/L}$	4,600 $\mu\text{g/L}$	9,228 $\mu\text{g/L}$

The lowest (most restrictive) of the aquatic life and human health effluent limits for nickel are based on aquatic toxicity and were incorporated into this Order

for discharges of low volume wastes at Discharge Points 001, 002, 003, 004, and 005.

In addition, for low volume waste discharge of selenium there is no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria is established as the WQBELs for selenium. Aquatic life criteria are also more stringent than the human health criteria for cyanide. For bis(2-ethylhexyl)phthalate there is no aquatic life criteria; therefore, the AMEL and MDEL based on human health criteria is established as the WQBELs. The limit for nickel was carried over from Order R4-2015-0259 in this Order. Effluent limitations for selenium, cyanide, and bis(2-ethylhexyl)phthalate were established in Order R4-2015-0259 and are carried over to this Oder.

For process wastewater commingled with stormwater and boiler blowdown discharges (Discharge Points 001, 002, 003, 004, and 005), the effluent limitation for aldrin is based on human health criteria and is more stringent than the effluent limitation based on protection of aquatic life and is included in Order R4-2015-0259. The effluent limitation for mercury is based upon human health criteria as no aquatic life criteria exist. The effluent limit for mercury is carried over from R4-2015-0259. A new effluent limitation for aldrin was established in Order R4-2015-0259 and is carried over into this Order.

The waste load allocations (WLAs) based on Harbor Toxics TMDL for Dominguez Channel Estuary are applicable for discharges of both low volume wastes and process wastewater commingled with stormwater and boiler blowdown. The following are the applicable WLAs: copper (3.73 µg/L), lead (8.52 µg/L), zinc (85.6 µg/L), dieldrin (0.00014 µg/L), 4,4'-DDT (0.00059 µg/L), total PCBs (0.00017 µg/L), and PAHs (0.049 µg/L).

4.3.5. WQBELs Based on Basin Plan Objectives

The Basin Plan Objectives applicable to the Discharger are identified below. These objectives were evaluated with respect to effluent monitoring data and Facility operations.

- a. **pH.** This Order includes effluent and receiving water limitations for pH to ensure compliance with Basin Plan Objectives for pH.
- c. **Temperature.** The Basin Plan states that temperature objectives for enclosed bays and estuaries are specified in the Thermal Plan. The Thermal Plan states “elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving waters by more than 20°F.” An additional overlay of the White Paper establishes that the maximum temperature of discharges that is protective of beneficial uses (aquatic life) is 86°F. A maximum effluent temperature limitation of 86°F, consistent with the Thermal Plan, and an

effluent limit that requires that the effluent not be more than 20 degrees more than the receiving water was determined to be appropriate for protection of aquatic life and is included in this Order.

4.3.6. **Bacteria**

The Bacteria Provisions include bacteria water quality objectives for all waters where the salinity is greater than 1 part per thousand (ppt) more than 5 percent of the time during the calendar year. These objectives are: a six-week rolling geometric mean of *Enterococci* not to exceed 30 colony forming units (CFU) or most probable number (MPN) per 100 milliliters (mL), calculated weekly, with a statistical threshold value (STV) of 110 CFU or MPN/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. Monitoring data submitted during the term of Order R4-2007-0015 indicates a maximum value of 120 MPN/100 mL for *enterococci*. The maximum reported value for total coliform was 1600 MPN/100mL. As discussed above, the Discharger is a non-continuous discharger and the Bacteria Provisions do not contain provisions for non-continuous discharges. Therefore, this Order does not establish effluent limits for bacteria, but includes effluent monitoring requirements for each discharge event.

4.3.7. **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 response includes, but is 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. R4-2015-0259 included chronic toxicity monitoring requirements at Discharge Points 001, 002, 003, 004, and 005 for Low Volume Wastes and Discharge Points 003 and 004 for Process Wastewater Commingled with Stormwater and Boiler Blowdown. The chronic toxicity in-stream waste concentration (IWC) for this discharge is 100 percent effluent. 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 (Ho) for the TST approach is:

Ho: Mean response (IWC in % effluent) \leq 0.75 mean response (Control).

