

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

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**ORDER R4-2019-XXXX  
NPDES NO. CA0055387**

**WASTE DISCHARGE REQUIREMENTS  
FOR TORRANCE REFINING COMPANY, LLC  
TORRANCE REFINERY**

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

**Table 1. Discharger Information**

<b>Discharger</b>	Torrance Refining Company, LLC
<b>Name of Facility</b>	Torrance Refinery
<b>Facility Address</b>	3700 West 190th Street
	Torrance, CA 90509
	Los Angeles County

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude (North)</b>	<b>Discharge Point Longitude (West)</b>	<b>Receiving Water</b>
001	Storm water from the Facility and the City of Torrance; commingled with small amounts of steam condensate and process area wash water	33.8498°	-118.3179°	Torrance Lateral tributary to the Dominguez Channel Estuary

**Table 3. Administrative Information**

This Order was adopted on:	<b>June 13, 2019</b>
This Order shall become effective on:	<b>August 1, 2019</b>
This Order shall expire on:	<b>July 31, 2024</b>
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	<b>180 days prior to the Order expiration date.</b>
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	<b>Major discharge</b>

I, Deborah J. Smith, 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 June 13, 2019.

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Deborah J. Smith, Executive Officer

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## I. FACILITY INFORMATION

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

## II. FINDINGS

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

- A. Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (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. 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.
- B. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations. None of these provisions are applicable in this Order.
- D. Notification of Interested Persons.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- E. Consideration of Public Comment.** The Regional Water Board in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order R4-2013-0138 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 Regional Water Board from taking enforcement action for violations of the previous Order.

## III. DISCHARGE PROHIBITIONS

- A.** Wastes discharged shall be limited to a maximum of 10 million gallons per day (MGD) of storm water from Torrance Refinery and the City of Torrance, comingled with a small amount of steam condensate and process area wash water from Discharge Point 001.
- B.** The discharge of wastewater at a location other than specifically described in this Order is prohibited and constitutes a violation of the Order. The discharge of wastes from accidental spills or other sources is prohibited.

- C. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Torrance Lateral, or other waters of the State and U.S., are prohibited.
- D. Neither the treatment nor the discharge of wastes shall create pollution, contamination, or a nuisance as defined by section 13050 of the Water Code.
- E. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- F. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the federal CWA and regulations adopted thereunder.
- G. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited.
- H. The discharge of any radiological, chemical, or biological warfare agent into the waters of the State is prohibited under Water Code section 13375.
- I. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.
- J. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
- K. The discharge of trash to surface waters or the deposition of trash where it may be discharged into surface waters is prohibited.

#### **IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

##### **A. Effluent Limitations**

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

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

Table 4. Effluent Limitations for Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	--	10 <sup>1</sup>	--	--
<b>Conventional Pollutants</b>					
pH	standard units	--	--	6.5	8.5
Oil and Grease	mg/L	--	15	--	--
	lbs/day <sup>2</sup>	--	1,300	--	--
Total Suspended Solids (TSS)	mg/L	--	75	--	--
	lbs/day <sup>2</sup>	--	6,300	--	--
E. coli	MPN/100mL	--	3	--	--
<b>Non-Conventional Pollutants</b>					
Carbon, Total Organic (TOC)	mg/L	--	110	--	--
	lbs/day <sup>2</sup>	--	9,200	--	--
Settleable Solids	ml/L	--	0.2	--	--
Temperature	°F	--	--	--	80
TPH <sup>4</sup>	µg/L	--	100	--	--
	lbs/day <sup>2</sup>	--	8.3	--	--
Turbidity	NTU	--	75	--	--
<b>Priority Pollutants</b>					
Chromium (VI), Total Recoverable	µg/L	--	16	--	--
	lbs/day <sup>2</sup>	--	1.3	--	--
Copper, Total Recoverable	µg/L	--	7.3 <sup>6</sup>	--	--
	lbs/day <sup>2</sup>	--	0.61 <sup>6</sup>	--	--
Lead, Total Recoverable	µg/L	--	2.2 <sup>6</sup>	--	--
	lbs/day <sup>2</sup>	--	0.18 <sup>6</sup>	--	--
Mercury, Total Recoverable	µg/L	--	0.10	--	--
	lbs/day <sup>2</sup>	--	0.0083	--	--

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Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nickel, Total Recoverable	µg/L	--	48	--	--
	lbs/day <sup>2</sup>	--	4.0	--	--
Zinc, Total Recoverable	µg/L	--	67 <sup>6</sup>	--	--
	lbs/day <sup>2</sup>	--	5.6 <sup>6</sup>	--	--
Benzo(a)anthracene	µg/L	--	0.098	--	--
	lbs/day <sup>2</sup>	--	0.0082	--	--
Benzo(a)pyrene	µg/L	--	0.098	--	--
	lbs/day <sup>2</sup>	--	0.0082	--	--
Benzo(b)fluoranthene	µg/L	--	0.098	--	--
	lbs/day <sup>2</sup>	--	0.0082	--	--
Bis (2-Ethylhexyl) Phthalate	µg/L	--	12	--	--
	lbs/day <sup>2</sup>	--	1.0	--	--
<b>Harbor Toxics TMDL Final Wet-Weather (Unfiltered) Limitations</b>					
Chronic Toxicity	Pass or Fail, % Effect	5			
Copper, Total Recoverable	kg/yr <sup>7</sup>	1.36			
Lead, Total Recoverable	kg/yr <sup>7</sup>	5.98			
Zinc, Total Recoverable	kg/yr <sup>7</sup>	9.75			

<sup>1</sup> The Discharger is required to maintain an effluent flow of 10 MGD or less, except during an emergency storm event, wherein the rainfall or cumulative rainfalls that are equal to or greater than the 50-year return period, 24-hour storm or an equivalent chronic rainfall event. The Discharger may exceed a 10 MGD discharge to the receiving water, only after all storm water storage has been utilized and all steps have been taken to reduce the amount of storm water discharged into the receiving water. In the event of an emergency storm event discharge (as defined in Attachment A definition), the Discharger shall continue to comply with effluent limitations for all pollutants.

<sup>2</sup> The mass limitations are based on a maximum flow of 10 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. If the flow is greater than 10 MGD, the mass loading is to be recalculated using the event specific flow.

<sup>3</sup> The bacteria water quality objective for all waters where the salinity is equal to or less than 1 part per thousand (ppt) 95 percent or more of the time during the CALENDAR YEAR is: a six-week rolling GEOMETRIC MEAN of *Escherichia coli* (*E. coli*) not to exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a STATISTICAL THRESHOLD VALUE (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a CALENDAR MONTH, calculated in a static manner.

<sup>4</sup> TPH equals the sum of TPH gasoline (C4-C12), TPH diesel (C13-C22), and TPH oil (C23+)

- 5 The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as “Pass” or “Fail” and “% Effect” during wet weather. The MDEL is exceeded when a toxicity test results in a “Fail” and the percent effect is greater than or equal to 0.50.
- 6 Effluent limitations apply during dry weather only. Within this Order, dry-weather is assumed for any discharge that is not a result of precipitation or that is the result of a precipitation event of a magnitude that is less than 62.7 cubic feet per second (cfs) as measured at station S28 in the Dominguez Channel.
- 7 Annual effluent limitations applicable to unfiltered water. The mass (kg/yr) limitations were calculated based on a flow of 3.7 MGD for seven days per year and are calculated as follows: Flow volume (millions of gallons) x target concentration (mg/L) x 3.788 gal/L (conversion) x No. of days of discharge.

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

**C. Recycling Specifications – Not Applicable**

**V. RECEIVING WATER LIMITATIONS**

**A. Surface Water Limitation**

The discharge shall not cause the following in Torrance Lateral or the Dominguez Channel Estuary.

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.
2. Water temperature to be altered by more than 5° F above the natural temperature. At no time shall the water temperature be raised above 80° F as a result of waste discharges.
3. Water Contact Recreation Standards
  - a. Geometric Mean Limit:  
*E. coli* density shall not exceed 100/100 ml.
  - b. Statistical Threshold Value (STV) Limits  
*E. coli* density shall not exceed 320/100 ml.

The waterbody Geometric Mean shall not be greater than the applicable Geometric Mean Limit in any six-week interval, calculated weekly. The applicable STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

4. The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharges.
5. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
6. 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.
7. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
8. 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.
9. Accumulation of bottom deposits or aquatic growths.
10. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

11. The presence of substances that result in increases of BOD that adversely affect beneficial uses.
12. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.
13. Changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits: 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%.
14. Damage, discoloration, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.
15. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.
16. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
17. Nuisance, or adversely affect beneficial uses of the receiving water.
18. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

**B. Groundwater Limitations – Not Applicable**

**VI. PROVISIONS**

**A. Standard Provisions**

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
  - a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R., sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order
  - b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.
  - c. 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.

- d. These requirements do not exempt the operator of the facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this 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.
- e. Oil or oily material, chemicals, refuse, or other waste materials 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.
- f. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.
- g. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
  - i. Violation of any term or condition contained in this Order;
  - ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- h. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside
- i. The Discharger shall file with the Regional Water Board a report of waste discharge at least 180 days before making any material change or proposed change in the character, location or volume of the discharge
- j. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture an intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- k. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.
- l. Violation of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.
- m. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
  - i. Name and general composition of the chemical,
  - ii. Frequency of use,
  - iii. Quantities to be used,
  - iv. Proposed discharge concentrations, and
  - v. U.S. EPA registration number, if applicable.

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- 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. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report
- p. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.).
- q. The provisions of this order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

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

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

#### **C. Special Provisions**

##### **1. Reopener Provisions**

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

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

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

- b. **Harbor Toxics TMDL Compliance Monitoring Program.**

As defined in the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters* (Harbor Toxics TMDL), the Discharger is a “responsible party” because it is an “Individual Industrial Permittee”. As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) to monitor compliance with the Harbor Toxics TMDL. The plans shall follow the “TMDL Element - Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. Participating in the collaborative water quality monitoring program and submittal of the Monitoring Plan and QAPP will constitute compliance with the requirement. The Discharger shall join a group already formed, form its own collaborating group with other dischargers, or develop a site-specific monitoring plan.

If the Discharger decides to join a group already formed, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and provide proof of participation. If the Discharger decides to form a new group, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit a coordinated Monitoring Plan with a QAPP to the Regional Water Board within 12 months of the effective date of the Order for public comment and the Regional Water Board approval. If the Discharger decides to develop a site-specific Monitoring Plan with a QAPP, the Discharger shall notify the Regional Water Board within 90 days of the effective date of the Order and submit the Monitoring Plan with a QAPP to the Regional Water Board within 12 months of the effective date of the Order for public comment and the Regional Water Board approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer.

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

For Torrance Lateral, water and total suspended solids samples shall be collected at the outlet of the storm drains discharging to the Channel and the estuary. Fish tissue samples shall be collected in receiving waters of the Dominguez Channel Estuary. Sediment samples shall also be collected in the estuary.

The monitoring program shall include:

- i. **Water Column Monitoring.** Water samples and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for a suite of compounds including, at a minimum, metals, including lead, zinc, and copper, DDT, PCBs, Benzo[a]anthracene, Benzo[a]pyrene, Chrysene,

Phenanthrene, and Pyrene. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment.

In addition to TMDL constituents, general water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement will be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection, if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements.

- ii. **Sediment Monitoring.** A sediment monitoring program shall be developed consistent with the selected method for compliance and all samples shall be collected in accordance with SWAMP protocols.

- a). If compliance will be determined based on achieving sediment quality targets, sediment chemistry samples shall be collected every two years for analysis of general sediment quality constituents and the full chemical suite as specified in sediment quality objective (SQO) Part 1. In addition, benthic community effects shall be assessed in the Dominguez Channel Estuary.

- b). If compliance will be determined based on the SQO compliance method, sediment chemistry samples shall also be collected every five years (in addition to, and in between, the sediment triad sampling events as described below), beginning after the first sediment triad event, to evaluate trends in general sediment quality constituents and listed constituents relative to sediment quality targets. Chemistry data without accompanying sediment triad data shall be used to assess sediment chemistry trends and shall not be used to determine compliance.

SQO objective evaluation as detailed in the SQO Part 1 (sediment triad sampling) shall be performed every five years in coordination with the Biological Baseline and Bight regional monitoring programs, if possible. 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 EO 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 MRP to be approved by the Executive Officer. The sampling design shall be in compliance with the SQO Part 1 Sediment Monitoring section (VII.E).

- iii. **Fish Tissue Monitoring.** Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. The target species in the Dominguez Channel Estuary shall be selected based on residency, local abundance and fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species.
- iv. **Sampling and Analysis Plan.** The Sampling and Analysis Plan must be proposed based on methods or metrics described in the *State Water Board Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Resolution 2008-0070 – SQO Part 1), and the *U.S.EPA or American Society for Testing and Materials* (ASTM). The plan shall include a list of chemical analytes for the water column and sediment.
- v. **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) shall describe the project objectives and organization, functional activities, and quality

assurance/quality control protocols for the water and sediment monitoring. The QAPP shall include protocols for sample collection, standard analytical procedures, and laboratory certification. All samples shall be collected in accordance with Surface Water Ambient Monitoring Program (SWAMP) protocols.

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

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

### **3. Best Management Practices and Pollution Prevention**

The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order.

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

Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The plans shall be reviewed annually and at the same time and updated as required. Updated information shall be submitted to the Regional Water Board within 30 days of revision.

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

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

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

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

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

### **VII. COMPLIANCE DETERMINATION**

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

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

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

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

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as “Not Detected” (ND) or “Not Detected but Not Quantified” (DNQ) to have concentrations equal to zero, provided that the applicable ML is used.

