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

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576 - 6600 • Fax (213) 576 - 6640
http://www.waterboards.ca.gov

# ORDER R4-2019-XXXX
# NPDES NO. CA0059153

## WASTE DISCHARGE REQUIREMENTS FOR THE TESORO REFINING & MARKETING COMPANY LLC TESORO LOS ANGELES REFINERY - CALCINER OPERATIONS (FORMERLY KNOWN AS THE TESORO WILMINGTON CALCINER FACILITY)

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

**Table 1. Discharger Information**

| | |
|---|---|
| **Discharger** | Tesoro Refining & Marketing Company LLC |
| **Facility Name** | Tesoro Los Angeles Refinery - Calciner Operations (Formerly Tesoro Wilmington Calciner) |
| **Facility Address** | 2450 Pier B Street |
| | Long Beach, CA 90813 |
| | Los Angeles County |

**Table 2. Discharge Location**

| Discharge Point | Effluent Description | Discharge Point Latitude (North) | Discharge Point Longitude (West) | Receiving Water |
|---|---|---|---|---|
| 001 | Treated wastewater consisting of green coke drainage and miscellaneous wash water, boiler safety relief system blowdown, boiler feed water pump seal flush, cooling tower overflow, and storm water runoff. | 33.77472° | -118.2275° | Cerritos Channel (Los Angeles-Long Beach Inner Harbors) |

**Table 3. Administrative Information**

| | |
|---|---|
| This Order was adopted on: | **March 14, 2019** |
| This Order shall become effective on: | **May 1, 2019** |
| This Order shall expire on: | **April 30, 2024** |
| The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than: | **180 days prior to the Order expiration date** |
| The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows: | **Minor discharge** |

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 March 14, 2019.

_____
Deborah J. Smith, Executive Officer

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## I. FACILITY INFORMATION

Information describing the Tesoro Los Angeles Refinery - Calciner Operations (hereinafter Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

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

**A. Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370) and state regulations (including title 27, California Code of Regulations Section 22561 et seq.). 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 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 to the discharges that are the subject of 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 No. R4-2013-0157 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

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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 1.1 MGD of treated wastewater consisting of storm water, boiler safety relief system blowdown, boiler feed water pump seal flush, green coke drainage, and miscellaneous wash waters from Discharge Point No. 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 the Cerritos Channel, or other waters of the United States or State, are prohibited.

**D.** Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by section 13050 of the Water Code.

**E.** Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

**F.** The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the federal CWA and regulations adopted thereunder.

**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 that 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.** Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

**L.** The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

## IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

### A. Effluent Limitations

#### 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.

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

| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| ***Conventional Pollutants*** | | | | | |
| pH | s.u. | -- | -- | 6.5 | 8.5 |
| Biochemical Oxygen Demand (5-day @ 20 deg. C) (BOD) | mg/L | 20 | 30 | -- | -- |
| | lbs/day[1] | 183 | 275 | -- | -- |
| Oil and Grease | mg/L | 10 | 15 | -- | -- |
| | lbs/day[1] | 92 | 138 | -- | -- |
| Total Suspended Solids (TSS) | mg/L | 30 | 75 | -- | -- |
| | lbs/day[1] | 275 | 688 | -- | -- |
| ***Non-Conventional Pollutants*** | | | | | |
| Settleable Solids | ml/L | 0.1 | 0.2 | -- | -- |
| Temperature | °F | -- | -- | -- | 86 |
| Total Petroleum Hydrocarbons (TPH)[2] | µg/L | -- | 100 | -- | -- |
| | lbs/day[1] | -- | 0.92 | -- | -- |
| Turbidity | NTU | 50 | 75 | -- | -- |
| Chronic Toxicity[3] | Pass or Fail, % Effect (TST) | -- | Pass or % Effect <50 | -- | -- |
| Total Coliform | CFU/100mL or MPN/100mL | [4] | | -- | -- |
| Fecal Coliform | CFU/100mL or MPN/100mL | [4] | | -- | -- |
| Enterococcus | CFU/100mL or MPN/100mL | [4] | | -- | -- |
| ***Priority Pollutants*** | | | | | |
| Copper, Total Recoverable[5] | µg/L | 3.1 | 6.1 | -- | -- |
| | lbs/day[1] | 0.03 | 0.1 | -- | -- |
| Lead, Total Recoverable[5] | µg/L | 7 | 14 | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- |
| Nickel, Total Recoverable | µg/L | 7 | 14 | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- |
| Thallium, Total Recoverable | µg/L | 6.3 | 13 | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- |
| Zinc, Total Recoverable[5] | µg/L | 70 | 141 | -- | -- |
| | lbs/day[1] | 0.6 | 1.3 | -- | -- |
| | µg/L | 0.5 | 1.0 | -- | -- |

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| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Cyanide, Total (as CN) | lbs/day[1] | 0.005 | 0.01 | -- | -- |
| 4,4'-DDT[5,6] | µg/L | 0.0006 | 0.001 | -- | -- |
| | lbs/day[1] | 5.4E-06 | 1.1E-05 | -- | -- |
| Total PCBs[5,6,7] | µg/L | 0.0002 | 0.0003 | -- | -- |
| | lbs/day[1] | 1.6E-06 | 3.1E-06 | -- | -- |

[1] Mass (lbs/day) limitations are based on a maximum flow of 1.1 MGD and calculated as follows:

Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge and actual measured concentration.

[2] TPH equals the sum of TPH gasoline ($C_4$-$C_{12}$), TPH diesel ($C_{13}$-$C_{22}$), and TPH oil ($C_{23+}$).

[3] The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as "Pass" or "Fail" and "% Effect". The MDEL is exceeded when a toxicity test results in a "Fail," and the percent effect is greater than or equal to 0.50.

[4] Both geometric mean and single sample bacterial limitations are established. The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period).

a. Rolling 30-day Geometric Mean Limits
   i. Total coliform density shall not exceed 1,000/100 ml.
   ii. Fecal coliform density shall not exceed 200/100 ml.
   iii. Enterococcus density shall not exceed 35/100 ml.

b. Single Sample Limits (SSM)
   **i.** Total coliform density shall not exceed 10,000/100 ml.
   ii. Fecal coliform density shall not exceed 400/100 ml.
   iii. Enterococcus density shall not exceed 104/100 ml.
   iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to total coliform exceeds 0.1.