A test result that does not reject this null hypothesis is reported as “Fail”.

Because the type of operation, the Facility is categorized as a petrochemical refinery the Facility included a multitude of chemicals, which individually may not be present in toxic concentrations, but could exhibit aggregate toxic effects as a whole, this Order includes monitoring of chronic toxicity once per discharge event for the effluent at Discharge Points 001, 002, 003, 004, and 005 for Low Volume Wastes and Discharge Points 003 and 004 for Process Wastewater Commingled with Stormwater and Boiler Blowdown.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent (and in some cases, more stringent) as the effluent limitations in Order R4-2015-0259. Therefore, no backsliding has occurred.

4.4.2. Antidegradation Policies

40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. On October 28, 1968, the State Water Board established California’s antidegradation policy when it adopted Resolution Number 68-16, Statement of Policy with Respect to Maintaining the Quality of the Waters of the State. Resolution Number 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The State Water Board has, in State Water Board Order Number 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution Number 68-16 to be fully consistent with the federal antidegradation policy contained in 40 CFR section 131.12. Similarly, CWA section 303(d)(4)(B) and 40 CFR section 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal antidegradation policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The Los Angeles Water Board’s Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The renewal of this NPDES permit is consistent with the anti-degradation policy because it is not expected to allow degradation of receiving water quality. The cumulative effect of all effluent limitations and other requirements included in this Order is to ensure that applicable water quality objectives of the receiving water will be attained, thereby protecting the beneficial uses of the receiving water.

The final effluent limitations in this Order hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation. The permitted discharge is not a new discharge and this Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final effluent limitations in this Order, which include concentration based and mass-based limitations are at least as stringent as the previous permit. Further, there is a rigorous monitoring program in place in this Order to ensure that any discharges will not degrade any historical or existing high quality receiving waters. Therefore, the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

4.4.3. 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, 002, 003, 004, and 005 for low volume wastes are based on a maximum flow of 0.045 MGD.

Non-EGL mass-based effluent limitations applicable to Discharge Points 003 and 004 for process wastewater commingled with stormwater and boiler blowdown are based on a maximum flow of 4.4 MGD.

4.4.4. 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 which apply to Waste Stream 1 consist of restrictions on BOD, oil and grease, and TSS. The technology-based effluent limitations which apply to Waste Streams 2 and 3 consist of restrictions on BOD, TSS, COD, oil and grease, ammonia, sulfides, phenolic compounds, total chromium, and hexavalent chromium (chromium VI). Restrictions on these pollutants are discussed in section 4.2.2 of

the Fact Sheet. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitation 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. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The procedures for calculating the individual water quality-based effluent limitations 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 CFR 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.

Table F-15. Summary of Final Effluent Limitations for Low Volume Wastes - Discharge Points 001, 002, 003, 004, and 005

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
pH	standard units	---	6.5 to 8.5	E, BP	a
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	milligram per liter (mg/L)	20	30	E, BCT	
BOD	pounds per day (lbs/day)	7.5	11	E, BCT	b
Oil and Grease	mg/L	10	15	E, BCT	
Oil and Grease	lbs/day	3.8	5.6	E, BCT	b
Total Suspended Solids (TSS)	mg/L	50	75	E, BCT	
TSS	lbs/day	19	28	E, BCT	b
Settleable Solids	milliliter per liter (ml/L)	0.1	0.3	E, BP	
Turbidity	nephelometric turbidity unit (NTU)	50	75	E	
Temperature	degrees Fahrenheit (°F)	---	86	E, BP	c
Detergent (MBAS)	mg/L	---	0.5	E	