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

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

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

#### **D. Multiple Sample Data.**

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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

If the average (or when applicable, the median determined by section D above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation; though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. If multiple samples are taken the Discharger will only be considered out of compliance for days when the discharge occurs. For anyone calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

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

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

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

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

**G. Instantaneous Minimum Effluent Limitation.**

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

**H. Instantaneous Maximum Effluent Limitation.**

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

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

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

**J. Mass and Concentration Limitations**

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

**K. Chronic Toxicity.**

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

The null hypothesis ( $H_0$ ) for the TST statistical approach is:

Mean discharge IWC response  $\leq 0.75 \times$  Mean control response.

A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as:

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

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent Effect” is  $\geq 50\%$ .

**L. Bacterial Standards and Analyses**

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

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

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

Detection methods used for coliforms (total, fecal, and *E. coli*) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. part 136 (revised August 28, 2017), unless alternate methods



have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.

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## ATTACHMENT A – DEFINITIONS

### Arithmetic Mean ( $\mu$ )

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

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

### Average Monthly Effluent Limitation (AMEL)

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

### Average Weekly Effluent Limitation (AWEL)

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

### Bioaccumulative

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

### Carcinogenic

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

### Chlordane

Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

### 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.

### DDT

Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

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**Degrade**

Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

**Detected, but Not Quantified (DNQ)**

Sample results that are less than the reported Minimum Level, 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 waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001)

**Enclosed Bays**

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

**Endosulfan**

The sum of endosulfan-alpha and -beta and endosulfan sulfate.

**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 part 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.

**Halomethanes** shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

**HCH** shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

**Inland Surface Waters**

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

**Instantaneous Maximum Effluent Limitation**

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

**Instantaneous Minimum Effluent Limitation**

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

**Maximum Daily Effluent Limitation (MDEL)**

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

**Median**

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

**Method Detection Limit (MDL)**

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 C.F.R. 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.

**Ocean Waters**

The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

**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)**

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.

**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 Ocean Plan Table 1 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

**Pollution Prevention**

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

**Reporting Level (RL)**

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

**Source of Drinking Water**

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

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

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

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

where:

x is the observed value;

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

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)**

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

**Trash**

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

**Water Recycling**

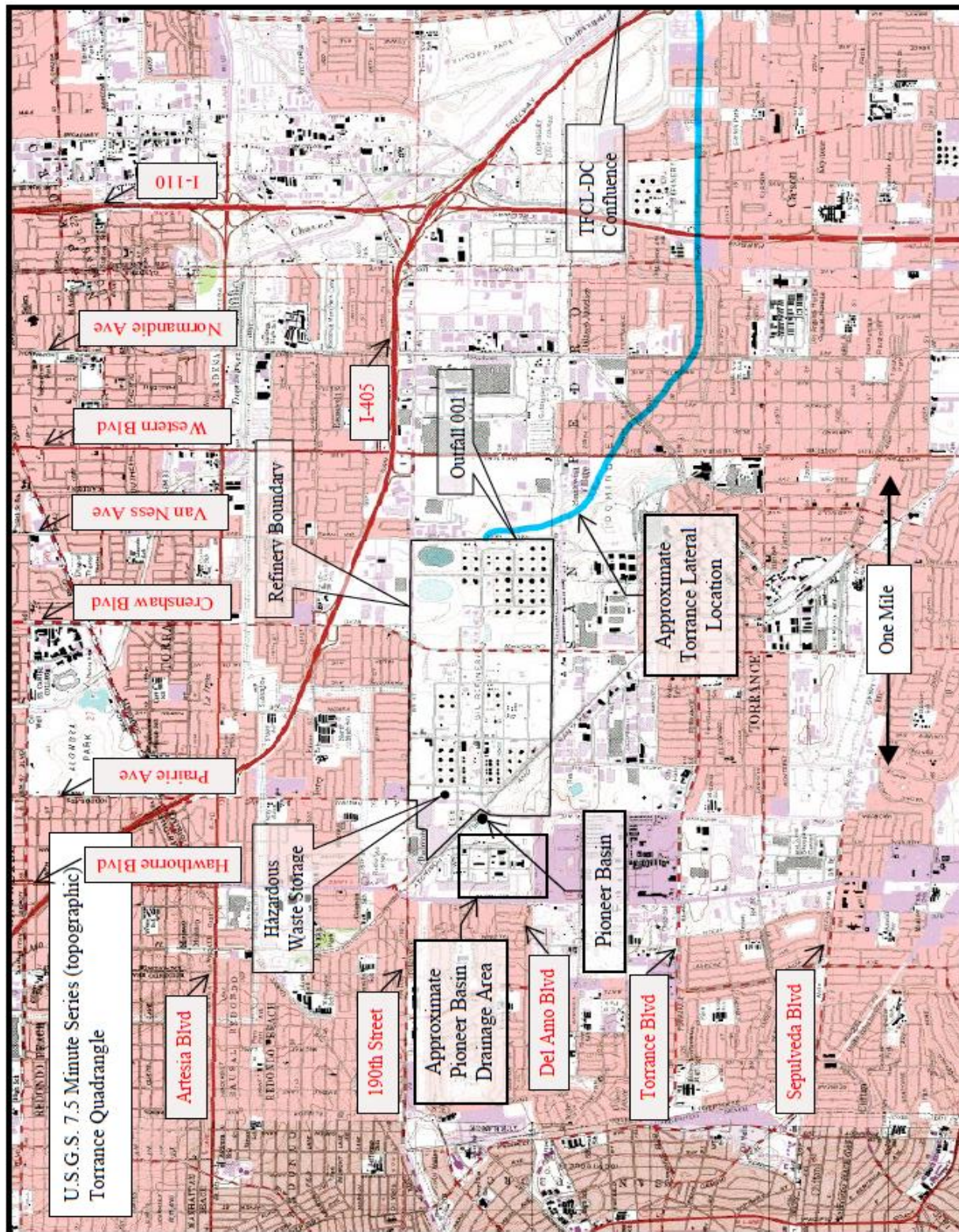
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

**Wet Weather**

As per the Harbor Toxics TMDL, wet weather conditions apply to any day when the maximum daily flow measured at a location within the Dominguez Channel is equal to or greater than 62.7 cubic feet per second.



# ATTACHMENT B – SITE MAP- TORRANCE REFINING COMPANY LLC (TORC)

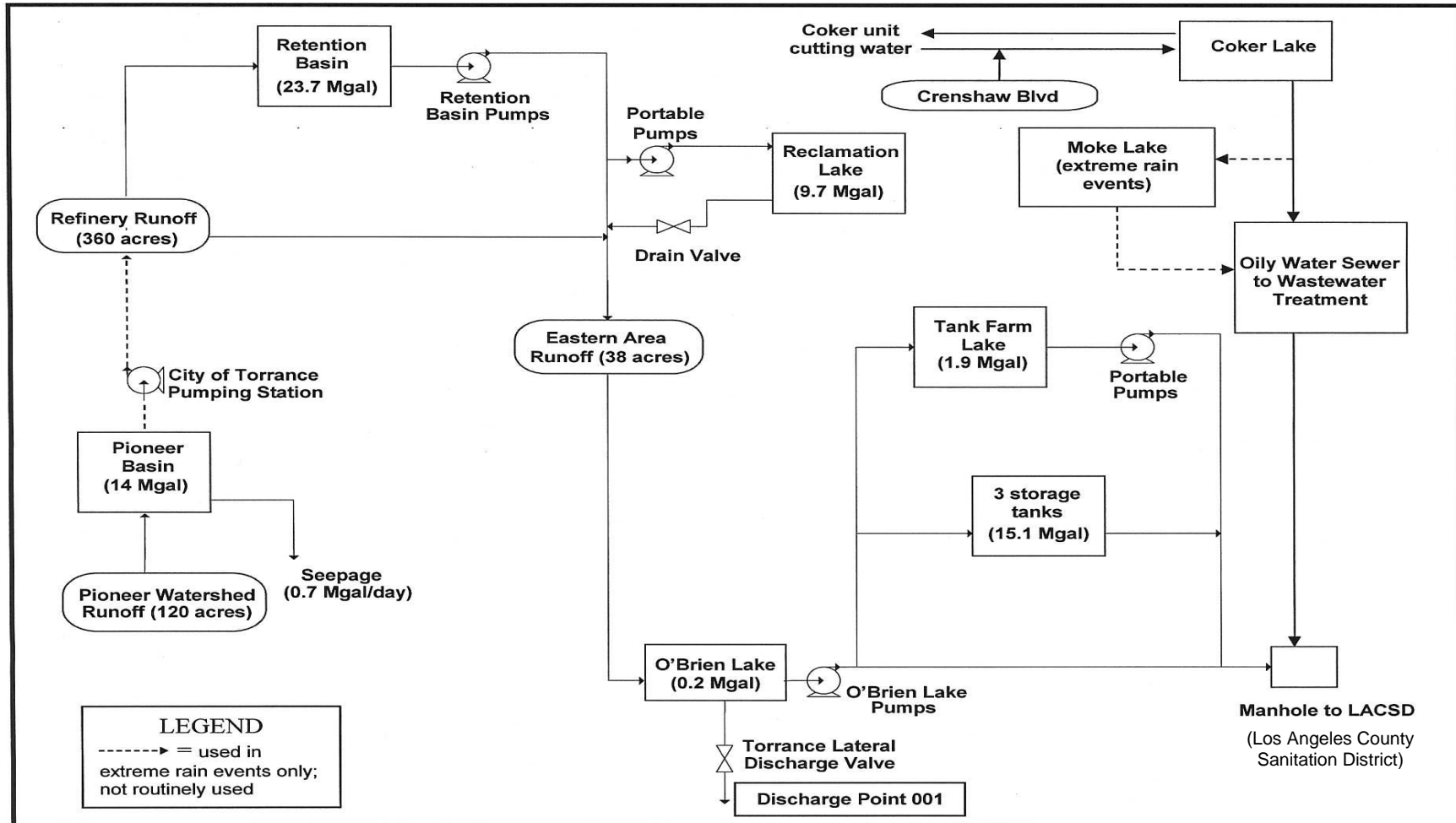


(TFCL-DC Confluence – Torrance Flood Control Lateral-Dominguez Channel Confluence)

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## ATTACHMENT C – FLOW SCHEMATIC

Attachment C- TORC Storm Water Storage and Collection Process Flow Diagram  
US EPA Form 2E Section VI



Note: Dike area storage is not shown. Storm water from dike areas is typically held up during the storm and does not enter surface drainage directly. Tank dikes areas may also be used to store storm water from other areas consistent with maintaining required containment volume. Storm water from diked areas can be pumped to Reclamation Lake for transfer to LACSD and/or Discharge Point 001.



## ATTACHMENT D – STANDARD PROVISIONS

### I. STANDARD PROVISIONS – PERMIT COMPLIANCE

#### A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

#### B. Need to Halt or Reduce Activity Not a Defense

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

#### C. Duty to Mitigate

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

#### D. Proper Operation and Maintenance

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

#### E. Property Rights

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

#### F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

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2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

#### **G. Bypass**

1. Definitions
  - a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
  - b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, shall

also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)

- b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, notices shall be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii).)

## **H. Upset**

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

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

### **B. Duty to Reapply**

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

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## C. Transfers

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

## III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B. Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
  - 1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
  - 2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N for the measured pollutant or pollutant parameter.

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

## IV. STANDARD PROVISIONS – RECORDS

- A. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)
- B. Records of monitoring information shall include:
  - 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
  - 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
  - 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
  - 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
  - 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
  - 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)
- C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

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

## **V. STANDARD PROVISIONS – REPORTING**

### **A. Duty to Provide Information**

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

### **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to

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or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

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

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

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

### **C. Monitoring Reports**

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

### **D. Compliance Schedules**

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

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

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

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

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

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

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

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

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

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

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

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

#### **I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the

Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

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

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

**VI. STANDARD PROVISIONS – ENFORCEMENT**

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

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of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 C.F.R. section 122.41(a)(3)].

- E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 C.F.R. section 122.41(k)(2)]

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Non-Municipal Facilities

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

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));
  - b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 5742)

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 5742)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

### I. GENERAL MONITORING PROVISIONS

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

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

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

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

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

- 1. When the pollutant under consideration is not included in Attachment H;
  - 2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 C.F.R. part 136 (revised August 28, 2017);
  - 3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;
  - 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,
  - 5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes
- K. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R. section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
  - L. Field analyses with short sample holding times such as pH, total residual chlorine, dissolved oxygen and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of

analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.