[5] These effluent limitations are included based on applicable waste load allocation (WLAs) specified in the *Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Harbors Toxics TMDL), which were incorporated into the *Water Quality Control Plan for the Los Angeles Region* (Basin Plan) through Regional Water Board Resolution No. R11-008, and calculated using the California Toxic Rule (CTR) and State Implementation Plan (SIP) procedures.

[6] Samples analyzed must be unfiltered samples.

[7] See Footnote 7 of Table E-2 in Attachment E of this Order for requirements on PCBs analyses.

### 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 the Cerritos Channel.

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.

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2. Surface water temperatures that are not in compliance with the ~~to rise greater than 5º F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 80º F as a result of waste discharged.~~ Thermal Plan Specific Water Quality Objectives for Enclosed Bays:

   For Existing Discharges

   **a.** Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses.

3. Water Contact Standards

   In marine waters designated for Water Contact Recreation (REC-1) and potential REC-1 uses, the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water:

   **a.** Geometric Mean Limits

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

   **b.** Single Sample Maximum (SSM) Limits

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

4. The mean annual dissolved oxygen concentration to be less than or equal to ~~fall below~~ 7.0 mg/L. No single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

5. Exceedance of the total ammonia (as N) concentrations specified in Chapter 3 of the Basin Plan as amended by Regional Water Board Resolution No. 2004-022, adopted on March 4, 2004. Resolution No. 2004-022, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including Enclosed Bays, Estuaries, and Wetlands) with the Beneficial Use Designations for Protection of "Aquatic Life"*. The ammonia Basin Plan amendment became effective on May 19, 2005.

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.

7. Where natural turbidity is between 0 to 50 NTU, increases in turbidity shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases in turbidity shall not exceed 10%.

8. Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.

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9. 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.
10. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
11. 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.
12. Accumulation of bottom deposits or aquatic growths.
13. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
14. The presence of substances that result in increases of BOD that adversely affect beneficial uses.
15. 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.
16. Alteration of turbidity, or apparent color beyond present natural background levels.
17. Damage, discoloration, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.
18. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.
19. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
20. Nuisance, or adversely affect beneficial uses of the receiving water.
21. 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

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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 waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

**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.

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**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 30 days prior to taking effect, 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.** The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil liability of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation by either the State Water Board or the Regional Water Board, or by a court. Additionally, when the violation involves the discharge of pollutants, the discharger may be subject to civil liability of up to $10 per gallon or $25 per gallon; or some combination thereof, depending on the violation, or upon the combination of violations and the number of gallons discharged. See Water Code section 13385.

**m.** Violation of any of the provisions of this Order may subject the violator to any of the liability or 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.

**n.** 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.

**o.** 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.

**p.** 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.

**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.

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**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 any reasonable potential analysis (RPA) that may be conducted.

**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 or revision of a TMDL for the Los Angeles-Long Beach Inner Harbors Watershed Management Area.

**e.** This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data (Section VI.C.2.c. of the attached MRP No. 6571).

**f.** This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.

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

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

**a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation 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 TRE requirements.

**b. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Greater Los Angeles and Long Beach Harbor Waters Compliance**

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**Monitoring Program.** As defined in the amendment to the Basin Plan, incorporating the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Resolution No. R11-008 or Harbor Toxics TMDL), the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Greater Los Angeles and Long Beach Harbors. These plans shall follow the "TMDL Element - Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Harbor Toxics TMDL requires that the Monitoring Plan and QAPP shall be submitted 20 months after the effective date (March 23, 2012) of the TMDL for public review and subsequent Executive Officer approval. Since the effective date of this Order exceeds the deadline for the Monitoring Plan and QAPP, the Discharger shall join a group already formed, 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. At a minimum, monitoring shall be conducted at the locations and for the constituents listed in Table 5 for water column, total suspended solids, and bed sediments. The exact locations of monitoring sites shall be specified in the Monitoring Plan to be approved by the Executive Officer.

**The Compliance Monitoring Program shall include:**

i. **Water Column Monitoring.** Water samples and TSS samples shall be collected during two wet weather events and one dry weather event each year. TSS samples shall be collected at several depths during wet weather events. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and TSS samples shall be collected at Stations 12 through 15 and analyzed for a suite of compounds including, at a minimum, copper, lead, zinc, DDT, and PCBs as indicated in Table 5. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the pollutants in the bulk sediment.

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In addition, temperature, dissolved oxygen, pH, salinity, and receiving water flow shall be monitored during each sampling event.

**Table 5. Water and Sediment Chemistry Monitoring Requirements[1]**

| Water Body Name | Station ID | Station Location | Sample Media and Parameters | |
|---|---|---|---|---|
| | | | Water Column | Sediment |
| Long Beach Inner Harbor | 12 | Cerritos Channel between the Heim Bridge and the Turning Basin | Flow, Temperature, DO, pH, Salinity, TSS, Copper, Lead, Zinc, PCBs, DDT | Copper, Lead, Zinc, Toxicity, Benthic Community Effect |
| | 13 | Back Channel between Turning Basin and West Basin | | |
| | 14 | Center of West Basin | | |
| | 15 | Center of Southeast Basin | | |

[1] Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment based on the Harbor Toxics TMDL.

ii. **Sediment Monitoring.** Sediment chemistry samples shall 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. Sediment samples shall be collected at Stations 12 through 15 and analyzed for parameters as included in Table 5.

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

iii. **Fish Tissue Monitoring.** Fish tissue samples shall be collected every two years in San Pedro Bay, Los Angeles Harbor, and Long Beach Harbor, and analyzed for chlordane, dieldrin, toxaphene, DDT, and PCBs. At a minimum, three species shall be collected, including white croaker, a sport fish, and a prey fish.

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) or by U.S. EPA. The plan shall include a list of chemical analytes for the water column and sediment.

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v. **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) shall describe the project objectives and organization, functional activities, and quality assurance/quality control protocols for the water and sediment monitoring. The QAPP shall include protocols for sample collection, standard analytical procedures, and laboratory certification. All samples shall be collected in accordance with Surface Water Ambient Monitoring Program (SWAMP) protocols.

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

**3. Best Management Practices and 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 substituted for the Discharger's Spill Prevention Control and Countermeasure (SPCC) Plan.

Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The plans shall be reviewed annually and at the same time and updated

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as required. Updated information shall be submitted to the Regional Water Board within 30 days of revision.

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.

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

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

If the average (or when applicable, the median determined by 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 for the purpose of calculating mandatory minimum penalties; 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) for the purpose of calculating discretionary administrative civil liabilities. 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 one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

**G. Instantaneous Minimum Effluent Limitation**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, 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

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are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

**H. Instantaneous Maximum Effluent Limitation**

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

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

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

**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, Appendix A, Figure A-1, and Table A- 1* (EPA 833-R-10-003, 2010),

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

Mean discharge IWC response ≤0.75 × Mean control response.

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

((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100%.

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 ≥ 50%.

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**L. Bacterial Standards and Analyses**

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

$$\text{Geometric Mean} = (C1 \times C2 \times \ldots \times Cn)^{1/n}$$

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

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**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:

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

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

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

**Bioaccumulative**
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.

**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

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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.

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**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)**
PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. PCBs as congeners shall be individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate) using EPA Method 1668c. PCBs as congeners shall be analyzed using EPA Method 1668c for three years and an alternate method may be used if none of the PCB congeners are detected for three years using EPA Method 1668c. To facilitate interpretation of sediment/fish tissue data collected pursuant to the Harbors Toxics TMDL, PCB congeners whose analytical characteristics resemble those of PCB-8, 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 195, 201, 206 and 209 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate).

**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.

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**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.

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**ACRONYMS AND ABBREVIATIONS**

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

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

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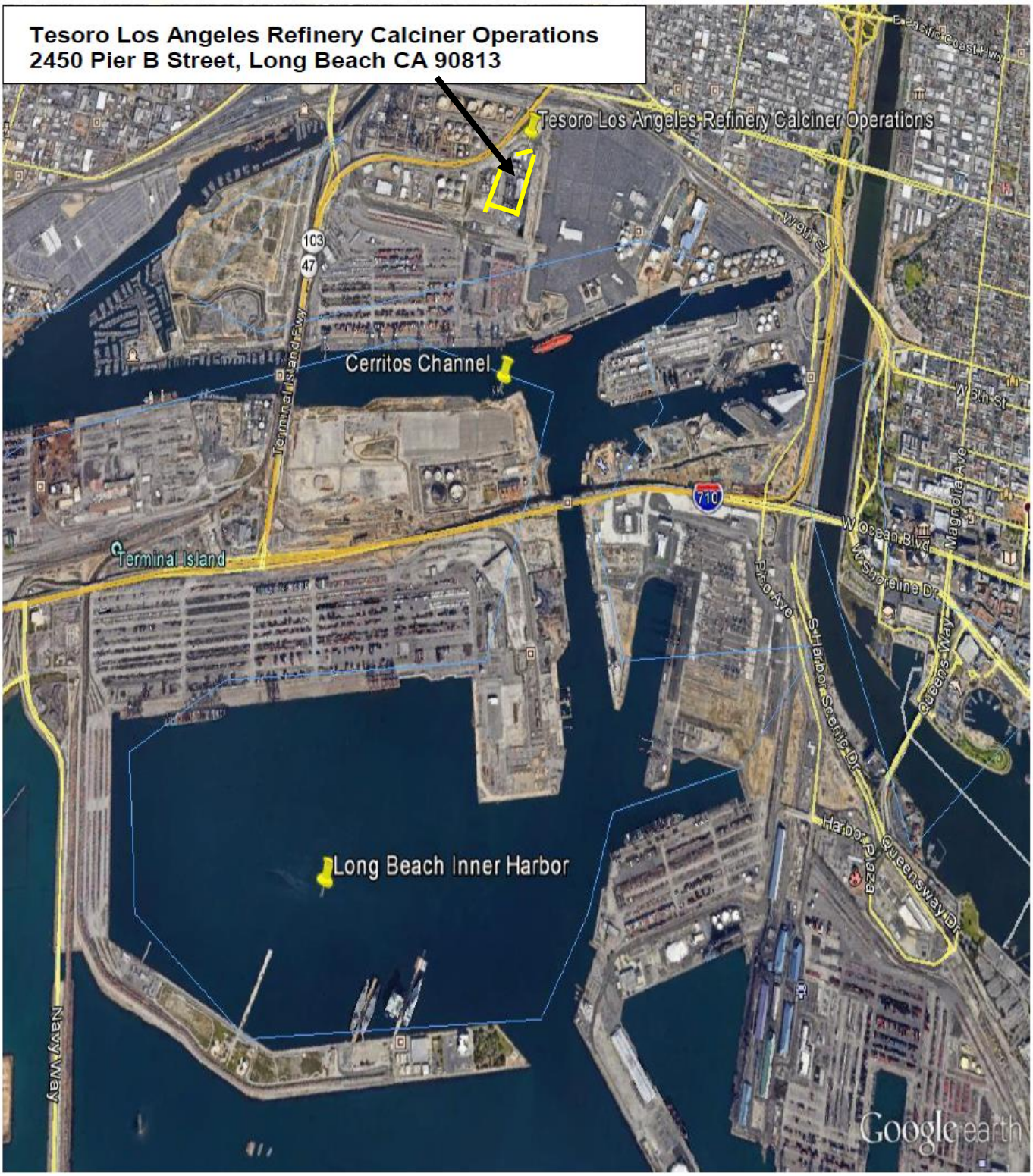
**ATTACHMENT B – MAP**