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
MBAS	lbs/day	---	0.2	E	b
Residual Chlorine	mg/L	---	0.1	E, BP	
Residual Chlorine	lbs/day	---	0.04	E, BP	b
Sulfides	mg/L	---	1.0	E, BP	
Sulfides	lbs/day	---	0.4	E, BP	b
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	E, BP	d
Cadmium, TR	µg/L	7.6	15.4	E, TMDL	
Cadmium, TR	lbs/day	0.008	0.07	E, TMDL	b
Copper, TR	µg/L	3.1	6.1	E, TMDL	
Copper, TR	lbs/day	0.001	0.002	E, TMDL	b
Lead, TR	µg/L	7	14	E, TMDL	
Lead, TR	lbs/day	0.003	0.005	E, TMDL	b
Nickel, TR	µg/L	6.7	13	E, CTR	
Nickel, TR	lbs/day	0.0025	0.005	E, CTR	b
Selenium, TR	µg/L	58	117	E, CTR	
Selenium, TR	lbs/day	0.022	0.044	E, CTR	b
Zinc, TR	µg/L	70	141	E, TMDL	
Zinc, TR	lbs/day	0.02	0.05	E, TMDL	b
Cyanide	µg/L	0.5	1.0	E, CTR	
Cyanide	lbs/day	0.0002	0.0004	E, CTR	b
Methylene Chloride	µg/L	1,600	3,210	E	
Methylene Chloride	lbs/day	0.60	1.2	E	b
Pentachlorophenol	µg/L	6.5	13	E	
Pentachlorophenol	lbs/day	0.0024	0.005	E	b
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	E, CTR	
Bis(2-Ethylhexyl)Phthalate	lbs/day	0.002	0.004	E, CTR	b
Fluoranthene	µg/L	42	742	E	
Fluoranthene	lbs/day	0.016	0.3	E	b
Aldrin	µg/L	0.00014	0.00028	E	
Aldrin	lbs/day	0.00000005	0.0000001	E	b
Chlordane	µg/L	0.00059	0.0012	E, TMDL	
Chlordane	lbs/day	0.0000002	0.0000005	E, TMDL	b
Dieldrin	µg/L	0.00014	0.00028	E, TMDL	e
Dieldrin	lbs/day	0.00000005	0.0000001	E, TMDL	b
4,4'-DDT	µg/L	0.00059	0.0012	E, TMDL, CTR	e

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
4,4'-DDT	lbs/day	0.0000002	0.0000005	E, TMDL, CTR	b
Total PCBs	µg/L	0.00017	0.0003	E, TMDL, CTR	e and f
Total PCBs	lbs/day	0.00000006	0.0000001	E, TMDL, CTR	b
Heptachlor Epoxide	µg/L	0.00011	0.00022	E	
Heptachlor Epoxide	lbs/day	0.00000004	0.00000008	E	b
Benzo(a)anthracene	µg/L	0.049	0.1	E, TMDL, CTR	e
Benzo(a)anthracene	lbs/day	0.00002	0.00004	E, TMDL, CTR	b
Benzo(a)pyrene	µg/L	0.049	0.1	E, TMDL, CTR	e
Benzo(a)pyrene	lbs/day	0.00002	0.00004	E, TMDL, CTR	b
Chrysene	µg/L	0.049	0.1	E, TMDL, CTR	e
Chrysene	lbs/day	0.00002	0.00004	E, TMDL, CTR	b
Pyrene	µg/L	11000	22068	E, TMDL, CTR	e
Pyrene	lbs/day	4.13	8.25	E, TMDL, CTR	b

Footnotes for Table 15

- a. The effluent limitations for pH are 6.5 as an Instantaneous Minimum and 8.5 as an Instantaneous Maximum.
- b. The mass (lbs/day) limitations are based on a maximum flow of 0.045 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day
- c. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20°F.
- d. The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”. The MDEL is exceeded when a toxicity test results in a “Fail,” and the percent effect is greater than or equal to 0.50.
- e. Samples analyzed for chlordane, 4,4'-DDT, dieldrin, PCB total, benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene must be unfiltered samples.
- f. Total PCBs (polychlorinated biphenyls) 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.