- M. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- N. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.
- O. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there are fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.
- P. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board  
Quality Assurance Program Officer  
Office of Information Management and Analysis  
1001 I Street  
Sacramento, CA 95814
- Q. For parameters that both average monthly and maximum daily limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger may collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent may be increased to weekly and may continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit
- R. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:
  - 1. Types of wastes and quantity of each type;
  - 2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
  - 3. Location of the final point(s) of disposal for each type of waste.If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted
- S. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

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## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Prior to the discharge to the Torrance Lateral (Latitude 33.8498°, Longitude -118.3179°).
---	RSW-001	In Torrance Lateral 50 feet downstream of Outfall 001 (as Outfall 001 is the beginning of Torrance Lateral)

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

## III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location – EFF-001

1. The Discharger shall monitor treated storm water and other process wastewaters at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding minimum level:

**Table E-2. Effluent Monitoring at Monitoring Location EFF-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD <sup>1</sup>	Metered	1/Day	--
<b>Conventional Pollutants</b>				
pH	std. units	Grab	1/Discharge Event <sup>2</sup>	3
Oil and Grease <sup>4</sup>	mg/L	Grab	1/Discharge Event <sup>2</sup>	3
Total Suspended Solids (TSS) <sup>4</sup>	mg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
<b>Non-Conventional Pollutants</b>				
Ammonia Nitrogen, Total (as N)	mg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Chemical Oxygen Demand (COD)	mg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Carbon, Total Organic (TOC) <sup>4</sup>	mg/L	Grab	1/Discharge Event <sup>2</sup>	3
Chromium, Total	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Chronic Toxicity	Pass or Fail and % Effect	Grab or Composite <sup>2A</sup>	1/Discharge Event	5

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<i>Escherichia coli</i> ( <i>E. coli</i> )	MPN/ 100 ml	Grab	1/Discharge Event <sup>2</sup>	3
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1/Discharge Event <sup>2</sup>	3
Settleable Solids	ml/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Temperature	°F	Grab	1/Discharge Event <sup>2</sup>	3
TPH as Diesel (C <sub>13</sub> -C <sub>22</sub> ) <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	EPA Method 503.1, 8015B, or 8270
TPH as Waste Oil (C <sub>23+</sub> ) <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	EPA Method 503.1, 8015B, or 8270
Turbidity	NTU	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Xylene <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
<b>Priority Pollutants</b>				
Chromium (VI), Total Recoverable <sup>4</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Copper, Total Recoverable <sup>6</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Lead, Total Recoverable <sup>6</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Mercury, Total Recoverable <sup>4</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Nickel, Total Recoverable <sup>4</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Silver, Total Recoverable	µg/L	Grab or Composite	1/Discharge Event <sup>2</sup>	3
Thallium, Total Recoverable	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Zinc, Total Recoverable <sup>6</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Benzene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Benzo(a)anthracene <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Benzo(a)pyrene <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	3

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Benzo(b)fluoranthene <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Bis (2-Ethylhexyl)Phthalate <sup>4</sup>	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Chrysene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Total DDT	µg/L	Grab or Composite <sup>2A</sup>	1/Discharge Event <sup>2</sup>	3
Ethylbenzene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Total PCBs	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Phenanthrene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Pyrene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Toluene	µg/L	Grab	1/Discharge Event <sup>2</sup>	3
Remaining Priority Pollutants <sup>7</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Year <sup>2</sup>	3
TCDD Equivalents <sup>8</sup>	µg/L	Grab or Composite <sup>2A</sup>	1/Year <sup>2</sup>	3

<sup>1</sup> MGD= million gallons per day.

<sup>2</sup> Sampling shall be performed during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If the discharge is continuous and occurs for multiple days, at least one sample per seven days of discharge must be collected. If there is no discharge to surface waters, then no monitoring is required. In the corresponding monitoring report, the Discharger will indicate that no effluent was discharged to surface water during the reporting period.

<sup>2A</sup> For these parameters, the Discharger has the option to either:

- 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
- 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.

<sup>3</sup> Pollutants shall be analyzed using the analytical methods described in Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP. Where no methods are specified for a given pollutant, methods shall be approved by this Regional Water Board or the State Water Board.

<sup>4</sup> The mass emission (lbs/day) for the discharge shall be reported and calculated using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$M = 8.34 \times C_e \times Q$$

Where: M = Mass discharge for a pollutant, lbs/day

C<sub>e</sub> = Limitation concentration for a pollutant, mg/L



Q = Actual discharge flow rate, MGD

- <sup>5</sup> Monitoring shall be conducted in accordance with Section V. Whole Effluent Toxicity Testing Requirements of this MRP.
- <sup>6</sup> The cumulative annual mass emission (kg/yr) for the discharge shall be calculated and reported in each Quarterly Report using the effluent concentration and the actual flow rate measured at the time of discharge using the formula:

MA = Sum for calendar year ( $3.785 \times C_e \times V$ )

where:

MA = cumulative mass discharge for a pollutant, kg/yr, during wet-weather, within the calendar year.

3.785 = conversion factor

$C_e$  = measured effluent concentration for a pollutant, mg/L

V = actual volume (millions of gallons) discharged over representative sample period.

- <sup>7</sup> Priority Pollutants as defined by the California Toxics Rule (CTR) are included in Attachment I of this Order. PCBs must be sampled once during Year 1 of the permit term. For mercury analysis, method 1631E shall be used.
- <sup>8</sup> TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). TCDD equivalents include 2,3,7,8-TCDD plus 16 dioxin and furan congeners and shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners:

Dioxin-TEQ (TCDD Equivalents) =  $\Sigma(C_x \times \text{TEF}_x)$

where:  $C_x$  = concentration of, dioxin or furan congener x

$\text{TEF}_x$  = TEF for congener x

**Minimum Levels, Toxicity Equivalency Factors**

<b>Congeners</b>	<b>Minimum Levels (pg/L)</b>	<b>Toxicity Equivalency Factor (TEF)</b>
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

## **V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

### **A. Chronic Toxicity Testing**

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

The chronic toxicity IWC for the discharges at Discharge Point 001 is 100 percent effluent.

## 2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test and 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.

## 3. Chronic Toxicity Effluent Monitoring Program

For this Permit, samples are collected from an outfall discharging to the receiving water. 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 Freshwater Organisms* (EPA/821/R-02/013, 2002). In no case shall these species be substituted with another test species unless written authorization from the Regional Water Board Executive Officer is received.

- a. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).
- b. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
- c. A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

## 4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this permit's first required sample collection. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests using the fish, an invertebrate, and the algae species previously referenced. After this screening period, the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle.

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

Toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity effluent limits.

## 5. Quality Assurance and Additional Requirements

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

- a. The discharge is subject to a determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) statistical approach described in the *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 statistical approach is:

Mean discharge IWC response  $\leq$  (0.75 x Mean control response).

A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as:

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

- b. 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 for the subsequent discharge event.
- c. 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.
- d. All reference toxicant test results should be reviewed and reported. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).
- e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

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

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

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

#### **7. Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process**

- a. **Toxicity Identification Evaluation (TIE).** A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if a chronic toxicity test shows “Fail and % Effect value  $\geq 50$ ”. The Discharger shall initiate a TIE using, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations*; *Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

- b. **Toxicity Reduction Evaluation (TRE).** When a toxicant or class of toxicants is identified, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs and/or treatment are identified, the Discharger shall submit a TRE Corrective Action Plan to the Executive Officer for approval. At minimum, the plan shall include:
  - i. The potential sources of pollutant(s) causing toxicity.
  - ii. Recommended BMPs and/or treatment to reduce the pollutant(s) causing toxicity.
  - iii. Follow-up monitoring to demonstrate that toxicity has been removed.
  - iv. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
  - v. A schedule for these actions, progress reports, and the final report.
- c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
- d. The Discharger shall conduct routine effluent monitoring for the duration of the TIE/TRE process.
- e. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

## 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 titled *Report Preparation*, including:

- a. The toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported in the SMR for that testing month.
- b. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- c. TRE/TIE results. The Regional Water Board Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.
- d. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.
- e. Tabular data and graphical plots clearly showing the laboratory’s performance for the reference toxicant for the previous 20 tests and the laboratory’s performance for the control mean, control standard deviation, and control coefficient of variation for the previous 12-month period.
- f. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Regional Water Board staff.

## VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

## VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

## VIII. RECEIVING WATER MONITORING REQUIREMENTS

### A. Monitoring Location RSW-001

1. The Discharger shall monitor RSW-001 as follows:

**Table E-3. Receiving Water Monitoring Requirements – RSW-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard units	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Temperature	°F	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Dissolved Oxygen	mg/L	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Chlorine, Total Residual	µg/L	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Salinity	mg/L	Grab	1/Discharge Event <sup>1</sup>	<sup>2</sup>
Priority Pollutants <sup>3</sup>	µg/L	Grab	1/Year	<sup>2</sup>
TCDD Equivalents <sup>4</sup>	µg/L	Grab	1/Year	<sup>2</sup>

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, provided as Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

<sup>2</sup> Receiving water pH, hardness, and temperature shall be analyzed at the same time the samples are collected for Priority Pollutants analysis as well as TCDD equivalents.

<sup>3</sup> Priority Pollutants as defined by the California Toxics Rule (CTR) are included in Attachment I of this Order. For mercury analysis, method 1631E shall be used.

<sup>4</sup> TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). TCDD equivalents include 2,3,7,8-TCDD plus 16 dioxin and furan congeners and shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

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

where:  $C_x$  = concentration of, dioxin or furan congener x  
 $\text{TEF}_x$  = TEF for congener x

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**Minimum Levels, Toxicity Equivalency Factors**

<b>Congeners</b>	<b>Minimum Levels (pg/L)</b>	<b>Toxicity EquivalencyFactor (TEF)</b>
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

## IX. OTHER MONITORING REQUIREMENTS

### A. Visual Monitoring

In addition to the requirements for monitoring the receiving water described above, the Discharger is required to perform general observations of the receiving water when discharges occur and report the observations in the quarterly monitoring report. The receiving water monitoring program shall consist of periodic surveys of the receiving water.

Receiving Water Observations. General observations of the receiving water shall be made at each discharge point on a monthly basis and 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 noted. The following observations shall be made

1. Time, and date of monitoring
2. Weather conditions
3. Color of water
4. Appearance of oil films or grease, or floatable materials
5. Extent of visible turbidity or color patches
6. Description of odor, if any, of the receiving water
7. Presence and activity of California Least Tern and California Brown Pelican

### B. Rainfall Monitoring

The Discharger shall measure and record the rainfall on each day of the month at the Facility. If no rainfall measurement data is available at the Facility, the Discharger may submit data obtained from the nearest city/county operated rain gauge monitoring station. The location of the rain gauge utilized and the distance from the Facility and any other information shall be included in the monitoring report for that month.

## C. Regional Monitoring

The Discharger is required to participate in the development of Regional Monitoring Program(s) to address pollutants as specified in the Harbors Toxics TMDL. If the Discharger joins a group of stakeholders to complete this monitoring, the Discharger must provide documentation of participation and a description of applicable responsibilities. The Regional Water Board must also be provided with documentation of the availability of the reports associated with the implementation of the Monitoring Plan. If the Discharger chooses to develop its site-specific plan or form its own group, the Discharger shall notify the Regional Water Board as per the requirements enumerated in section VI.C.2.b of this Order.

## X. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.
3. If the Discharger conducts monitoring more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order.
4. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.
5. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
6. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section V.

### B. Self-Monitoring Reports (SMRs)

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

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**Table E-4. Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On...</b>	<b>Monitoring Period</b>	<b>SMR Due Date</b>
1/Discharge Event	Permit effective date	One per week (or any 7-day)	Submit with quarterly SMR
1/Quarter	Permit effective date	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
1/Year	Permit effective date	January 1 through December 31	February 1 of the following year

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

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

- 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).
- 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.

- Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 5. Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
- 6. Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger



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

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
7. The Discharger shall submit SMRs in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
  - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

#### **C. Discharge Monitoring Reports (DMRs)**

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

#### **D. Other Reports**

1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
  - a. Initial Investigation TRE workplan
  - b. Updated Storm Water Pollution Prevention Plan (SWPPP)
  - c. Updated Best Management Practices Plan (BMPP)
  - d. Updated Spill Control Plan (SCP)

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 Regional Water Board within 30 days of revisions.

2. Within 90 days of the effective date of this Order, the Discharger must submit to the Regional Water Board notification of whether the Discharger will be participating with an organized group of Responsible Parties to complete the regional monitoring required by the Harbors Toxics TMDL and included in section VI.C.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 Regional Water Board within 12 months from the effective date of this Order. Regional Water Board staff will review the plan and provide an opportunity for public comment. After the receipt of the plan the Executive Officer will comment or approve the plan. The Discharger has six months after the approval to implement the plan.

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

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## ATTACHMENT F – FACT SHEET

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## ATTACHMENT F – FACT SHEET

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

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

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	<b>4B192079002</b>
<b>Discharger</b>	<b>Torrance Refining Company, LLC</b>
<b>Name of Facility</b>	<b>Torrance Refinery</b>
<b>Facility Address</b>	<b>3700 West 190<sup>th</sup> Street</b>
	<b>Torrance, CA 90509</b>
	<b>Los Angeles County</b>
<b>Facility Contact, Title and Phone</b>	<b>Amy Kim, Environmental Advisor, 310-212-3760</b>
<b>Authorized Person to Sign and Submit Reports</b>	<b>Steven Steach, Torrance Refinery Manager, 310-212-4500</b>
<b>Mailing Address</b>	<b>3700 West 190<sup>th</sup> Street, Torrance, CA 90509</b>
<b>Billing Address</b>	<b>Same as Mailing Address</b>
<b>Type of Facility</b>	<b>Petroleum Refining (SIC 2911)</b>
<b>Major or Minor Facility</b>	<b>Major</b>
<b>Threat to Water Quality</b>	<b>2</b>
<b>Complexity</b>	<b>C</b>
<b>Pretreatment Program</b>	<b>No</b>
<b>Recycling Requirements</b>	<b>No</b>
<b>Facility Permitted Flow</b>	<b>10 million gallons per day (MGD)</b>
<b>Facility Design Flow</b>	<b>Not applicable</b>
<b>Watershed</b>	<b>Dominguez Channel</b>
<b>Receiving Water</b>	<b>Torrance Lateral to Dominguez Channel Estuary</b>
<b>Receiving Water Type</b>	<b>Inland Surface Water</b>

- A. Torrance Refining Company, LLC (hereinafter Discharger), is the owner and operator of the Torrance Refinery Facility (hereinafter Facility or Refinery) located at 3700 West 190th Street, Torrance, California.