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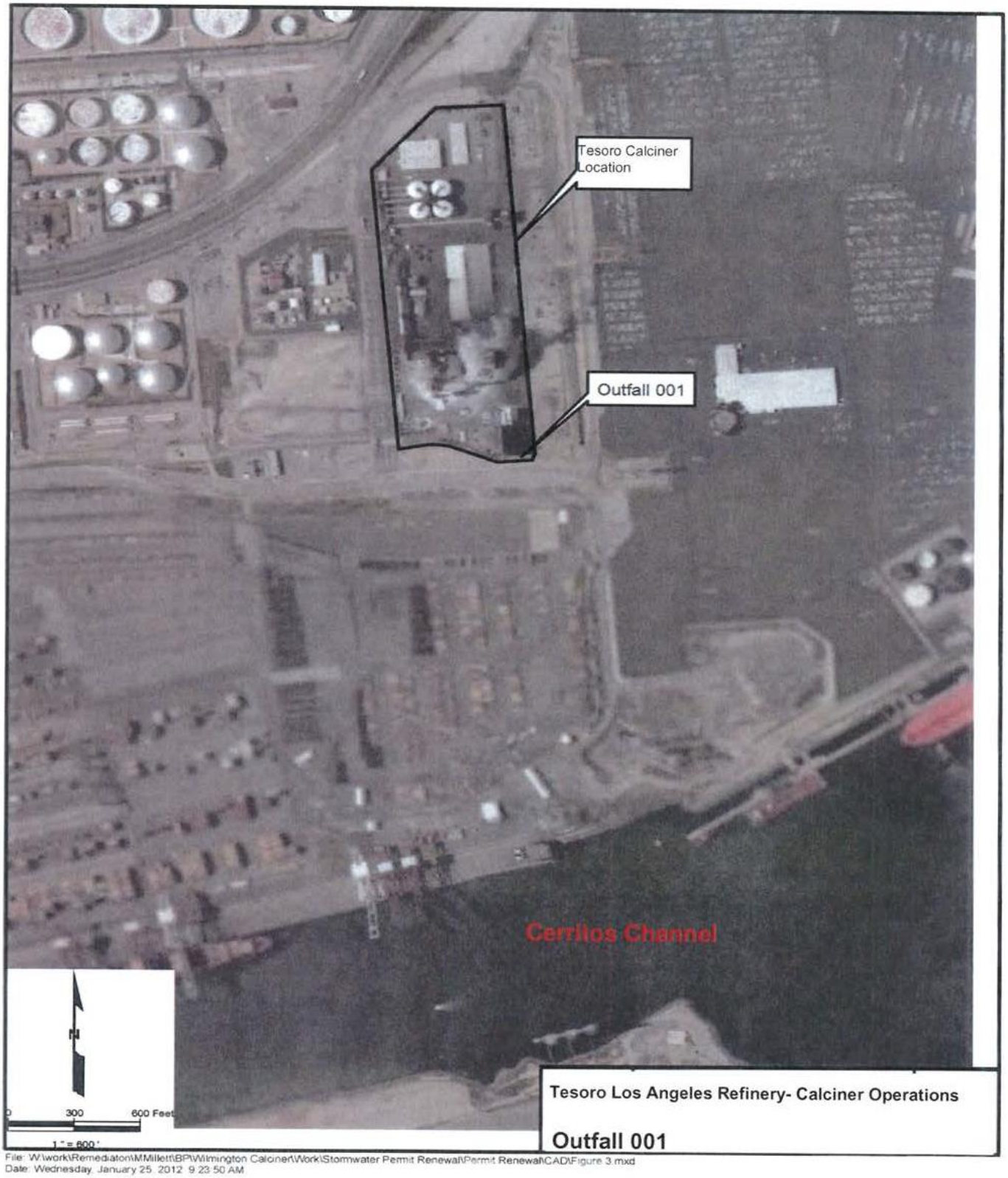


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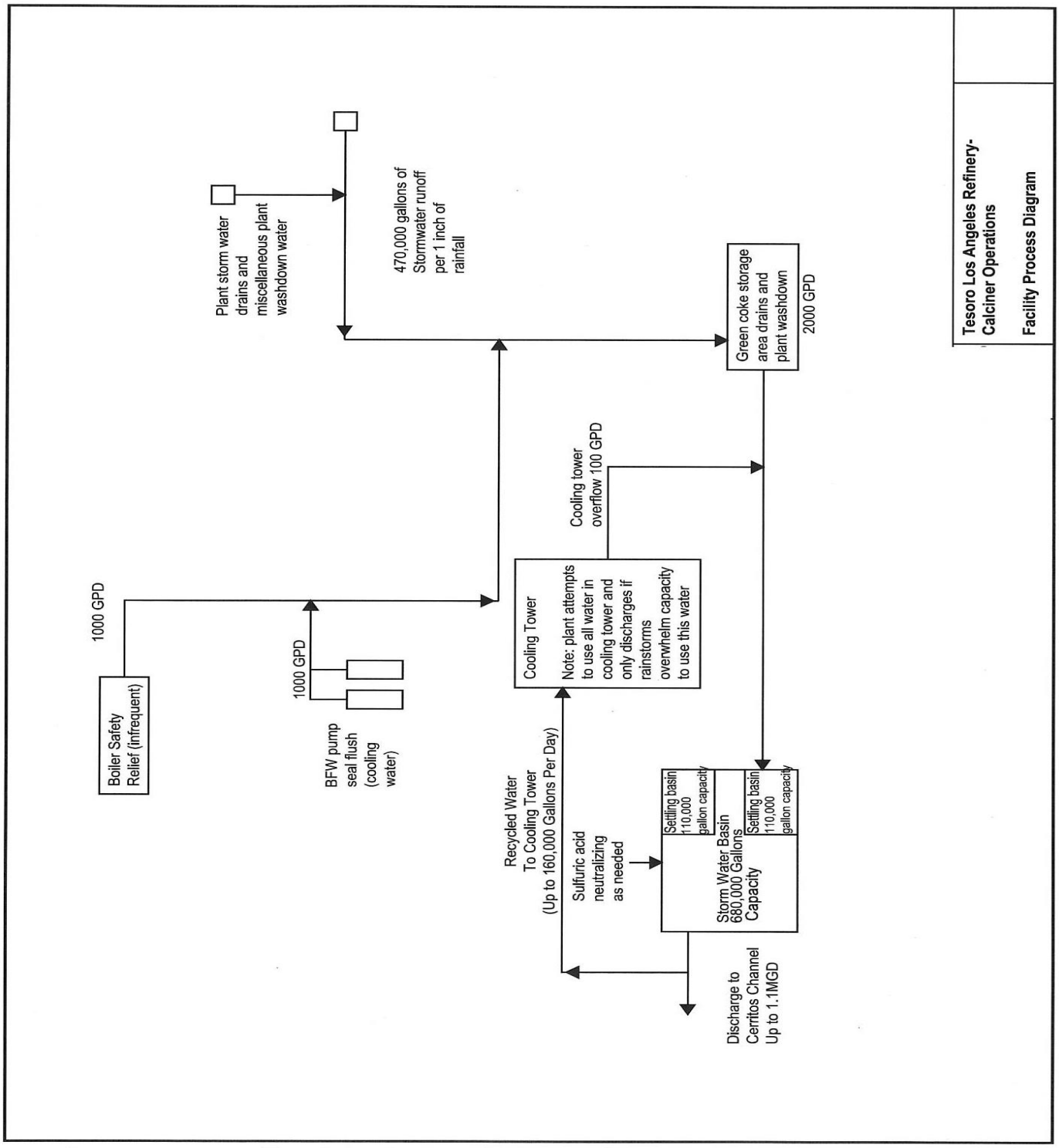
## ATTACHMENT C – FLOW SCHEMATIC

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# ATTACHMENT D – STANDARD PROVISIONS

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## 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);

**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).)

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**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).)