End of Footnotes for Table 15

Table F-16. Summary of Final Effluent Limitations for Low Volume Wastes - Discharge Points 003 and 004

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
pH	standard units	---	6.5 to 8.5	E, BP	a
BOD	mg/L	89	164	E	
BOD	lbs/day	3,259	6,025	E	b
Oil and Grease	mg/L	29	53	E	
Oil and Grease	lbs/day	1,047	1,955	E	b
TSS	mg/L	74	116	E	
TSS	lbs/day	2,701	4,249	E	b
Ammonia as N	mg/L	41	89	E	
Ammonia as N	lbs/day	1,507	3,272	E	b
Chemical Oxygen Demand (COD)	mg/L	539	1,045	E	
COD	lbs/day	19,766	38,349	E	c
Residual Chlorine	mg/L	---	0.1	E, BCT	
Residual Chlorine	lbs/day	---	3.7	E, BCT	b
MBAS	mg/L	---	0.5	E, BCT	
MBAS	lbs/day	---	18	E, BCT	b
Chromium, Total	µg/L	488	1,386	E	
Chromium, Total	lbs/day	18	51	E	b
Phenols (4AAP)	µg/L	403	1,182	E	
Phenols (4AAP)	lbs/day	15	43	E	b
Sulfide	µg/L	378	856	E, ELG	
Sulfide	lbs/day	14	31.4	E	b
Settleable Solids	ml/L	0.1	0.3	E, BP	
Temperature	°F	---	86	E, BP	d
Chronic Toxicity	Pass or Fail, % Effect (TST)	---	Pass or % Effect <50	E, BP	e
Cadmium, TR	µg/L	7.7	15.4	E, TMDL, CTR	c
Cadmium, TR	lbs/day	0.3	0.6	E, TMDL, CTR	
Chromium (VI)	µg/L	46	104	E	
Chromium (VI)	lbs/day	1.7	3.8	E	c
Copper, TR	µg/L	3.1	6.1	E, TMDL, CTR	

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
Copper, TR	lbs/day	0.1	0.24	E, TMDL, CTR	c
Lead, TR	µg/L	7	14	E, TMDL, CTR	
Lead, TR	lbs/day	0.25	0.5	E, TMDL, CTR	c
Selenium, TR	µg/L	58.3	117	E, TMDL, CTR	
Selenium, TR	lbs/day	2.2	4.3	E, TMDL, CTR	c
Zinc, TR	µg/L	70	141	E, TMDL, CTR	
Zinc, TR	lbs/day	2.6	5.2	E, TMDL, CTR	c
Cyanide	µg/L	0.5	1.0	E	
Cyanide	lbs/day	0.02	0.04	E	c
1,1-Dichloroethylene	µg/L	3.2	6	E	
1,1-Dichloroethylene	lbs/day	0.1	0.2	E	c
Pentachlorophenol	µg/L	6.5	13	E, CTR	
Pentachlorophenol	lbs/day	0.2	0.5	E, CTR	c
Hexachlorobenzene	µg/L	0.0007	0.0015	E, CTR	
Hexachlorobenzene	lbs/day	0.00003	0.00006	E, CTR	c
Aldrin	µg/L	0.00014	0.0003	E, CTR	c and f
Aldrin	lbs/day	0.000005	0.00001	E, CTR	
Chlordane	µg/L	0.00059	0.001	E, TMDL	c and f
Chlordane	lbs/day	0.00002	0.00004	E, TMDL	
Dieldrin	µg/L	0.00014	0.0003	E, TMDL	c and f
Dieldrin	lbs/day	0.000005	0.00001	E, TMDL	
4,4'-DDT	µg/L	0.00059	0.001	E, TMDL	c and f
4,4'-DDT	lbs/day	0.00002	0.00004	E, TMDL	
Total PCBs	µg/L	0.00017	0.0003	E, TMDL	c, f, and g
Total PCBs	lbs/day (Note c)	0.000006	0.00001	E, TMDL	
alpha-BHC	µg/L	0.013	0.026	E, CTR	c
alpha-BHC	lbs/day	0.0005	0.001	E, CTR	
beta-BHC	µg/L	0.05	0.09	E, CTR	c
beta-BHC	lbs/day	0.0017	0.003	E, CTR	
gamma-BHC	µg/L	0.06	0.13	E, CTR	c