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

- B. The Facility discharges wastewater to the Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537), a tributary to the Dominguez Channel Estuary, a water of the United States, and is currently regulated by Order No. R4-2013-0138 which was adopted on September 12, 2013 and expired on October 12, 2018. However, pursuant to 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.
- C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its waste discharge requirements (WDRs) and the National Pollutant Discharge Elimination System (NPDES) permit on April 12, 2018. Supplemental information was requested on May 11, 2018 and received on May 21, 2018. The application was deemed complete on May 21, 2018.
- D. Regulations at 40 C.F.R. 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, as noted above, pursuant to 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.

## II. FACILITY DESCRIPTION

The Discharger owns and operates the Refinery, a petroleum refining facility, which processes crude petroleum. The Refinery processes approximately 150,000 barrels per day of crude oil to produce gasoline, diesel fuel, jet fuel, sulfur, coke, and liquefied petroleum gas (LPG). The refinery processes include crude cracking, flashing, coking, hydrotreating, alkylation, reforming, and sulfur recovery.

### A. Description of Wastewater and Treatment or Controls

The discharge is primarily composed of storm water collected at the site, which consists of 734 acres of drainage area (110 acres of impervious surface) as well as storm water from the Pioneer Watershed, a neighborhood south of the facility within the City of Torrance. Runoff from the Pioneer Watershed can comprise up to 25 percent of the storm water flow within the Discharger's system. Other sources that may commingle with the discharge include small amounts of steam condensate and process area wash waters (mainly hosing down for dust control) that may be present in sumps when storm water is generated, collected, and stored.

Materials that could be exposed to storm water are petroleum hydrocarbon compounds associated with refining operations, process area wash water, and steam condensate. Chemical additives used in the refining processes and utility systems and solid and hazardous waste are stored in an enclosed building or in covered containers within a bermed area to prevent contact with rainfall runoff. Storm water runoff from the City of Torrance (Pioneer Watershed) will contain pollutants typically found in urban areas, including oil and grease, solids, bacteria, and trace metals. The storm water pollution prevention plan implemented by the Discharger specifies best management practices to prevent pollutants from being commingled with storm water and subsequently discharged through Discharge Point No. 001.

The Refinery site is sloped to the east, so that storm water from non-process areas drains by gravity to various retention basins, via concrete-lined ditches. In addition, the Facility uses dedicated and portable pumps to manage storm water volumes within the basins. When storm water collects in the tank farm areas, the volumes are managed by pumping among the diked areas. Generally, the Facility pumps storm water from the diked areas to the storm water basins to prevent accumulation of standing water in the tank farm areas.

The storm water commingled with small amounts of steam condensate and process area wash water is stored and treated through a series of retention ponds, then routed to O'Brien Lake.

Under most conditions, this waste stream is discharged from O'Brien Lake to a publicly owned treatment works (POTW) through the Van Ness Outfall under Los Angeles County Sanitation District (LACSD) Permit No. 516, which allows for discharge of up to 10,000 gpm during dry weather and for discharge of up to 5,000 gpm during a storm event and for 24 hours after the storm event. Discharges through the Van Ness Outfall are regulated separately under the LACSD Permit No. 516 and are not included in this Order. The Discharger's primary objective is to provide storage during wet weather and maximize discharge through the Van Ness Outfall, thereby providing treatment for the "first flush" of a storm event. During extreme storm events when the capacity to store and discharge to the Van Ness Outfall is exceeded, the Facility discharges to the Torrance Lateral via O'Brien Lake. The retention ponds and other relevant units are described below. Refer to Attachment C of this Order for a process flow diagram.

1. **Pioneer Basin.** Storm water runoff from the Pioneer Watershed is collected in Pioneer Basin (storage capacity of 14 million gallons). Pioneer Basin is located off-site, west of Prairie Avenue and receives drainage from west of Prairie Boulevard and from Crenshaw Boulevard. Discharges from Pioneer Basin to the Torrance Refinery drainage system are managed by an established procedure developed in conjunction with the City of Torrance to optimize the use of the detention capabilities of the Pioneer Basin. Established procedures include sampling of discharges from the Pioneer Basin. The City of Torrance has not discharged from Pioneer Basin to the Torrance Refinery drainage system since 2011.
2. **Drainage Ditches.** A series of drains convey storm water commingled with steam condensate and process wash water from throughout the site to the Retention Basin or Reclamation Lake. One of two main concrete drainage ditches discharges from Retention Lake, along 4<sup>th</sup> Street to Reclamation Lake. The second main ditch connects Reclamation Lake to O'Brien Lake.
3. **Tank Farms.** The Facility has over 100 aboveground storage tanks containing petroleum products. Several tank farm areas are located throughout the site. Each tank has an individual berm. In addition, groups of tanks share a common berm. Storm water from tank farms is routed to the Retention Basin, or Reclamation Lake.
4. **Retention Basin.** The Retention Basin is a 24.0 million-gallon unlined earthen basin that receives runoff from the tank farm area east of Crenshaw Boulevard. Two field valves are located upstream of the Retention Basin. These valves remain open during dry weather and smaller rain events to divert storm water entering the storm drains to the oily water sewer, which ultimately discharges to the POTW through the Van Ness Outfall. When the valves are closed during larger storms, the storm water is directed to the Retention Basin. Note that these two field valves are operated independently of the valve at O'Brien Lake, which is kept in a closed position and only opened during periods of extreme rainfall runoff in order to discharge storm water through Discharge Point No. 001. The Retention Basin provides solids removal through settling. Floating oil, if any, is skimmed using booms and vacuum trucks. From the Retention Basin, flow is directed to Reclamation Lake.
5. **Reclamation Lake.** Reclamation Lake is an unlined, earthen basin that receives runoff from the tank farm area west of Crenshaw Boulevard. In addition, storm water from O'Brien Lake may also be pumped to Reclamation Lake. This unit provides solids removal through settling. Ultimately, flow from Reclamation Lake is routed to O'Brien Lake for discharge through the Van Ness Outfall or through Discharge Point No. 001.
6. **O'Brien Lake.** O'Brien Lake is a concrete-lined basin that receives storm water from the eastern portions of the site. O'Brien Lake provides storm water storage and is the discharge point to the Torrance Lateral (Discharge Point No. 001). O'Brien Lake is equipped with an underflow baffle and oil skimming weir. In addition, the Discharger applies oil absorbent pads and booms within this unit to remove any floating oil. Storm water that is comingled with

steam condensate and process area wash water flows into O'Brien Lake and is pumped to an 80,000-barrel holding tank and/or to the Tank Farm Lake. This stored water is discharged from the Van Ness Outfall to the POTW. The Facility discharges from O'Brien Lake only when the capacity to discharge through the Van Ness Outfall is maximized and the storm water volume approaches the Facility's storage capacity. In this scenario, Facility staff open the valve located in O'Brien Lake to allow flow through hay bales prior to Discharge Point No. 001 at the Torrance Lateral.

The existing NPDES permit, Order No. R4-2013-0138 allows for the discharge of up to 10 MGD of treated storm water from the Facility and the City of Torrance, steam condensate, and process area wash water. Order No. R4-2013-0138 also allows for discharge in excess of 10 MGD, when the rainfall or cumulative rainfalls are equal to or greater than the 50-year return period, 24-hour storm or an equivalent chronic rainfall event and only after all storm water storage has been utilized. Since 2003 the Facility discharged three times to the Torrance Lateral, with the most recent discharge event occurring in February of 2005. No discharges occurred during the term of Order No. R4-2013-0138, as indicated in the Discharger's ROWD dated May 21, 2018.

#### **B. Discharge Points and Receiving Waters**

The Discharger proposes to discharge up to 10 MGD of treated storm water comingled with steam condensate and process area wash water from the Facility via Discharge Point 001 (Latitude 33.8498°, Longitude -118.3179°) into the Torrance Lateral, a concrete channel that flows to the Dominguez Channel Estuary at a location just north of Avalon Boulevard. Torrance Lateral is a tributary to the Dominguez Channel Estuary.

Attachment B depicts a topographic map of the area around the Facility. Attachment C depicts the schematic diagram of the wastewater flow.

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

No discharges occurred during the term of Order No. R4-2013-0138.

#### **D. Compliance Summary**

During the term of Order No. R4-2013-0138, no discharges occurred. Therefore, there were no violations of effluent limitations.

There was a requirement to submit a site-specific Harbor Toxics TMDL Water Column Compliance Program developed individually or with a collaborating group. The Discharger has not complied with this requirement.

#### **E. Planned Changes**

The Discharger does not have any planned changes to the Facility.

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

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

#### **A. Legal Authorities**

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

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

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA. See also *County of Los Angeles vs State Water Resources Control Board* (2006) 143 Cal. App. 4<sup>th</sup> 985, 1007.

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

1. **Water Quality Control Plan.** The Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan.

The Basin Plan does not assign beneficial uses specific to the Torrance Lateral. Federal regulations that address state water quality standards are contained in 40 CFR 131.2 and 131.10 and constitute a rebuttable presumption that beneficial uses supporting the “fishable, swimmable” goals of the federal CWA are attainable. Therefore, without evidence to disprove attainability, recreation and aquatic life beneficial uses apply to the Torrance Lateral. The Basin Plan states that “waters not specifically listed (generally, smaller tributaries), are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary”. The Facility discharges to Torrance Lateral which subsequently discharges to Dominguez Channel Estuary. The beneficial uses identified in the Basin Plan for the Dominguez Channel Estuary are:

**Table F-2. Basin Plan Beneficial Uses**

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

The discharge from the Facility is comprised primarily of storm water runoff mixed with a small amount of steam condensate and process area wash water. The Facility discharges to the Torrance Lateral, an inland freshwater channel, only during storm events that generate runoff in excess of the Facility storage capacity and discharge flow limitations to the sanitary sewer.

2. **Sediment Quality Plan.** On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Plan). The Sediment Quality Plan became effective on August 25, 2009. The Sediment Quality Plan establishes: 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health; and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement sediment quality objectives of Part 1 of the *Water Quality Control Plan for Enclosed Bays and Estuaries*.
3. **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 Resources Control 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 (ISWEBE); and (2) an amendment to the Water Quality Control Plan for Ocean Waters of California. The goals of the bacteria provisions are to (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 US EPA. OAL approved the regulatory action on February 4, 2019. On March 22, 2019 US EPA approved the Bacteria Objectives and they became effective. This permit implements the objectives for inland surface waters included in the Bacteria Provisions.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. The CTR contains water quality criteria for priority pollutants
5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
6. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law.

Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.
7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
9. **Trash Provisions Requirements.** The State Water Board adopted a narrative water quality objective and implementation requirements to control trash, through Resolution No. 2015-0019 “*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) that became effective on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Regional Water Board where trash or debris Total Maximum Daily Loads (TMDLs) are in effect prior to the effective date of the Trash Amendments. There are currently no Trash TMDLs for Dominguez Channel or its tributaries; therefore, the discharges described in this Order are subject to the Trash Amendments.

In the absence of TMDL requirements, the Trash Amendments establish a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements. No specific implementation provisions were prescribed for individual industrial permittees, and no references were made to the monitoring and reporting requirements for individual industrial permits. To be consistent with the Trash Amendments, this Order incorporates the requirements of the Trash Amendments through the prohibition of trash discharges to the NPDES discharge points. The Trash Amendments did not prescribe specific monitoring and reporting requirements applicable to the Discharger; therefore, this Order requires the Discharger to develop and implement an updated Storm Water Pollution Prevention Plan (SWPPP), which shall include specific BMPs used for storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Torrance Lateral, Dominguez Channel Estuary or its tributaries. The Discharger is required to detail and submit to the Regional Water Board the updated SWPPP.

10. **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 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, implemented through NPDES permits issued pursuant to CWA section 402, waste discharge requirements, or waivers of waste discharge requirements. The Provisions included implementation provisions for individual non-storm water NPDES permits for municipal and industrial dischargers; storm water discharges including the MS4 and the Industrial General Permit (NPDES No. CAS000001); mine site remediation; nonpoint source discharges; dredging activities; and wetland projects.

In section IV.D.3 Storm Water Discharges (c) Industrial Activities the Mercury Provisions stipulated that the Numeric Action Level (NAL) of 1,400 nanograms/liter (ng/L), which is in the current NPDES General Permit for Storm Water Discharges Associate with Industrial Activities, be modified to 300 ng/L or lower. This is the applicable criteria for storm water discharges. The NAL of 300 ng/L (0.3 µg/L) is less stringent than criteria for mercury of 0.051 µg/L established for the protection of the human health criterion in 40 C.F.R. section 131.38

(i.e. the California Toxics Rule or CTR). Therefore, considering the nature of the discharge, this Order retains the water-quality based effluent limitations (WQBELs) for mercury previously established in Order No. R4-2007-0049 consisting of a maximum daily effluent limitation (MDEL) of 0.1 µg/L. This limitation was established based on the human health criterion for mercury in the CTR due to the reasonable potential for the discharge to cause or contribute to an exceedance of this mercury criterion. Reasonable potential was demonstrated from an analysis of effluent monitoring data submitted by the Discharger in 2005.

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

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

U.S. EPA approved the State Water Board's 2014-2016 CWA section 303(d) list of impaired water bodies on April 6, 2018. Certain receiving waters in the Los Angeles and Ventura Counties' watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2014-2016 CWA section 303(d) List of Water Quality Limited Segments (hereinafter 303(d) list) and have been scheduled for TMDL development.