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## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

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

### B. Duty to Reapply

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

### C. Transfers

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

## III. STANDARD PROVISIONS – MONITORING

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

**B.** Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, 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

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the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

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

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

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

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

## V. STANDARD PROVISIONS – REPORTING

### A. Duty to Provide Information

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

### B. Signatory and Certification Requirements

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

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**3.** All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

**a.** The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

**b.** The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

**c.** The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

**4.** If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

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

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

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

## C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)

**2.** Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. 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).)

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**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.

   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:

   ~~b.~~a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   ~~c.~~b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

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**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.

## 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)):

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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. 6571)

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 6571

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.

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### I. GENERAL MONITORING PROVISIONS

**A.** Effluent sampling stations shall be established for the points of discharge (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

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**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 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

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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.

## 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 |
|---|---|---|
| ***Effluent Monitoring*** | | |
| 001 | EFF-001 | At the discharge point of the retention basin. (Latitude: 33.77472º ; Longitude: -118.2275º) |
| ***Receiving Water Monitoring*** | | |
| --- | RSW-001 | A sampling station shall be established at a location outside the influence of the effluent discharge location, and at least 50 feet upstream, relative to tidal flow in the Cerritos Channel. |
| -- | RSW-002 | A sampling station shall be established at a location 50 feet downstream from the effluent discharge location, relative to tidal flow in the Cerritos Channel. |

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 mixed with wastewaters associated with industrial activities 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:

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

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Total Flow | Gallons/Day | Meter or Calculated | 1/Day[1] | -- |
| ***Conventional Pollutants*** | | | | |
| pH | std. units | Grab[2A] | 1/Discharge Event[2] | [4] |
| Biochemical Oxygen Demand (BOD) (5-day @ 20 deg. C)[3] | mg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Chemical Oxygen Demand (COD)[3] | mg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Oil and Grease[3] | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Total Suspended Solids (TSS)[3] | mg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| ***Non-Conventional Pollutants*** | | | | |
| Aluminum, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Ammonia Nitrogen, Total (as N) | mg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Barium, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Boron, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Bromide | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Chronic Toxicity | Pass or Fail and % Effect (TST) | Grab or Composite[2B] | 2/Year | [5] |
| Color | std. units | Grab[2A] | 1/Discharge Event[2] | [4] |
| Elemental Sulfur | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Fluoride, Total | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Hardness, Total (as $CaCO_3$) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Iron, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Magnesium, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Manganese, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Mercaptan | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Methylene Blue Active Substance (MBAS) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Molybdenum, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Nitrite Plus Nitrate (as N) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Organic Nitrogen, Total (as N) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Phosphorus, Total (as P) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Sulfate, Total (as $SO_4$) | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Sulfide | mg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |

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| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Settleable Solids | ml/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Specific Conductivity | µmhos/cm | Grab[2A] | 1/Discharge Event[2] | [4] |
| Temperature | °F | Grab[2A] | 1/Discharge Event[2] | [4] |
| Fecal Coliform | CFU/100mLor MPN/100mL | Grab[2A] | 1/Discharge Event[2] | [8] |
| Enterococcus | CFU/100mLor MPN/100mL | Grab[2A] | 1/Discharge Event[2] | [8] |
| Total Coliform | CFU/100mLor MPN/100mL | Grab[2A] | 1/Discharge Event[2] | [8] |
| Total Petroleum Hydrocarbons (TPH) as Gasoline ($C_4$-$C_{12}$)[3] | µg/L | Grab[2A] | 1/Discharge Event[2] | EPA Method 503.1 or 8015B |
| TPH as Diesel ($C_{13}$-$C_{22}$)[3] | µg/L | Grab[2A] | 1/Discharge Event[2] | EPA Method 503.1, 8015B, or 8270 |
| TPH as Waste Oil ($C_{23+}$)[3] | µg/L | Grab[2A] | 1/Discharge Event[2] | EPA Method 503.1, 8015B, or 8270 |
| Turbidity | NTU | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Vanadium, Total Recoverable | mg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Xylene | µg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| ***Priority Pollutants*** | | | | |
| Antimony, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Arsenic, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Beryllium, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Cadmium, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Chromium (III) | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Chromium (VI) | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Copper, Total Recoverable[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Lead, Total Recoverable[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Mercury, Total Recoverable[3A] | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Nickel, Total Recoverable[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |

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| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Selenium, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Silver, Total Recoverable | µg/L | Grab or Composite[2B] | 1/Year[6] | [4] |
| Thallium, Total Recoverable[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Zinc, Total Recoverable[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Cyanide, Total (as CN)[3] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| 4,4'-DDT, Total[3,6] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Total PCBs[3,6,7] | µg/L | Grab or Composite[2B] | 1/Discharge Event[2] | [4] |
| Benzo(a)pyrene, Total[6] | µg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Crysene, Total[6] | µg/L | Grab[2A] | 1/Discharge Event[2] | [4] |
| Remaining Priority Pollutants[9] | µg/L | Grab or Composite[2B] | 1/Year[10] | [4] |
| TCDD Equivalents[11] | µg/L | Grab or Composite[2B] | 1/Year[10] | [4] |

[1] The meter or calculated ~~F~~flow shall be recorded daily during each period of discharge. Periods of no flow shall also be reported.

[2] During periods of extended discharge, no more than **one sample per week** (or a 7-day period) is required.

[2A] Grab samples must be collected during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, then no monitoring is required. In the corresponding monitoring report, the Discharger will indicate under statement of perjury that no effluent was discharged to surface water during the reporting period.