Parameter	Units	Average Monthly	Maximum Daily	Basis	Notes
gamma-BHC	lbs/day	0.002	0.005	E, CTR	
Benzo(a)anthracene	µg/L	0.049	0.1	E, TMDL, CTR	c and f
Benzo(a)anthracene	lbs/day	0.002	0.004	E, TMDL, CTR	
Benzo(a)pyrene	µg/L	0.049	0.1	E, TMDL, CTR	c and f
Benzo(a)pyrene	lbs/day	0.002	0.004	E, TMDL, CTR	
Chrysene	µg/L	0.049	0.1	E, TMDL, CTR	c and f
Chrysene	lbs/day	0.002	0.004	E, TMDL, CTR	
Pyrene	µg/L	11000	22,068	E, TMDL, CTR	c and f
Pyrene	lbs/day	402	806	E, TMDL, CTR	

Footnotes for Table 16

- a. The effluent limitations for pH are 6.5 as an Instantaneous Minimum and 8.5 as an Instantaneous Maximum.
- b. ELG mass-based effluent limitations based upon a refinery production of 300,000 bbls and discharge flow volumes as described in Section 4.2.2. of the Fact Sheet.
- c. Non-ELG mass-based effluent limitations based on a maximum discharge of 4.4 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- d. The effluent limitation for temperature is 86°F as an Instantaneous Maximum. Additionally, the maximum temperature of the effluent shall not exceed the natural receiving water temperature by more than 20°F.
- e. The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect”. The MDEL is exceeded when a toxicity test results in a “Fail,” and the percent effect is greater than or equal to 0.50.
- f. Samples analyzed for chlordane, 4,4'-DDT, dieldrin, PCB total, benzo(a)anthracene, benzo(a)pyrene, chrysene, and pyrene must be unfiltered samples.
- g. Total PCBs (polychlorinated biphenyls) 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.

End of Footnotes for Table 16

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications – Not Applicable

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan and applicable statewide water quality control plans. As such, they are a required part of the proposed Order.

5.1. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. These water quality objectives include the requirement to maintain existing or historically high-quality waters pursuant to federal regulations (40 CFR section 131.12) and State Water Board Resolution Number 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on water quality objectives contained in the Basin Plan and applicable statewide water quality control plans.

5.2. Groundwater – Not Applicable

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

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

Sections 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.2. Special Provisions

6.2.1. Reopener Provisions

These provisions are based on 40 CFR part 123. The Los Angeles 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 Los Angeles Water Board, including revisions to the Basin Plan or revisions to the Harbor Toxics TMDL.

6.2.2. Special Studies and Additional Monitoring Requirements

- a. **Initial Investigation Toxicity Reduction Evaluation 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. **Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance, and Dominguez Channel Estuary Compliance Monitoring Program.** 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 collaborating group or develop a site-specific plan to comply with this requirement. Details on these requirements are provided in Section 6.3.2.b. of this Order.