The Facility discharges to the Torrance Lateral, which is a tributary to the Dominguez Channel Estuary. The 2014 State Water Board California 303(d) List includes Torrance Lateral, referred to in the listing as the Torrance Carson Channel. The pollutants/stressors of concern for the Torrance Lateral include indicator bacteria (fecal), copper, and lead. The 2014 303(d) List also includes classification of the Dominguez Channel Estuary. The pollutants/stressors of concern for the Dominguez Channel Estuary include benthic community effects, benzo(a)pyrene (3,4-benzopyrene-7-d), benzo(a)anthracene, PCBs, copper (sediment), chlordane (tissue), chrysene (C1-C4), coliform bacteria, fecal indicator bacteria, dichlorodiphenyltrichloroethane (DDT, tissue and sediment), dieldrin (tissue), lead (sediment), phenanthrene, pyrene, and toxicity.

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

1. **Bacteria TMDL.** The Regional Water Board adopted the *Los Angeles Harbor Bacteria TMDL* (Bacteria TMDL) through Resolution 2004-011 on July 1, 2004, and the TMDL became effective on March 1, 2005.
2. **Harbor Toxics TMDL.** The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Harbor Toxics TMDL), and the TMDL became effective on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, the Regional Water Board has developed and included effluent limitations and monitoring requirements within this Order that are consistent with the assumptions and requirements of the applicable wasteload allocations included in the Harbor Toxics TMDL.

For the Torrance Lateral, the Harbor Toxics TMDL included:

- a. Concentration-based Torrance Lateral freshwater interim wet weather allocations (in µg/L) for copper, lead, and zinc (Attachment A to Resolution No. R11-08, p.10).
- b. Final wet weather mass-based sediment WLAs (in kg/yr) for copper, lead, and zinc in Torrance Refining Company, LLC, discharges to the Torrance Lateral (in kg/yr, unfiltered water) (Attachment A to Resolution No. R11-08, p.13).

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- c. Provisions for monitoring discharges and/or receiving waters during the TMDL's 20 year implementation schedule to determine attainment with waste load and load allocations as appropriate.

### 3. **Implementation of the Harbor Toxics TMDL**

#### a. Final Effluent Limitations

The Harbor Toxics TMDL assigns final, mass-based WLAs to the Discharger. The WLAs were developed based on total metals targets, a discharge flow rate of 3.7 MGD for seven days per year and assuming the discharge events are irregular (e.g., occur once every seven years on average). If, during the permit term, due to an increase in discharge frequency or volumes, it appears that the allocations are not supportive of the TMDL, the permit may be reopened and these allocations may be revised. Since the WLAs are based on flow data from the Facility, they are translated directly to effluent limitations.

**Table F-3. Harbor Toxics TMDL Final, Wet-weather Effluent Limitations – Discharge Point No. 001**

<b>Pollutant</b>	<b>Units</b>	<b>Final, Wet-Weather Allocation</b>
Copper, Total Recoverable <sup>1</sup>	kg/yr <sup>2</sup>	1.36
Lead, Total Recoverable <sup>1</sup>	kg/yr <sup>2</sup>	5.98
Zinc, Total Recoverable <sup>1</sup>	kg/yr <sup>2</sup>	9.75

1. Compliance based on unfiltered effluent water samples collected at Discharge Point No. 001.

2. Annual Effluent Limitations applicable to unfiltered water.

This Order includes WQBELs based on final wet-weather mass-based WLAs for copper, lead, and zinc converted from freshwater CTR criteria using default translators and discharge flow data from the Facility.

The TMDL states that during conditions less than the 90th percentile of the annual flow rate, samples must demonstrate that the acute and chronic water quality criteria provided in the CTR that are hardness dependent are achieved. As a result, this Order requires that discharges from the Facility during dry-weather must comply with effluent limitations calculated based on CTR criteria and SIP methods, as described in section IV.C.7 of this Fact Sheet. Within this Order, “dry-weather” is assumed for any discharge that occurs when the flow is less than 62.7 cfs as measured at S28 in the Dominguez Channel. The TMDL specifies that although no allocation for PAHs is assigned to the Facility, monitoring shall continue for the discharges. Therefore, this Order includes monitoring for PAHs.

#### b. Harbor Toxics TMDL Water Column Compliance Monitoring Program

The TMDL's implementation schedule to demonstrate attainment of WLAs and load allocations is 20 years after the TMDL effective date for any Discharger who justifies the need for that length of time. During this period, the Discharger is required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column in the Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the “TMDL Element – Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. Participating in the collaborative water quality monitoring program and submittal of the monitoring plan and QAPP will constitute compliance with the requirement. The compliance monitoring program shall include water column monitoring.

### **E. Other Plans, Policies and Regulations – Not Applicable**

#### IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The existing Order established effluent limitations for a number of pollutants believed to be present in the discharge of storm water from a petroleum refining facility and urban runoff from the City of Torrance. Effluent limitations in the existing permit were established for oil and grease, total organic carbon (TOC), chromium (VI), total suspended solids (TSS), turbidity, settleable solids, E. coli, copper, lead, zinc, nickel, mercury, total petroleum hydrocarbons (TPH), benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, pH, temperature, and acute toxicity. These constituents were identified based on a review of pollutants commonly found in discharges from petroleum refining operations, materials stored or used on-site, and/or were historically detected in the effluent. Urban runoff from the City of Torrance likely contains pollutants including oil and grease, trace metals, and solids, thus these pollutants remain pollutants of concern. Pollutants identified on the 303(d) list for the Torrance Lateral and the Dominguez Channel Estuary, identified in section III.D of this Fact Sheet, are also considered pollutants of concern. Storm water may carry a combination of pollutants that may contribute to chronic toxicity. Therefore, toxicity, an indicator of the presence of toxic pollutants, is also considered a pollutant of concern.

Pursuant to 40 CFR §122.45(d), permit limitations for continuous discharges shall be expressed, unless impracticable, as both average monthly effluent limitations (AMELs) and maximum daily effluent limitations (MDELs). Discharges from the Facility are intermittent, comprised of primarily storm water, and of short duration; therefore, AMELs are not applicable for the discharge and only MDELs have been established for those priority pollutants that have no WLAs established in the applicable TMDLs.

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

##### A. Discharge Prohibitions

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

## B. Technology-Based Effluent Limitations

### 1. Scope and Authority

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

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

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- 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 effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3 and CWA Section 301(b)(2)(A).

### 2. Applicable Technology-Based Effluent Limitations

Discharges from the Facility are subject to the federal effluent limitation guidelines in 40 CFR Part 419. The technology-based requirements in the Order are based on ELGs, case-by-case numeric limitations using BPJ, and anti-backsliding provisions.

The discharge does not contain process wastewater as defined by 40 CFR 401.11(g). Within the ROWD, the Discharger indicates that a negligible amount of process area wash water and steam condensate may commingle with the storm water discharge. Within 40 CFR 401.11(g) "process waste water" is defined as *"any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product."* The non-storm water contributions from process area wash water and steam condensate are not directly generated from refinery processes and at this time do not meet the definition "process waste waters".

The applicable ELGs include BPT, BAT, and BCT limits for contaminated runoff not commingled with process wastewater at 40 CFR 419.22(e)(1), 419.23(f)(1), and 419.24(e)(1). The BPT limits cover total organic carbon (TOC) and oil and grease. The BAT and BCT limits are the same as the BPT limits.

The technology-based effluent limitations for settleable solids, turbidity, and total petroleum hydrocarbons were developed using BPJ and are carried over from prior orders, Order No. R4-2007-0049 and Order No. R4-2013-0138. In setting these limitations, the Regional Water Board considered the factors listed in 40 CFR sections 125.3(c) and 125.3(d). These limitations are summarized in Table F-4. Pursuant to state and federal anti-backsliding regulations, this Order retains effluent limitations for these pollutants as technology-based effluent limitations.

**Table F-4. Summary of Technology-based Effluent Limitations for Discharge Point No. 001.**

Parameter	Units	Average Monthly	Maximum Daily
<b><i>ELG Based Limitations</i></b>			
Oil and Grease <sup>2</sup>	mg/L	--	15
	lbs/day <sup>1</sup>	--	1,300
Carbon, Total Organic (TOC) <sup>2</sup>	mg/L	--	110
	lbs/day <sup>1</sup>	--	9,200
<b><i>BPJ Limitations</i></b>			
Total Suspended Solids (TSS) <sup>3</sup>	mg/L	--	75
	lbs/day <sup>1</sup>	--	6,300
Settleable Solids <sup>3</sup>	mL/L	--	0.2
Turbidity <sup>3</sup>	NTU	--	75
Total Petroleum Hydrocarbons <sup>3,4</sup>	µg/L	--	100
	lbs/day <sup>1</sup>	--	8.3

<sup>1</sup> The mass (lbs/day) limitations are based on a maximum flow of 10 MGD and is calculated as follows: Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor). Results are rounded to two significant digits.

<sup>2</sup> TBEL for this parameter is included in this Order pursuant to BPT requirements (40 CFR 419.22(e)(1)).

<sup>3</sup> TBEL for this parameter is included in this Order pursuant to BPT requirements (40 CFR 125.3(c) and 125.3(d)).

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

Pursuant to CWA section 402(p) and 40 CFR. section 122.44(k), this Order requires the Discharger to develop, implement, and annually submit a Storm Water Pollution Prevention Plan (SWPPP), in accordance to Attachment G, to outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff and trash from being discharged directly into the storm drain or receiving water. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water runoff and to prevent the entrainment of trash in storm water that is discharged through Discharge Point 001. These procedures shall also ensure that at no time will process wastewaters be commingled with storm water and unauthorized non-storm water discharges do not occur from the Facility. The SWPPP shall include a summary of BMPs aimed at controlling the potential exposure of pollutants to storm



water, inspection practices, schedules of preventive maintenance, housekeeping procedures, vehicle management practices, and spill containment and cleanup procedures; it should demonstrate the Discharger's continued effective implementation of the SWPPP.

This Order also requires the Discharger to develop and implement a Best Management Practices Plan (BMPP) to establish site-specific procedures that will ensure proper operation and maintenance of transfer and storage areas, and to ensure that unauthorized non-storm water discharges (i.e. spills or process wastewater) do not occur at the Facility. In addition, the Discharger must develop and implement a Spill Contingency Plan (SCP). The SCP should be site-specific and shall cover all areas of the Facility; it should address measures to be taken to control accidental discharges and to minimize the effect of such events at the Facility. The combination of the SWPPP, BMPP, SCP, and permit limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

The technology-based requirements in this Order are based on ELGs for TOC and oil and grease and case-by-case numeric limitations developed using BPJ in accordance with 40 C.F.R. section 125.3. Technology-based effluent limitations are established in this Order for total suspended solids (TSS), TOC, turbidity, settleable solids, and total petroleum hydrocarbons (TPH) at Discharge Point 001. The limitations for these pollutants are consistent with technology-based effluent limitations (TBEL) included in the previous Order and other orders within the State for similar types of discharges. They are included in this Order to ensure that discharges from the Facility meet the level of treatment attainable by other industrial facilities within the state using existing technologies that are practical, available, and economically achievable. The Regional Water Board considered other relevant factors pursuant to 40 C.F.R. section 125.3 and concluded that the limitations are appropriate.

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

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

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

40 C.F.R. Section 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard in the receiving water, 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 any applicable TMDL WLAs approved by U.S. EPA

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 the Basin Plan and other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs, are contained in the U.S. EPA's *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, 1991) (TSD) for storm water discharges and in the

SIP for non-storm water discharges. However, the TSD on Page 64 Section 3.3.8 states that “The statistical approach shown in Box 3-2 or an analogous approach developed by a regulatory authority can be used to determine the reasonable potential.” The Regional Water Board has determined that the procedures for determining reasonable potential and calculating WQBELs contained in the SIP for non-storm water discharges may also be used to evaluate reasonable potential and calculate WQBELs for storm water discharges. Hence, in this Order, the SIP methodology is used to evaluate reasonable potential for storm water discharges through Discharge Point 001.

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

As noted in section III of the Fact Sheet, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the Torrance Lateral and the Dominguez Channel Estuary are summarized in section III.C.1 of this Fact Sheet. The Basin Plan and other statewide water quality control plans include both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the Torrance Lateral. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, and 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 Basin Plan states that “waters not specifically listed (*generally, smaller tributaries*), are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary”. The Facility discharges to Torrance Lateral, which subsequently discharges to Dominguez Channel Estuary. The Torrance Lateral is not included in the Basin Plan tables identifying the specific beneficial uses of waterbodies; therefore, for purposes of identifying beneficial uses to be protected, the beneficial uses of Dominguez Channel Estuary were considered. As indicated in the Harbor Toxics TMDL, the Torrance Lateral is classified as a freshwater waterbody. Based on this information, the Regional Water Board has evaluated the discharge based on CTR freshwater aquatic life criteria.

The Facility’s last discharge event was in February of 2005. 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. R4-2013-0138.

Table F-5 summarizes the applicable water quality criteria/objective for priority pollutants that were included in the RPA for Order No. R4-2013-0138.

**Table F-5. Applicable Water Quality Criteria**

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater <sup>1</sup>		Saltwater <sup>1</sup>		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms <sup>2</sup>	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
5b	Chromium (VI)	11.43	16.29	11.43	N/A			--
6	Copper	5.2	7.3	5.2				--

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater <sup>1</sup>		Saltwater <sup>1</sup>		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms <sup>2</sup>	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
7	Lead	1.3	34	1.3				--
8	Mercury	0.051	--	--				0.051
9	Nickel	29	261	29				4,600
11	Silver	1.23	1.23	--				--
12	Thallium	6.3	--	--				6.3
13	Zinc	67	67	67				--
19	Benzene	71	--	--				71
33	Ethylbenzene	29,000	--	--				29,000
39	Toluene	200,000	--	--				200,000
58	Anthracene	110,000	--	--				110,000
60	Benzo(a)-Anthracene	0.049	--	--				0.049
61	Benzo(a)-Pyrene	0.049	--	--				0.049
62	Benzo(b)-Fluoranthene	0.049	--	--				0.049
68	Bis(2-ethylhexyl)-Phthalate	5.9	--	--				5.9
86	Fluoranthene	370	--	--				370
87	Fluorene	14,000	--	--				14,000
100	Pyrene	11,000	--	--				11,000

<sup>1</sup> A hardness of 50 mg/L, based on data provided in the Harbor Toxics TMDL, was used to adjust criteria.