[2B] For these parameters, the Discharger has the options to either:

a. 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

b. 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.

[3] The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula.

$$M = 8.34 \times Ce \times Q$$

where: M = mass discharge for a pollutant, lbs/day

Ce = limitation concentration for a pollutant, mg/L

Q = actual discharge flow rate, MGD

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[3A] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 µg/l).

[4] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP, provided in Attachment H. Where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

[5] Refer to section V, Whole Effluent Toxicity Testing Requirements.

[6] Water samples analyzed for these pollutants shall not be filtered.

[7] Monitoring for PCBs as aroclors and PCBs as congeners is required. PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. PCBs as congeners shall be individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate) using EPA Method 1668c. PCBs as congeners shall be analyzed using EPA Method 1668c for three years and an alternate method may be used if none of the PCB congeners are detected for three years using EPA Method 1668c. To facilitate interpretation of sediment/fish tissue data, PCB congeners whose analytical characteristics resemble those of PCB-8, 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 195, 201, 206 and 209 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate)..

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

[9] Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I.

[10] Monitoring is only required during years in which discharge occurs. Annual samples shall be collected during the first discharge of the year. If there is no discharge to surface waters, the Discharger will indicate in the corresponding monitoring report, under statement of perjury that no effluent was discharged to surface water during the reporting period.

[11] TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (ML), and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD equivalents) = $\Sigma(C_x \times TEF_x)$

where: $C_X$ = concentration of dioxin or furan congener x

$TEF_X$ = TEF for congener x

**Toxicity Equivalency Factors**

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

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| Congeners | Minimum Level (pg/L) | Toxicity Equivalence Factor (TEF) |
|---|---|---|
| 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 Points 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. Sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

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

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

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0).
b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

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**4. Species Sensitivity Screening**

Species sensitivity screening shall be conducted during this Order's first required sample collection. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests, using the fish, an invertebrate, and the alga species as previously referenced. 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 if there is a discharge. 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 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, Appendix A, Figure A-1, and Table A-1* (EPA 833-R-10-003, 2010). The null hypothesis ($H_O$) for the TST statistical approach is:

Mean discharge IWC response ≤ (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:

((Mean control response-Mean discharge IWC response) ÷ Mean control response) x 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 1-µm-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or 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.

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

**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 source of toxicity, effluent variability, and treatment system efficiency.

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the Facility.

c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

**7. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail" and % Effect ≥ 50".**

Within 24 hours of the time the Discharger becomes aware of a failing result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five concentration (including the discharge IWC) toxicity tests, conducted at approximately two-week intervals, over an eight-week period. If there is no discharge during the eight-week period, the Discharger should conduct toxicity testing at the next discharge event following the failing result. If each of the accelerated toxicity tests at the discharge IWC results in "Pass", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests at the discharge IWC results in "Fail", the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL

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

**a. Toxicity Identification Evaluation (TIE).** A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if a chronic toxicity test shows "Fail and % Effect value ≥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*

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*Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

**b. Toxicity Reduction Evaluation (TRE).** When a toxicant or class of toxicants is identified, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs and/or treatment are identified, the Discharger shall submit a TRE Corrective Action Plan to the Executive Officer for approval. At minimum, the plan shall include:

**i.** The potential sources of pollutant(s) causing toxicity.

**ii.** Recommended BMPs and/or treatment to reduce the pollutant(s) causing toxicity.

**iii.** Follow-up monitoring to demonstrate that toxicity has been removed.

**iv.** Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

**v.** A schedule for these actions, progress reports, and the final report.

**c.** Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

**d.** The Discharger shall conduct routine effluent monitoring for the duration of the TIE/TRE process.

**e.** The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

**9. Reporting**

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

**a.** The toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge. 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.

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**b.** Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

**c.** The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1.

**d.** 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.

**e.** Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

**f.** 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.

**g.** Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Regional Water Board staff.

**10. Ammonia Removal**

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

**a.** There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

**b.** Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

**c.** Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.

**d.** Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

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

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### 11. Chlorine Removal

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

## VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

## VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

## VIII. RECEIVING WATER MONITORING REQUIREMENTS

### A. Monitoring Location RSW-001

1. Receiving water sampling shall be conducted at the same time as the effluent monitoring when there is discharge to surface water. The Discharger shall monitor the Cerritos Channel, at Monitoring Location RSW-001, within 50 feet upstream of Discharge Point No. 001, relative to tidal flow, as follows:

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

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Ammonia, Total (as N) | mg/L | Grab | 1/Year | [1] |
| Residual Chlorine, Total | mg/L | Grab | 1/Year | [1] |
| pH | s.u. | Grab | 1/Year | [1] |
| Salinity | mg/L | Grab | 1/Year | [1] |
| Temperature | ºF | Grab | 1/Year | [1] |
| Priority Pollutants[2] | µg/L | Grab | 1/Year | [1] |
| TCDD Equivalents[3] | µg/L | Grab | 1/Year | [1] |

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 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. 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.

[2] Priority Pollutants as defined by the California Toxics Rule (CTR) are included in Attachment I of this Order.

[3] 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**. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD Equivalents) = $\Sigma(C_x \times TEF_x)$

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

$TEF_x$ = TEF for congener x

**Minimum Levels, Toxicity Equivalency Factors**

| Congeners | Minimum Levels (pg/L) | Toxicity Equivalency Factor (TEF) |
|---|---|---|
| 2,3,7,8 - tetra CDD | 10 | 1.0 |
| 1,2,3,7,8 - penta CDD | 50 | 1.0 |
| 1,2,3,4,7,8 - hexa CDD | 50 | 0.1 |
| 1,2,3,6,7,8 - hexa CDD | 50 | 0.1 |

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| Congeners | Minimum Levels (pg/L) | Toxicity Equivalency Factor (TEF) |
|---|---|---|
| 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 |

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### B. Monitoring Location RSW-002

1. Receiving water sampling shall be conducted at the same time as the effluent monitoring when there is discharge to surface water. The Discharger shall monitor the Cerritos Channel, at Monitoring Location RSW-002, within 50 feet downstream of Discharge Point No. 001, relative to tidal flow, as follows:

**Table E-4. Receiving Water Monitoring Requirements at Monitoring Location RSW-002**

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| pH | s.u. | Grab | 1/Year | [1] |
| Dissolved Oxygen | mg/L | Grab | 1/Year | [1] |
| Residual Chlorine, Total | mg/L | Grab | 1/Year | [1] |
| Salinity | mg/L | Grab | 1/Year | [1] |
| Temperature | ºF | Grab | 1/Year | [1] |

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

## IX. OTHER MONITORING REQUIREMENTS

### A. Visual Monitoring of Upstream and Downstream Receiving Water Sampling Points

**1.** A visual observation station shall be established in the vicinity of the discharge point of the storm drain to the receiving water, the Cerritos Channel.