6.2.3. **Best Management Practices and Pollution Prevention**

- a. **Stormwater Pollution Prevention Plan (SWPPP).** The prior permit required the Discharger to develop and implement a SWPPP. This Order requires the Discharger to update the SWPPP with an evaluation of the avoidability and feasible alternatives to bypass events, and continue to implement a SWPPP approved by the Executive Officer of the Los Angeles Water Board. The SWPPP shall outline site-specific management processes for minimizing stormwater runoff contamination and for preventing contaminated stormwater runoff from being discharged directly into the Dominguez Channel Estuary. At a minimum, the management practices shall ensure that raw materials and chemicals do not come into contact with stormwater. SWPPP requirements are included as Attachment G, based on 40 CFR section 122.44(k).
- b. **Best Management Practices Plan (BMPP).** Order No. R4-2015-0259 required the Discharger to develop and implement BMPs in order to reduce the number of pollutants entering the discharge. This Order requires the Discharger to update and continue to 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 update and continue to 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.

6.2.4. Construction, Operation, and Maintenance Specifications

This provision included in Section 6.3.4 of the Waste Discharge Requirements of this Order is based on the requirements of 40 CFR section 122.41(e).

6.2.5. Climate Change Effects Vulnerability Assessment and Mitigation Plan

The Permittee is required to address potential climate change impacts through the development and implementation of a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan), which is due 12 months after the effective date of this Order. This requirement is based on the need to adapt to and mitigate the effects of climate change on permitted facilities as described in State Water Board's Resolution No. 2017-0012 and the Los Angeles Water Board's Resolution No. R18-004.

6.2.5. Other Special Provisions – Not Applicable

6.2.6. Compliance Schedules – Not Applicable

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Los Angeles 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.

7.1. Influent Monitoring – Not Applicable

7.2. Effluent Monitoring

Monitoring for pollutants expected to be present in the discharge are required as established in the MRP (Attachment E) and as required in the SIP. To demonstrate compliance with effluent limitations, the Order retains and updates the monitoring requirements from Order No. R4-2015-0259 to determine compliance with the effluent limitations in section 4.1.1 and 4.1.2 of the Order.

The SIP states that the Los Angeles 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. The Los Angeles Water Board will use the additional data to conduct an RPA and determine if additional WQBELs are required. The Los Angeles Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.

7.3. Whole Effluent Toxicity Testing Requirements

WET protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration can have chronic effects but no acute effects. For this permit, chronic toxicity monitoring

in the discharge is required. The chronic toxicity testing requirements are based on U.S. EPA's 2010 TST statistical approach.

7.4. Receiving Water Monitoring

7.4.1. Surface Water

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants, to determine reasonable potential. The Facility is also required to perform general observations of the receiving water monthly as well as when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, and fungi, slime, or objectionable growths.

The Los Angeles Water Board is requiring that the Discharger conduct upstream receiving water monitoring for the pH, salinity, temperature, and CTR priority pollutants at Monitoring Location RSW-001A, RSW-002A, RSW-003A, RSW-004A, and RSW-005A. Further, the Discharger must analyze temperature, pH, salinity, ammonia, nitrate (as N) and dissolved oxygen of the downstream receiving water at the same time as the samples are collected for priority pollutants analysis at Monitoring Location RSW-001B, RSW-002B, RSW-003B, RSW-004B, and RSW-005B.

7.4.2. Groundwater – Not Applicable

7.5. Other Monitoring Requirements

7.5.1. Stormwater Monitoring Requirements. In order to evaluate the effectiveness of the SWPPP, rainfall monitoring and visual stormwater monitoring are required during discharge events.

7.5.2. Regional Monitoring. Monitoring is required to determine compliance with the assigned wasteload and load allocations specified in the Harbor Toxics TMDL. The Discharger may join a group of stakeholders in the development of Regional Monitoring program(s) to address pollutants as specified in the Harbor Toxics TMDL.

8. PUBLIC PARTICIPATION

The Los Angeles Water Board is considering the issuance of WDRs that will serve as a NPDES permit for the Facility. As a step in the WDR adoption process, the Los Angeles Water Board staff has developed tentative WDRs. The Los Angeles Water Board encourages public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Los Angeles 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 email and public notice.