<sup>2</sup> "N/A" indicates the receiving water body is not characterized as saltwater, nor are the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

### 3. Harbor Toxics TMDL

The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the TMDL for *Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Harbor Toxics TMDL). The Harbor Toxic TMDL became effective on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, the Regional Water Board has developed and included effluent limitations and monitoring requirements within this Order that are consistent with all assumptions and requirements of the applicable wasteload allocations included in the Harbor Toxics TMDL

For the Torrance Lateral, the Harbor Toxics TMDL included:

- a. Final wet weather mass-based sediment WLAs for copper (1.36), lead (5.98), and zinc (9.75) in discharges to the Torrance Lateral (in kg/yr, unfiltered water) from the Torrance Refinery (formerly ExxonMobil Torrance Refinery) (Attachment A to Resolution No. R11-08, p.13).

The Regional Water Board developed WQBELs 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 permit development.

**b. Determining the Need for WQBELs**

In accordance with section 1.3 of the SIP, the Regional Water Board conducted 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. If there is effective TMDL-based WLA, then WQBELs are developed using the WLA. Otherwise, the Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required.

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

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

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

There were no discharges from the Facility during the term of Order No. R4-2013-0138. For this Order, the data used to conduct an RPA for Order No. R4-2013-0138 were used to rerun the RPA using the freshwater criteria in the CTR.

The Regional Water Board developed WQBELs for copper, lead, and zinc, based on the waste load allocations included in the Harbors Toxics TMDL. Effluent limitations for these pollutants were established in this Order independent of a reasonable potential analysis during the development of this Order. The Regional 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 an additional reasonable potential analysis at the permitting stage for effluent limitations consistent with the assumption and requirements of a TMDL WLA. Similarly, the SIP at Section 1.3 recognizes that reasonable

potential analysis is not necessary at the permitting stage if a TMDL has been developed.

**Table F-6. Summary Reasonable Potential Analysis in Order R4-2013-0138**

CTR No.	Constituent	Applicable Water Quality Criteria (C), µg/L	Max Effluent Conc. (MEC), µg/L	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
5b	Chromium (VI)	11.43	11	NA <sup>1</sup>	Yes	Trigger 3 <sup>2</sup>
6	Copper	5.2	39.8	NA	Yes	MEC > C
7	Lead	1.3	171	NA	Yes	MEC > C
8	Mercury	0.051	0.262	NA	Yes	MEC > C
9	Nickel	29.02	33.5	NA	Yes	MEC > C
11	Silver	1.23	< 0.4	NA	No	ND in Effluent
12	Thallium	6.3	< 2.33	NA	No	ND in Effluent
13	Zinc	67	619	NA	Yes	MEC > C
19	Benzene	71	21	NA	No	MEC < C
33	Ethylbenzene	29,000	4.1	NA	No	MEC < C
39	Toluene	200,000	33	NA	No	MEC < C
58	Anthracene	110,000	4.2	NA	No	MEC < C
60	Benzo(a)-Anthracene	0.049	2.2	NA	Yes	MEC > C
61	Benzo(a)-Pyrene	0.049	1.9	NA	Yes	MEC > C
62	Benzo(b)-Fluoranthene	0.049	0.83	NA	Yes	MEC > C
68	Bis(2-ethylhexyl)-Phthalate	5.9	30	NA	Yes	MEC > C
86	Fluoranthene	370	5.5	NA	No	MEC < C
87	Fluorene	14,000	6.7	NA	No	MEC < C
100	Pyrene	11,000	12	NA	No	MEC < C

<sup>1</sup> "NA" indicates no background data for the Torrance Lateral were available for the RPA.

<sup>2</sup> As per Step 7 of the SIP, other information, such as facility type and discharge type may be considered in determining whether a WQBEL is required. The previous Order established an effluent limitation for chromium VI and this constituent is commonly present in storm water runoff from petroleum refineries. Therefore, in accordance with Section 1.3 of the SIP, the Regional Water Board has determined that there is a reasonable potential and this Order includes a WQBEL for chromium (VI).

Based on the RPA, pollutants that demonstrate reasonable potential are chromium VI, copper, lead, mercury nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate.

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The Harbor Toxics TMDL includes mass-based waste load allocations for Torrance Refinery discharges into Torrance Lateral.

Media	Total Copper	Total Lead	Total Zinc
Water unfiltered (kg/yr)	1.36	5.98	9.75

Compliance with the fresh water metals allocations may be demonstrated via any of the three different methods.

- a. Final allocations are met.
- b. CTR total metals criteria are met instream.
- c. CTR total metals criteria are met in the discharge.

#### 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 Regional Water Board.
- b. Since no discharges have occurred during the permit term, an RPA was performed using SIP procedures and effluent data included in Attachment J to Order No. R4-2013-0138. No ambient background data were available for the Torrance Lateral.
- c. WQBELs for copper, lead, and zinc are based on the Harbor Toxics TMDL final wet-weather WLAs. Discharges are not anticipated during dry-weather, therefore the WLAs are protective of water quality objectives. This Order requires that discharges from the Facility during dry-weather must comply with effluent limitations calculated based on CTR criteria and SIP methods, as described in section IV.C.8 of this Fact Sheet. Within this Order, “dry-weather” is assumed for any discharge that is neither the result of precipitation nor the result of a precipitation event of a magnitude that generates a flow of less than the 90<sup>th</sup> percentile flow in Torrance Lateral.
- d. Order No. R4-2013-0138 includes only MDELs since the discharge is primarily stormwater. The discharge includes small amounts of non-storm water contributions from steam condensate and process area washdown water. Since the discharge is primarily storm water, discharges are of short duration (less than 24 hours) and infrequent (one in last 12 years); only daily maximum limits are prescribed. The limits for nickel in Order No. R4-2013-0138 was calculated based on salt water criteria. The TMDL stipulates fresh water criteria are applicable to Torrance Lateral. Hence, the limit for nickel was recalculated using fresh water criteria.
- e. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. The Torrance Lateral is dry for part of the year, therefore, in this Order, no dilution credit is included. However, in accordance with the reopener provision in section VI.C.1.e in the Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

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f. WQBELs Calculation Example

Using total recoverable nickel as an example, the following demonstrates how WQBELs were established for this Order.

The process for developing these limits is in accordance with 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:

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

Where      C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. A hardness of 50 mg/L, based on data provided in the Harbor Toxics TMDL, was used to adjust criteria. A pH of 6.5, representing the lower bound of the permit limits was used to adjust the criteria.  
D = The dilution credit, and  
B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$$\text{ECA} = C$$

For total recoverable nickel, the applicable water quality criteria are:

$$\begin{aligned} \text{WLA}_{\text{acute}} &= 261 \text{ } \mu\text{g/L} \\ \text{WLA}_{\text{chronic}} &= 29 \text{ } \mu\text{g/L} \end{aligned}$$

**Step 2:** For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

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

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

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. The default CV of 0.6 was used to calculate effluent limitations.

For total recoverable nickel, the following data were used to develop the acute and chronic LTAs using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier <sub>acute</sub>	ECA Multiplier <sub>chronic</sub>
4	0.60	0.321	0.527

$$LTA_{acute} = 261 \mu\text{g/L} \times 0.321 = 83.8 \mu\text{g/L}$$

$$LTA_{chronic} = 29 \mu\text{g/L} \times 0.527 = 15.3 \mu\text{g/L}$$

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

LTA = most limiting of LTA<sub>acute</sub> or LTA<sub>chronic</sub>

For nickel, the most limiting LTA was the LTA<sub>chronic</sub>

$$LTA_{nickel} = LTA_{chronic} = 15.3 \mu\text{g/L}$$

**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.

$$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$$

$$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$$

AMEL multipliers are based on a 95<sup>th</sup> percentile occurrence probability, and the MDEL multipliers are based on the 99<sup>th</sup> percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For total recoverable nickel, the following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in Section 1.4, Step 5 of the SIP:

No. of Samples Per Month	CV	Multiplier <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>
4	0.6	3.11	1.55

Total Recoverable Nickel

$$AMEL = 15.3 \mu\text{g/L} \times 1.55 = 24 \mu\text{g/L}$$

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$$\text{MDEL} = 15.3 \mu\text{g/L} \times 3.11 = 48 \mu\text{g/L}$$

**Step 5:** For the ECA based on human health, set the AMEL equal to the ECA<sub>human health</sub>

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

For nickel,

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

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

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

For total recoverable nickel, the following data were used to develop the MDEL<sub>human health</sub>:

No. of Samples Per Month	CV	Multiplier <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>	Ratio
4	0.6	3.11	1.55	2.0

For total recoverable nickel:

$$\text{MDEL}_{\text{human health}} = 4,600 \mu\text{g/L} \times 2.0 = 9,200 \mu\text{g/L}$$

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

Calculations for effluent limitations were performed for chromium VI, mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate. For nickel and chromium VI, the calculated limitations are based on chronic aquatic life criteria. For total recoverable mercury, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate, no aquatic life criteria exist, therefore the calculated limitations are based on human health criteria. The nickel WQBELs which are based on the fresh water criteria of 48 µg/L in this example is less stringent than the existing nickel WQBEL contained in Order No. R4-2013-0138 which was incorrectly based on the salt water criteria. The calculated limitation for nickel based on the appropriate freshwater criteria is expected to be protective of beneficial uses.

## 5. WQBELs Based on Basin Plan and Statewide Water Quality Control Plan Objectives

The Basin Plan Objectives applicable to the discharge are identified in Table F-7. These objectives were evaluated with respect to effluent monitoring data and Facility operations.

- pH.** This Order includes effluent and receiving water limitations for pH to ensure compliance with Basin Plan Objectives for pH.

- b. **Bacteria.** The Torrance Lateral and the Dominguez Channel Estuary are identified on the 2014 303(d) list as impaired for bacteria. To address bacteria as a pollutant of concern, this Order includes effluent limitations for bacteria equal to the Water Quality Objectives in Part 3 – Bacteria Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California.
- c. **Dissolved Oxygen.** The receiving water limitation is protective of the Basin Plan objective for dissolved oxygen.
- d. **Turbidity.** The Basin Plan requirements for turbidity are as follows:
  - Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.
  - Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

This Order applies the water quality objective for turbidity as a receiving water limitation in addition to the technology-based effluent limitation.

- e. **Temperature.** This Order includes an instantaneous effluent temperature limitation of 80°F based on the Basin Plan objective for temperature.

#### 6. 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 in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in the population, community ecology, or receiving water biota.

Order R4-2013-0138 contains an acute toxicity limitation and a chronic toxicity limitation based on the Harbor Toxics TMDL. The chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Therefore, this Order prescribes the chronic toxicity limitation to address both acute and chronic toxicity endpoints in organisms exposed to the discharge.

The whole effluent toxicity testing is evaluated using U.S. EPA's 2010 Test of Significant Toxicity (TST) statistical approach. In 2010, U.S. EPA endorsed the peer-reviewed TST approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved statistical testing tool to evaluate data from U.S. EPA's toxicity test methods. The TST statistical testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the no observed effect concentration (NOEC) statistical testing approach. TST results are also more transparent than the point estimate model approach used for acute toxicity that is not designed to address the question of statistical uncertainty around the modeled toxicity test result in relation to the effect level of concern. The TST is the superior approach for addressing statistical uncertainty when used in combination with U.S. EPA's toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

The TST's null hypothesis for chronic toxicity is:

$H_0$ : Mean response (In-stream Waste Concentration (IWC) in % effluent)  
 $\leq 0.75$  mean response (Control).

Results obtained from a chronic toxicity test are analyzed using the TST statistical approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P". Since no dilution credit is allowed for the chronic toxicity testing, the chronic toxicity IWCs for Discharge Point 001 is 100 percent effluent. 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  $\geq 0.50$ .

This Order includes a chronic toxicity limitation and chronic toxicity monitoring with statistical analysis using the TST method.