**2.** General observations of the receiving water shall be made at the discharge point when discharges occur. During months of no discharge, the receiving water observations shall be made on a monthly basis. All receiving water observations shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be

reported. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

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

### B. Storm Water Monitoring

1. **Rainfall Monitoring.** The Discharger shall measure and record the rainfall on each day of the month. This information shall be included in the monitoring report for that month. In lieu of measuring rainfall, the Discharger may report rainfall data collected at the Long Beach Airport. The location of the rain gauge utilized and the distance from the Facility and any other information shall be included in the report.

### C. Regional Monitoring

The Discharger is required to participate in Regional Monitoring Program(s) to address pollutants as specified in the Harbor Toxics TMDL. If the Discharger joins a group of stakeholders to complete this monitoring, the Discharger must provide documentation of participation and a description of applicable responsibilities. The Regional Water Board must also be provided with documentation of the availability of the reports associated with the implementation of the Monitoring Plan. 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 at Discharge Point 001 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.

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

**Table E-5. Monitoring Periods and Reporting Schedule**

| Sampling Frequency | Monitoring Period Begins On… | Monitoring Period | SMR Due Date |
|---|---|---|---|
| 1/Day | May 1, 2019 | (Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling. | May 1<br>August 1<br>November 1<br>February 1 |
| 1/Discharge Event | May 1, 2019 | January 1 through March 31<br>April 1 through June 30<br>July 1 through September 30<br>October 1 through December 31 | May 1<br>August 1<br>November 1<br>February 1 |
| 2/Year | May 1, 2019 | January 1 through June 30<br>July 1 through December 31 | August 1<br>February 1 |
| 1 / Year | May 1, 2019 | January 1 through December 31 | February 1 |

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:

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

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

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

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

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

5. **Compliance Determination**. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above, Section VII of this Order, 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

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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>.

**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) or SPCC Plan

   The SWPPP, BMPP, and SCP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of trash and pollutants discharged from the Facility are addressed. All changes or revisions to the SWPPP, BMPP, and SCP shall be submitted to the 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 continue to participate with the Collaboration Group to complete the regional monitoring required by the Harbor Toxics TMDL and included in section VI.C.2.b. of the Waste Discharge Requirements of this Order, or if the Discharger will develop a site-specific plan. 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 Harbor Toxics TMDL, the Discharger shall submit an annual monitoring/implementation report to the Regional Water Board. The report shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs and compliance with the regional monitoring program in accordance with the Harbor 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.

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## I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

| | |
|---|---|
| **WDID** | **4A192208003** |
| **Discharger** | **Tesoro Refining & Marketing Company LLC** |
| **Name of Facility** | **Tesoro Los Angeles Refinery - Calciner Operations** |
| **Facility Address** | **2450 Pier B Street** |
| | **Long Beach, CA 90813** |
| | **Los Angeles County** |
| **Facility Contact, Title and Phone** | **Yung S. Chung, Senior Environmental Engineer, (562) 499 - 3210** |
| **Authorized Person to Sign and Submit Reports** | **SAME**[1] |
| **Mailing Address** | **2450 Pier B Street, Long Beach, CA 90813** |
| **Billing Address** | **SAME** |
| **Type of Facility** | **Petroleum Coke Calcining (SIC 2999) Facility** |
| **Major or Minor Facility** | **Minor** |
| **Threat to Water Quality** | **2** |
| **Complexity** | **B** |
| **Pretreatment Program** | **No** |
| **Recycling Requirements** | **No** |
| **Facility Permitted Flow** | **1.1 million gallons per day (MGD)** |
| **Facility Design Flow** | **Not Applicable** |
| **Watershed** | **Los Angeles/Long Beach Harbor** |
| **Receiving Water** | **Cerritos Channel within the Los Angeles-Long Beach Inner Harbor** |
| **Receiving Water Type** | **Coastal Water** |

1 Any person who signs and submits reports shall meet the provisions in Attachment D, Section V. Standard Provisions – Reporting V.B.1, V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 (40 C.F.R. § 122.41(k).) of this permit.

**A.** Tesoro Refining & Marketing Company LLC (hereinafter Discharger or Tesoro) is the owner and operator of the Tesoro Los Angeles Refinery – Calciner Operations, (hereinafter Facility) located at 2450 Pier B Street, Long Beach, 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 Cerritos Channel within the Los Angeles-Long Beach Inner Harbor, a water of the United States and of the State. The discharge was previously regulated by Order No. R4-2013-0157, which was adopted on October 3, 2013, and expired on November 22, 2018. The discharge was also regulated under Time Schedule Order (TSO) No. R4-2013-0158, which was also adopted on October 3, 2013 and expired on November 22, 2018.

**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 May 15, 2018. Supplemental information was requested on July 18, 2018, and it was received on July 25, 2018. The application was deemed complete on July 25, 2018. A site visit was conducted on October 23, 2018, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

**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, pursuant to 40 C.F.R. section 122.6(d) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

## II. FACILITY DESCRIPTION

Tesoro Los Angeles Refinery-Calciner Operations is a petroleum coke calcining facility. The Facility receives green coke that is produced at Tesoro's Carson Refinery (NPDES No. CA0000680; hereinafter Refinery) located at 2350 E. 223rd Street, Carson, California. The Refinery is located approximately 2.1 miles north of the Facility. The Refinery processes approximately 275,000 barrels per day of crude oil to produce gasoline, diesel fuel, jet fuel, sulfur, coke, liquefied petroleum gas (LPG), and polypropylene. The green coke from the Refinery is transported by truck and occasionally by rail car to the Facility and stored in a covered structure referred to as the Coke Barn prior to calcining. The Facility processes green coke (i.e., raw petroleum coke from an oil refinery's coking unit) by running it through a large rotary kiln to remove residual moisture and other impurities to produce calcined coke. The impurities generated from the Facility's calcining process include residual hydrocarbons, which are captured and used to fuel an on-site 34- megawatt (MW) power generation unit.