The public had access to the agenda and any changes in dates and locations through the Los Angeles Water Board's website at <http://www.waterboards.ca.gov/losangeles>.

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process electronically at losangeles@waterboards.ca.gov with a copy to adriana.vallejo@waterboards.ca.gov.

To be fully responded to by staff and considered by the Los Angeles Water Board, the written comments were due at the Los Angeles Water Board office by **5:00 p.m. on May 16, 2022.**

8.3. Public Hearing

The Los Angeles 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: July 14, 2022
Time: 9:00 AM
Location: Ventura County Government Center
800 S. Victoria Avenue #1920
Ventura, CA 93009

Additional information about the location of the hearing and options for participating will be available 10 days before the hearing. Any person desiring to receive future notices about any proposed Board action regarding this Discharger, please contact Adriana Vallejo at adriana.vallejo@waterboards.ca.gov, to be included on the e-mail list.

Interested persons were invited to attend. At the public hearing, the Los Angeles Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Los Angeles 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
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

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

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.s.html

8.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Water Board by calling 213-576-6600.

The tentative WDRs, comments received and response to comments are also available on the Los Angeles Water Board's website at:

http://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/index.shtm
|

8.6. 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 Los Angeles Water Board, reference this facility, and provide a name, address, and phone number.

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Adriana Vallejo at adriana.vallejo@waterboards.ca.gov.

ATTACHMENT G – STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. IMPLEMENTATION SCHEDULE

A stormwater pollution prevention plan (SWPPP) shall be developed and submitted to the Los Angeles 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 Los Angeles Water Board, or no later than 90 days from the date of the submittal of the SWPPP to the Los Angeles Water Board (whichever comes first).

2. OBJECTIVES

The 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 has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges and authorized non-stormwater 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 stormwater discharges and authorized non-stormwater 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 Los Angeles Water Board inspectors.

3. PLANNING AND ORGANIZATION

3.1. Pollution Prevention Team.

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a stormwater pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, stormwater pollution prevention teams may consist of one individual where appropriate.

3.2 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 stormwater 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.

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

Phase	Tasks
Planning and Organization	Form Pollution Prevention Team Review other plans
Assessment Phase	Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-stormwater discharges Assess pollutant risks
Best management Practices Identification Phase	Non-structural BMPs Structural BMPs Select activity and site-specific BMPs
Implementation Phase	Train employees Implement BMPs Conduct recordkeeping and reporting
Evaluation/Monitoring	Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

4. 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.

The following information shall be included on the site map:

- 4.1. The facility boundaries; the outline of all stormwater 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 stormwater discharges and authorized non-stormwater discharges may be received.
- 4.2. The location of the stormwater collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect stormwater discharges, authorized non-stormwater discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, skim ponds, diversion barriers, etc.
- 4.3. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- 4.4. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section 6.1.4. below have occurred.
- 4.5. 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

5. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials¹ 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.

6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section 4.5. above, associated potential pollutant sources and potential

¹ "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 stormwater discharges.

pollutants that could be discharged in stormwater discharges or authorized non-stormwater discharges. At a minimum, the following items related to the facility's industrial activities shall be considered:

- 6.1. **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.
- 6.2. **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 procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
- 6.3. **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.
- 6.4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in stormwater discharges or authorized non-stormwater discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (CFR), part 302) that have been discharged to stormwater 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 CFR, 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 stormwater or non-stormwater discharges, and the preventative measures taken to ensure spills or leaks do not reoccur. The list shall be updated as appropriate during the term of this Order.

- 6.5. **Non-Stormwater Discharges.** Facility operators shall investigate the facility to identify all non-stormwater 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-stormwater discharges shall be described except for those discharges regulated by this Order. This shall include the source, quantity, frequency, and characteristics of the non-stormwater discharges and associated drainage area.