## 7. Final WQBELS

**Table F-7. Summary of Final WQBELs for Discharge Point No. 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
pH	s.u.	--	--	6.5	8.5
Chromium (VI), Total Recoverable	$\mu\text{g/L}$	--	16	--	--
	lbs/day <sup>1</sup>	--	1.3	--	--
E. coli	MPN/100 ml	--	2	--	--
Temperature	°F	--	--	--	80
Copper, Total Recoverable	$\mu\text{g/L}$	--	7.3 <sup>5</sup>	--	--
	lbs/day <sup>1</sup>	--	0.61 <sup>5</sup>	--	--
Lead, Total Recoverable	$\mu\text{g/L}$	--	2.2 <sup>5</sup>	--	--
	lbs/day <sup>1</sup>	--	0.18 <sup>5</sup>	--	--
Mercury, Total Recoverable	$\mu\text{g/L}$	--	0.10	--	--
	lbs/day <sup>1</sup>	--	0.0083	--	--
Nickel, Total Recoverable	$\mu\text{g/L}$	--	48	--	--
	lbs/day <sup>1</sup>	--	4.0	--	--
Zinc, Total Recoverable	$\mu\text{g/L}$	--	67 <sup>5</sup>	--	--
	lbs/day <sup>1</sup>	--	5.6 <sup>5</sup>	--	--
Benzo(a)-anthracene	$\mu\text{g/L}$	--	0.098	--	--
	lbs/day <sup>1</sup>	--	0.0082	--	--
Benzo(a)pyrene	$\mu\text{g/L}$	--	0.098	--	--
	lbs/day <sup>1</sup>	--	0.0082	--	
Benzo(b)-fluoranthene	$\mu\text{g/L}$	--	0.098	--	--
	lbs/day <sup>1</sup>	--	0.0082	--	--
Bis (2-ethylhexyl)-phthalate	$\mu\text{g/L}$	--	12	--	--
	lbs/day <sup>1</sup>	--	1.0	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous	
				Minimum	Maximum
Harbor Toxics TMDL Wet-weather Effluent Limitations					
Copper, Total Recoverable	kg/yr <sup>4</sup>	1.36			
Lead, Total Recoverable	kg/yr <sup>4</sup>	5.98			
Zinc, Total Recoverable	kg/yr <sup>4</sup>	9.75			

- <sup>1</sup> The mass limitations are based on a maximum flow of 10 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. If the flow is greater than 10 MGD, the mass loading is to be recalculated using the event specific flow.
- <sup>2</sup> The bacteria water quality objective for all waters where the salinity is equal to or less than 1 part per thousand (ppt) 95 percent or more of the time during the CALENDAR YEAR is: a six-week rolling GEOMETRIC MEAN of *Escherichia coli* (*E. coli*) not to exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a STATISTICAL THRESHOLD VALUE (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a CALENDAR MONTH, calculated in a static manner.
- <sup>3</sup> The MDEL is exceeded when a toxicity test results in a "Fail" and the percent effect is  $\geq 0.5$ .
- <sup>4</sup> Annual effluent limitations in unfiltered water. The mass (kg/yr) limitations were calculated based on a flow of 3.7 MGD for seven days per year and are calculated as follows: Flow volume (millions of gallons) x target concentration (mg/L) x 3.788 gal/L (conversion) x No. of days of discharge.
- <sup>5</sup> Effluent limitations apply during dry weather only. Within this Order, dry-weather is assumed for any discharge that occurs when the flow is less than 62.7 cubic feet per second (cfs) as measured at station S28 in the Dominguez Channel.

#### D. Final Effluent Limitation Considerations

Technology-based effluent limitations (TBELs) for TSS, oil and grease, turbidity, total organic carbon, settleable solids, and TPH are included in this Order based on ELGs, a review of Facility operations, and BPJ. WQBELs for nickel were developed based on CTR freshwater criteria and SIP procedures. Mercury WQBELs were developed based on human health consumption of organisms only criteria and the Sip procedures. Effluent limitations for copper, lead and zinc are included in this Order consistent with the Harbors Toxics TMDL. The effluent limit for TSS (based on the Gold Book and consistent with Order No. R4-2013-0138) is also consistent with TSS limits included for similar discharges in the Los Angeles Region, at a level which has been demonstrated to be achievable using existing technologies that are practical, available, and economically achievable. Effluent limitations for bacteria (*E. coli*), temperature and pH are included in this Order in accordance with the Basin Plan and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California. Refer to Table F-6 of this Fact Sheet for a summary of the RPA for priority pollutants.

##### 1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed.

There are several exceptions to federal anti-backsliding requirements. Specifically, the anti-backsliding provisions allow for relaxation of effluent limitations when material and substantial alterations or additions to the permitted facility occurred after permit issuance that justifies the application of a less stringent effluent limitation (see CWA section 402(o)(2)(A)). Another

exception is when information is available which was not available at the time of permit issuance that would have justified the application of a less stringent effluent limitation at the time of permit issuance (see CWA section 402(o)(2)(B)(i)). As discussed below, the removal of the acute toxicity effluent limitations, and the modification of the nickel effluent limitation from 14 µg/L in Order No. R4-2013-0138 to 48 µg/L in this Order are either consistent with the anti-backsliding exceptions allowed in the CWA and federal regulations, or they are not actually covered under the anti-backsliding requirements because they are not in fact “backsliding”.

First, as explained in section IV.C.6, Order No. R4-2013-0138 contains acute toxicity limitations based on the objectives in the Basin Plan. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Discharges from the Facility may include a number of chemicals, which individually may not be present in toxic concentrations while exhibiting aggregated toxic effects as a whole. This Order includes a chronic toxicity effluent limitation only, evaluated using the TST statistical approach, and requires chronic toxicity monitoring for the effluent at Discharge Point 001. The removal of the acute toxicity effluent limitation for discharges is consistent with the anti-backsliding requirements of the CWA and federal regulations since chronic toxicity, is more protective of both the numeric and the narrative acute toxicity Basin Plan water quality objectives.

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order except for nickel. 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. Under section 303(d)(4)(B), the removal of an effluent limitation is permitted in waters that are in attainment as long as antidegradation requirements are met.

The effluent limit for nickel in Order R4-2013-0138 was developed based on salt water criteria because the downstream receiving water to the Torrance Lateral is Dominguez Channel Estuary, and saltwater body. However, the Harbor Toxics TMDL categorizes the Torrance Lateral, the receiving water for discharges from the Torrance Refinery, as a fresh water body. Hence, this Order recalculates the nickel limit utilizing fresh water criteria resulting in an effluent limit of 48 mg/L. This limit is less stringent than the limit of 14 mg/L based on saltwater criteria that was in the previous permit. The more stringent limit was selected to protect downstream beneficial uses in the Dominguez Channel Estuary which is impaired for copper, lead, zinc, PAHs, chlordane, 44-DDT, dieldrin, and total PCBs. However, nickel is not one of the metals causing or contributing to impairments in Torrance Lateral (Torrance Carson Channel) or Dominguez Channel Estuary. Therefore, the more stringent nickel limit is not necessary to protect beneficial uses in downstream waters. The relaxation of the nickel effluent limit is consistent with antidegradation as described in Section IV.D.2 below and may be modified pursuant to 303(d)(4)(B).

## 2. Antidegradation Policies

40 C.F.R. section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. State Water Board Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

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

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

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

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

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 are calculated based on a permitted discharge flow of 10MGD.

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

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. BPT ELGs were included for oil and grease and TOC as per 40 CFR 419.22(e)(1). Other technology-based effluent limitations consist of restrictions on TSS, settleable solids, turbidity, and TPH. Restrictions on these pollutants are discussed in section IV of the Fact Sheet.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by U.S. EPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

### **5. Summary of Final Effluent Limitations**

**Table F-8. Summary of Final Effluent Limitations for Discharge Point No. 001**

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous		
				Minimum	Maximum	
Conventional Pollutants						
pH	s.u.	--	--	6.5	8.5	BP, E
Oil and Grease	mg/L	--	15	--	--	ELG, E
	lbs/day <sup>2</sup>	--	1,300	--	--	
TSS	mg/L	--	75	--	--	E
	lbs/day <sup>2</sup>	--	6,255	--	--	
Non-conventional Pollutants						
TOC	mg/L	--	110	--	--	ELG, E
	lbs/day <sup>2</sup>	--	9,200	--	--	
E. coli	MPN/100mL	--	3	--	--	ISWEBE Plan, TMDL
Settleable Solids	ml/L	--	0.2	--	--	BPJ, E
Temperature	°F	--	--	--	80	BP
TPH <sup>5</sup>	µg/L	--	100	--	--	BPJ, E
	lbs/day <sup>2</sup>	--	8.3	--	--	
Turbidity	NTU	--	75	--	--	BPJ, E
Priority Pollutants						
Chromium (VI), Total Recoverable	µg/L	--	16	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	1.3	--	--	
Copper, Total Recoverable	µg/L	--	7.3 <sup>7</sup>	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	0.61 <sup>7</sup>	--	--	
Lead, Total Recoverable	µg/L	--	2.2 <sup>7</sup>	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	0.18 <sup>7</sup>	--	--	
Mercury, Total Recoverable	µg/L		0.10	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>		0.0083			
Nickel, Total Recoverable	µg/L	--	48	--	--	CTR, SIP
	lbs/day <sup>2</sup>	--	4.0	--	--	
Zinc, Total Recoverable	µg/L	--	67 <sup>7</sup>	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	5.6 <sup>7</sup>	--	--	
Benzo(a)-anthracene	µg/L	--	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	0.0082	--	--	
Benzo(a)-pyrene	µg/L	--	0.0098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	0.0082	--	--	

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Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous		
				Minimum	Maximum	
Benzo(b)fluoran thene	µg/L	--	0.098	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	0.0082	--	--	
Bis (2- ethylhexyl)- phthalate	µg/L	--	12	--	--	E, CTR, SIP
	lbs/day <sup>2</sup>	--	1.0	--	--	
<b>Harbor Toxics TMDL Final Wet-weather Effluent (Unfiltered) Limitations for Discharge Point No. 001</b>						
Copper, Total Recoverable	kg/yr <sup>6</sup>	1.36				E, TMDL
Lead, Total Recoverable	kg/yr <sup>6</sup>	5.98				E, TMDL
Zinc, Total Recoverable	kg/yr <sup>6</sup>	9.75				E, TMDL

- <sup>1</sup> BP = Basin Plan; E = Existing Order; BPJ = Best Professional Judgment; CTR = California Toxic Rule; SIP = State Implementation Policy; ISWEBE Plan = Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California; and TMDL= Total Maximum Daily Load.
- <sup>2</sup> The mass limitations are based on a maximum flow of 10 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. If the flow is greater than 10 MGD, the mass loading is to be recalculated using the event specific flow.
- <sup>3</sup> The bacteria water quality objective for all waters where the salinity is equal to or less than 1 part per thousand (ppt) 95 percent or more of the time during the CALENDAR YEAR is: a six-week rolling GEOMETRIC MEAN of *Escherichia coli* (*E. coli*) not to exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a STATISTICAL THRESHOLD VALUE (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a CALENDAR MONTH, calculated in a static manner.
- <sup>4</sup> TPH equals the sum of TPH gasoline (C<sub>4</sub>-C<sub>12</sub>), TPH diesel (C<sub>13</sub>-C<sub>22</sub>), and TPH oil (C<sub>23</sub>+)
- <sup>5</sup> The MDEL is exceeded when a toxicity test result in a "Fail" and the percent effect is ≥ 0.5
- <sup>6</sup> Annual effluent limitations in unfiltered water. The mass (kg/yr) limitations were calculated based on a flow of 3.7 MGD for ten days per year and are calculated as follows: Flow volume (millions of gallons) x target concentration (CTR acute criteria mg/L) x 3.785 gal/L (conversion) x No. of days of discharge.
- <sup>7</sup> Effluent limitations apply during dry weather only. Within this Order, dry-weather is assumed for any discharge that occurs when the flow is less than the 90<sup>th</sup> percentile flow in Torrance Lateral.

#### E. Sediment Monitoring of the Effluent

The Harbor Toxics TMDL requires attainment with the TMDL's final sediment allocations. This Order implements this requirement as mass-based annual effluent loadings for copper, lead, and zinc based on analyses of unfiltered effluent samples.

#### F. Interim Effluent Limitations – Not Applicable

#### G. Land Discharge Specifications – Not Applicable

#### H. Recycling Specifications - Not Applicable

### V. 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

#### **A. Surface Water**

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

The TMDL provides three methods to demonstrate compliance with the freshwater metals allocations for Torrance Refinery discharges to Torrance Lateral and subsequently to Dominguez Channel. They are:

- a. Final allocation are met,
- b. CTR total metals criteria are met instream, or
- c. CTR total metals criteria are met in the discharge.

#### **B. Groundwater – Not Applicable**

### **VI. RATIONALE FOR PROVISIONS**

#### **A. Standard Provisions**

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

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. 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) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

#### **B. Special Provisions**

##### **1. Reopener Provisions**

The reopener provisions included in section VI.C.1 of the Waste Discharge Requirements of this Order are based on 40 C.F.R. part 123 and the previous regulating Order No. R4-2013-0138. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications can include but are not limited to, the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan or adoption of applicable TMDLs associated with the receiving water

##### **2. Special Studies and Additional Monitoring Requirements**

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- a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.
- b. **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, sediment and fish tissue monitoring at monitoring stations in the Dominguez Channel Estuary. The Discharger may join a collaborative group or develop a site specific plan to comply with this requirement.

### 3. Best Management Practices and Pollution Prevention

#### a. Storm Water Pollution Prevention Plan (SWPPP)

This Order requires the Discharger to update, as necessary, and continue to implement a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing trash and contaminated storm water runoff from being discharged directly into the receiving water. At a minimum, best management practices should be implemented to ensure that raw materials and chemicals do not come into contact with storm water runoff and to prevent the entrainment of trash in storm water that is discharged. These procedures shall also ensure that at no time will process wastewaters be commingled with storm water and be discharged through Discharge Point 001. SWPPP requirements are included as Attachment G, based on 40 C.F.R. 122.44(k).

- b. **Best Management Practices Plan (BMPP).** This Order requires the Discharger to develop and implement the BMPP. The BMPP may be included as a component of the SWPPP. The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment, to ensure that unauthorized non-storm water discharges (i.e., spills) do not occur at the Facility. The BMPP shall incorporate the requirements contained in Attachment G. Attachment G requires a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
- c. **Spill Contingency Plan (SCP)** . This Order requires the Discharger to update or develop and implement a SCP to control the discharge of pollutants. The SCP shall include a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events at the site. This provision is included in this Order to minimize and control the amount of pollutants discharged in case of a spill. The SCP shall be site specific and shall cover all areas of the Facility. A Spill Prevention, Control, and Countermeasure (SPCC) Plan may satisfy this requirement

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

This provision, included in section VI.C.4 of the Waste Discharger Requirements of this Order, is based on the requirements of 40 CFR section 122.41(e).

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

### 6. Other Special Provisions

#### a. Emergency Provision

Under normal operating conditions and typical wet weather events, the Discharger is required to maintain effluent flow of 10 MGD or less. This anticipated flow is based on

maximum flow recorded in February 1998. During an emergency storm event, flow restriction for this discharge could lead to potential flooding in the refinery which could result in additional pollutants contaminating the storm water. Therefore, during an emergency storm event, defined in this Order as the 50-year return period, 24-hour storm or an equivalent chronic rainfall event, the Discharger may exceed a 10 MGD discharge to the receiving water. In the event of an emergency storm condition discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

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

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

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

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

### **B. Effluent Monitoring**

Monitoring for pollutants expected to be present in the discharge will be required as established in Table E-2 of the MRP (Attachment E). To demonstrate compliance with established effluent limitations, the Order includes monitoring requirements of once per discharge event for parameters with effluent limitations, and for parameters to which WLAs have been prescribed in the Harbor Toxics TMDL. The monitoring requirements included in this Order are consistent with those included in the prior order, Order No. R4-2013-0138. Monitoring for additional pollutants is required based on considerations of pollutants commonly associated with similar operations and historical presence in the discharge. This Order includes a maximum monitoring frequency during extended discharges of once per week for most of the pollutants.

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

### **C. Whole Effluent Toxicity Testing Requirements**

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. A chronic toxicity test measures mortality, reproduction, and growth. A chemical at a low concentration can have chronic effects but no acute effects. Chronic toxicity is a more stringent requirement than acute toxicity. For this Order, acute toxicity monitoring has been removed and the chronic toxicity limit with monitoring was retained. This Order includes monitoring requirements for chronic toxicity in the MRP.

### **D. Receiving Water Monitoring**

#### **1. Surface Water**

The SIP requires monitoring of the receiving water for the CTR priority pollutants, including TCDD equivalents, to determine reasonable potential. This Order requires the Discharger to conduct annual receiving water monitoring of the CTR priority pollutants, including TCDD equivalents, at the upstream Receiving Water Monitoring Location RSW-001 during years in

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which a discharge occurs from the Facility. Additionally, the Discharger must sample and analyze within applicable holding times for pH, temperature, salinity, hardness, and dissolved oxygen, in the receiving water at the same time samples are collected for priority pollutant (including TCDD equivalents) analyses.

The discharge from Torrance Refinery via Outfall 001 is the beginning of Torrance Lateral so there is no confluence of flows. RSW-001 is in Torrance Lateral 50 feet downstream of Outfall 001. Documentation of the exact sampling location will be provided by the sampling contractor and provided to the Regional Water Board.

## **2. Groundwater – Not Applicable**

### **E. Other Monitoring Requirements**

#### **1. Visual Monitoring Requirements**

The Discharger is required to conduct visual observations of O'Brien Lake just prior to discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. These requirements are consistent with requirements of other dischargers in the Region.

#### **2. Regional Monitoring**

Regional monitoring is required to determine compliance with the assigned wasteload and load allocations specified in the Harbors Toxics TMDL. The Discharger may develop a site-specific plan or join a group of stakeholders in the development of Regional Monitoring program(s) to address pollutants as specified in the Harbors Toxics TMDL. If the Discharger intends to address the Plan requirements in combination with another facility or by joining a group already formed, the Plan must address monitoring requirements for all water bodies to which discharges occur.

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

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

### **VIII. PUBLIC PARTICIPATION**

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Torrance Refinery. As a step in the WDR/NPDES permit adoption process, the Regional Water Board staff developed tentative WDRs and has encouraged public participation in the WDR/NPDES adoption process.

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## A. Notification of Interested Persons

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDR's/NPDES permit for the discharge and provided an opportunity to submit written comments, and recommendations. Notification was provided through a local newspaper, electronic mailing and posting on the Los Angeles Water Board Website. 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>

## B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs/NPDES permit as provided through the notification process electronically at [losangeles@waterboards.ca.gov](mailto:losangeles@waterboards.ca.gov) with a copy to [mazhar.ali@waterboards.ca.gov](mailto:mazhar.ali@waterboards.ca.gov).

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **May 13, 2019**.

## C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

**Date: June 13, 2019**

**Time: 9:00 a.m.**

**Location: City of Camarillo 601 Carmen Drive  
Camarillo, California**

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

You can access the current agenda for changes in dates and locations at <http://www.waterboards.ca.gov/losangeles>. Please be aware that dates and venues may change.

## D. Review of Waste Discharge Requirements

Any person aggrieved by this action of the Los Angeles Regional Water Board Name 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](mailto:waterqualitypetitions@waterboards.ca.gov)

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

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

#### **E. Information and Copying**

The Report of Waste Discharge, 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 Regional Water Board by calling (213) 576-6600.

#### **F. Register of Interested Persons**

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

#### **G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Mazhar Ali at [mazhar.ali@waterboards.ca.gov](mailto:mazhar.ali@waterboards.ca.gov) or at (213) 576-6652.

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

### **I. IMPLEMENTATION SCHEDULE**

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

### **II. OBJECTIVES**

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

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

The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

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

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

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

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

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

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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 STORM WATER POLLUTION PREVENTION PLANS**

<b>PLANNING AND ORGANIZATION</b>  Form Pollution Prevention Team Review other plans
<b>ASSESSMENT PHASE</b>  Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant risks
<b>BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE</b>  Non-structural BMPs Structural BMPs Select activity and site-specific BMPs
<b>IMPLEMENTATION PHASE</b>  Train employees Implement BMPs Conduct recordkeeping and reporting
<b>EVALUATION / MONITORING</b>  Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

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**IV. SITE MAP**

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

The following information shall be included on the site map:

- A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and



municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

- B. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.
- C. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section VI.A.4 below have occurred.
- E. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

## V. LIST OF SIGNIFICANT MATERIALS

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

## VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

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

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<sup>1</sup> Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or authorized non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (C.F.R.) part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 C.F.R., parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the authorized non-storm water discharges and associated drainage area.

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

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

## VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

- A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in section VI above to determine:
  1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and
  2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.
- B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

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

## VIII. STORM WATER BEST MANAGEMENT PRACTICES

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

**TABLE B**  
**EXAMPLE**  
**ASSESSMENT OF POTENTIAL POLLUTION SOURCES**  
**AND CORRESPONDING BEST MANAGEMENT**  
**PRACTICES SUMMARY**

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery.  Spills caused by topping off fuel tanks.  Hosing or washing down fuel oil fuel area.  Leaking storage tanks.    Rainfall running off fuel oil, and rainfall running onto and off fueling area	fuel oil	Use spill and overflow protection.  Minimize run-on of storm water into the fueling area.  Cover fueling area.  Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program.  Implement adequate preventative maintenance program to preventive tank and line leaks.  Inspect fueling areas regularly to detect problems before they occur.  Train employees on proper fueling, cleanup, and spill response techniques.

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

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

#### A. Non-Structural BMPs

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

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.
2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.
3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.
5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.
8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.
9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.
10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

#### B. Structural BMPs

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Where non-structural BMPs as identified in section VIII.A above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.
2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.
3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

#### IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. Evaluations shall include the following:

- A. A review of all visual observation records, inspection records, and sampling and analysis results.
- B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section X.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.B.5 of Attachment D.

#### X. SWPPP GENERAL REQUIREMENTS

- A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.
- B. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP

revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

- C.** The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- D.** The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.
- E.** When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.
- F.** The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under section 308(b) of the Clean Water Act.

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

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

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

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

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	



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

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

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

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

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

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

**Techniques:**

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

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

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

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

DCP - Direct Current Plasma

COLOR – Colorimetric

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# ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

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CTR Number	Parameter	CAS Number	Analytical Methods
1	Antimony	7440360	1
2	Arsenic	7440382	1
3	Beryllium	7440417	1
4	Cadmium	7440439	1
5a	Chromium (III)	16065831	1
5a	Chromium (VI)	18540299	1
6	Copper	7440508	1
7	Lead	7439921	1
8	Mercury	7439976	1631E
9	Nickel	7440020	1
10	Selenium	7782492	1
11	Silver	7440224	1
12	Thallium	7440280	1
13	Zinc	7440666	1
14	Cyanide	57125	1
15	Asbestos	1332214	1
16	2,3,7,8-TCDD	1746016	1
17	Acrolein	107028	1
18	Acrylonitrile	107131	1
19	Benzene	71432	1
20	Bromoform	75252	1
21	Carbon Tetrachloride	56235	1
22	Chlorobenzene	108907	1
23	Chlorodibromomethane	124481	1
24	Chloroethane	75003	1
25	2-Chloroethylvinyl Ether	110758	1
26	Chloroform	67663	1
27	Dichlorobromomethane	75274	1
28	1,1-Dichloroethane	75343	1
29	1,2-Dichloroethane	107062	1
30	1,1-Dichloroethylene	75354	1
31	1,2-Dichloropropane	78875	1
32	1,3-Dichloropropylene	542756	1
33	Ethylbenzene	100414	1
34	Methyl Bromide	74839	1
35	Methyl Chloride	74873	1
36	Methylene Chloride	75092	1
37	1,1,2,2-Tetrachloroethane	79345	1
38	Tetrachloroethylene	127184	1
39	Toluene	108883	1
40	1,2-Trans-Dichloroethylene	156605	1
41	1,1,1-Trichloroethane	71556	1
42	1,1,2-Trichloroethane	79005	1
43	Trichloroethylene	79016	1
44	Vinyl Chloride	75014	1
45	2-Chlorophenol	95578	1
46	2,4-Dichlorophenol	120832	1
47	2,4-Dimethylphenol	105679	1
48	2-Methyl-4,6-Dinitrophenol	534521	1
49	2,4-Dinitrophenol	51285	1

CTR Number	Parameter	CAS Number	Analytical Methods
50	2-Nitrophenol	88755	1
51	4-Nitrophenol	100027	1
52	3-Methyl-4-Chlorophenol	59507	1
53	Pentachlorophenol	87865	1
54	Phenol	108952	1
55	2,4,6-Trichlorophenol	88062	1
56	Acenaphthene	83329	1
57	Acenaphthylene	208968	1
58	Anthracene	120127	1
59	Benzidine	92875	1
60	Benzo(a)Anthracene	56553	1
61	Benzo(a)Pyrene	50328	1
62	Benzo(b)Fluoranthene	205992	1
63	Benzo(ghi)Perylene	191242	1
64	Benzo(k)Fluoranthene	207089	1
65	Bis(2-Chloroethoxy)Methane	111911	1
66	Bis(2-Chloroethyl)Ether	111444	1
67	Bis(2-Chloroisopropyl)Ether	108601	1
68	Bis(2-Ethylhexyl)Phthalate	117817	1
69	4-Bromophenyl Phenyl Ether	101553	1
70	Butylbenzyl Phthalate	85687	1
71	2-Chloronaphthalene	91587	1
72	4-Chlorophenyl Phenyl Ether	7005723	1
73	Chrysene	218019	1
74	Dibenzo(a,h)Anthracene	53703	1
75	1,2-Dichlorobenzene	95501	1
76	1,3-Dichlorobenzene	541731	1
77	1,4-Dichlorobenzene	106467	1
78	3,3'-Dichlorobenzidine	91941	1
79	Diethyl Phthalate	84662	1
80	Dimethyl Phthalate	131113	1
81	Di-n-Butyl Phthalate	84742	1
82	2,4-Dinitrotoluene	121142	1
83	2,6-Dinitrotoluene	606202	1
84	Di-n-Octyl Phthalate	117840	1
85	1,2-Diphenylhydrazine	122667	1
86	Fluoranthene	206440	
87	Fluorene	86737	1
88	Hexachlorobenzene	118741	1
89	Hexachlorobutadiene	87863	1
90	Hexachlorocyclopentadiene	77474	1
91	Hexachloroethane	67721	1
92	Indeno(1,2,3-cd)Pyrene	193395	1
93	Isophorone	78591	1
94	Naphthalene	91203	1
95	Nitrobenzene	98953	1
96	N-Nitrosodimethylamine	62759	1
97	N-Nitrosodi-n-Propylamine	621647	1
98	N-Nitrosodiphenylamine	86306	1
99	Phenanthrene	85018	1
100	Pyrene	129000	1
101	1,2,4-Trichlorobenzene	120821	1
102	Aldrin	309002	1

CTR Number	Parameter	CAS Number	Analytical Methods
103	alpha-BHC	319846	1
104	beta-BHC	319857	1
105	gamma-BHC	58899	1
106	delta-BHC	319868	1
107	Chlordane	57749	1
108	4,4'-DDT	50293	1
109	4,4'-DDE	72559	1
110	4,4'-DDD	72548	1
111	Dieldrin	60571	1
112	alpha-Endosulfan	959988	1
113	beta-Endosulfan	33213659	1
114	Endosulfan Sulfate	1031078	1
115	Endrin	72208	1
116	Endrin Aldehyde	7421934	1
117	Heptachlor	76448	1
118	Heptachlor Epoxide	1024573	1
119	PCB-1016	12674112	1
120	PCB-1221	11104282	1
121	PCB-1232	11141165	1
122	PCB-1242	53469219	1
123	PCB-1248	12672296	1
124	PCB-1254	11097691	1
125	PCB-1260	11096825	1
126	Toxaphene	8001352	1

<sup>1</sup> Pollutants shall be analyzed using the methods described in 40 CFR Part 136