Non-stormwater 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-stormwater discharges with significant materials (as defined in Footnote 1 of section 5 above) or equipment,

6.6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, stormwater discharges associated with industrial activity, or authorized non-stormwater discharges.

6.7. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.

The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similarly to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section 8. below

7. **ASSESSMENT OF POTENTIAL POLLUTANT SOURCES**

The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in section 6 above to determine:

7.1 Which areas of the facility are likely sources of pollutants in stormwater discharges and authorized non-stormwater discharges, and

7.2 Which pollutants are likely to be present in stormwater discharges and authorized non-stormwater discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current stormwater BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to stormwater or authorized non-stormwater discharges; history of spill or leaks; and run-on from outside sources.

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 stormwater discharges and authorized non-stormwater 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.

8. **STORMWATER BEST MANAGEMENT PRACTICES**

8.1. The SWPPP shall include a narrative description of the stormwater BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections 5 and 6 above). The BMPs shall be developed and implemented to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater 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	Spill 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 stormwater 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 stormwater discharges and authorized non-stormwater discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source similar to Table B.

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

8.2.1. 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 stormwater discharges and authorized non-stormwater discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs before considering additional structural BMPs. Below is a list of non-structural BMPs that should be considered:

- **Good Housekeeping.** Consists of practical procedures to maintain a clean and orderly facility.
- **Preventive Maintenance.** Includes the regular inspection and maintenance of structural stormwater controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

- **Spill Response.** Includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
- **Material Handling and Storage.** Includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to stormwater and authorized non-stormwater discharges.
- **Employee Training.** 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 stormwater. 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.
- **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
- **Recordkeeping and Internal Reporting.** 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.
- **Erosion Control and Site Stabilization.** 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.
- **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.
- **Quality Assurance.** Includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

8.2.2. Structural BMPs

When non-structural BMPs as identified above are ineffective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. Below is a list of potential structural BMPs:

- **Overhead Coverage.** Includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges.
- **Retention Ponds.** Includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow stormwater to discharge from the facility.

- **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
- **Secondary Containment Structures.** Includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
- **Treatment.** Includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in stormwater discharges and authorized non-stormwater discharges.

9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) each year. The SWPPP shall be revised, as appropriate, and submitted to the Los Angeles Water Board along with the annual monitoring report. The revisions shall be implemented no later than 90 days after submission. The evaluation is subject to review by the Los Angeles Water Board Executive Officer and modifications may be required. Evaluations shall include the following:

- 9.1. A review of all visual observation records, inspection records, and sampling and analysis results.
- 9.2. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- 9.3. 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.
- 9.4. 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 10.3. below 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 5.4.5 of Attachment D.

10. SWPPP GENERAL REQUIREMENTS

- 10.1. The SWPPP shall be retained onsite and made available upon request of a representative of the Los Angeles Water Board and/or local stormwater management agency (local agency) which receives the stormwater discharges.
- 10.2. The Los Angeles 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 Los Angeles 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 Los Angeles 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 Los Angeles Water Board and/or local agency that the revisions have been implemented.

- 10.3. 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 stormwater discharge, (ii) cause a new area of industrial activity at the facility to be exposed to stormwater, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- 10.4. 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 Order.
- 10.5. When any part of the SWPPP is infeasible to implement by the deadlines specified in this Order due to proposed significant structural changes, the facility operator shall submit a report to the Los Angeles 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 stormwater discharges and authorized non-stormwater discharges. Such reports are subject to Los Angeles Water Board approval and/or modifications. Facility operators shall provide written notification to the Los Angeles Water Board within 14 days after the SWPPP revisions are implemented.
- 10.6. The SWPPP shall be provided, upon request, to the Los Angeles Water Board. The SWPPP is considered a report that shall be available to the public by the Los Angeles Water Board under Section 308(b) of the Clean Water Act.