The Facility's industrial process waters including boiler blowdown, cooling tower blowdown, plant air sump wastewater, acid sump wastewater from maintenance activities, air compressor condensate, and all other normal calciner wastewater flows to the publicly owned treatment works (POTW). The discharge to the POTW is regulated under Permit No. 015671 issued by Los Angeles County Sanitation Department (LACSD) Industrial Wastewater Discharge Program. This Order covers discharges of the remaining treated storm water and wastewater associated with industrial activities only after the retention basin is filled to capacity during or immediately following large storm events, to the Cerritos Channel, a water of the United States.

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

The ROWD includes the following identification of wastewater contributions (long term average flow) to the discharge.

- Green coke drainage and miscellaneous wash water – 2,000 gallons per day (gpd) (0.002 million gallons per day - MGD)
- Boiler safety relief system blowdown – 1,000 gpd (0.001 MGD)
- Boiler feed water pump seal flush – 1,000 gpd (0.001 MGD)

The Discharger provided supplemental information that includes a Facility Process Diagram showing the flow contributions of cooling tower overflow at 100 gpd, on rare occasions, and the two settling basins with a storage capacity of 110,000 gallons each and the retention basin with a capacity of 680,000 gallons. The diagram also indicated that the discharge to Cerritos Channel is up to 1.1 MGD.

The Facility has a reverse osmosis (RO) unit that is used to treat potable water (from the City) for use as boiler feed water. The RO generates salt-free water for spray cooling the calcined coke. The RO unit concentrates the removed salts into a softener flush water stream. The softener flush water is discharged together with cooling tower blowdown to the industrial sewer under LACSD Permit No. 015671.

The Facility consists of paved or concreted areas, which are contained by a concrete berm, approximately 4 inches tall. The berm encompasses the entire site except for rail and roadway entrances and exits. The Facility's impervious areas are sloped to convey storm water and process waters to one of two lift stations (i.e., North and South Lift Stations) that pump collected water to the Facility's settling basins.

The storm water and wastewater associated with industrial activities passes through a treatment system consisting of two concrete-lined, two-compartment settling basins (eastern and western basin; 110,000 gallons each) for removal of settleable solids. Runoff from coke storage and handling areas is generally routed to the eastern settling basin. Wash water from ash storage and handling areas is generally routed to the western settling basin. Following treatment in the settling basins, the waste stream then flows into a 680,000-gallon, concrete-lined, retention basin (known as the main storm water basin) for additional settling and neutralization with sulfuric acid (as needed). Solids that accumulate within the settling basins and the retention basin are routinely removed and disposed of off-site to a legal disposal facility. From the retention basin, treated, commingled storm water and process waters are either recycled for use as cooling water or discharged to the Cerritos Channel.

During normal operations, the Facility recycles all water from the retention basin and uses it as cooling tower make-up water in all cases except in storm events where rainfall is higher than the recycling rate.

Using this storm water intake and recycling system, the Facility has eliminated most discharge events from the Facility to the receiving water. In December 2010, the Facility encountered the largest amount of rainfall in the Long Beach area since about 1984 and successfully managed all storm water on-site without discharging. The December 2010 storm event enabled the Facility to evaluate its retention capacity and storm water handling procedures and to enhance its management of storm water significantly such that now the Facility ensures that 80 percent of its basin remains available for storm events. The Facility has also secured an increased

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discharge limit to the local LACSD sewer system to enable it to discharge additional wastewater, including cooling tower blowdown, if necessary, at all times (including during storm events) thereby enabling the Facility to recycle a higher amount of storm water through the cooling tower. Based on experience and recent engineering studies, the Facility confirmed that its design enables the retention of a 50-year, 24-hour storm event (i.e. a 24-hour amount of precipitation that will occur once in a 50-year period, on average).

During significant storm events when the retention basin reaches full capacity, the treated storm water mixed with wastewater associated with industrial activities is discharged through Discharge Point No. 001 to the Cerritos Channel, a water of the United States.

No discharges occurred during the term of Order No. R4-2013-0157. The most recent discharge event occurred in January 2005.

## B. Discharge Points and Receiving Waters

The Discharger proposes to discharge up to 1.1 MGD of treated storm water mixed with wastewater associated with industrial activities from the Facility into the Cerritos Channel, within the Los Angeles-Long Beach Inner Harbor, a water of the United States via Discharge Point No. 001 (Latitude 33.77472°; Longitude -118.2275°).

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 Previous Requirements and Self-Monitoring Report (SMR) Data

### 1. Final Effluent Limitations-Discharge Point No. 001

**a.** Effluent limitations contained in Order No. R4-2013-0157 for discharges from Discharge Point 001 are summarized in Table F-2 below. No discharge occurred during the term of Order No. 2013-0157. The last discharge occurred in January 2005.

**Table F-2. Historic Effluent Limitations**

| Parameter | Units | Effluent Limitations | | | | Performance Goals |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| ***Conventional Pollutants*** | | | | | | |
| pH | s.u. | -- | -- | 6.5 | 8.5 | -- |
| Biochemical Oxygen Demand (5-day @ 20 deg. C) (BOD) | mg/L | 20 | 30 | -- | -- | -- |
| | lbs/day[1] | 183 | 275 | -- | -- | -- |
| Oil and Grease | mg/L | 10 | 15 | -- | -- | -- |
| | lbs/day[1] | 92 | 138 | -- | -- | -- |
| Total Suspended Solids (TSS)[4] | mg/L | 30 | 75 | -- | -- | -- |
| | lbs/day[1] | 275 | 688 | -- | -- | -- |
| ***Non-Conventional Pollutants*** | | | | | | |
| Settleable Solids | ml/L | 0.1 | 0.2 | -- | -- | -- |
| Temperature | °F | -- | -- | -- | 86 | -- |

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| Parameter | Units | Effluent Limitations | | | | Performance Goals |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| Total Petroleum Hydrocarbons (TPH)[2] | µg/L | -- | 100 | -- | -- | -- |
| | lbs/day[1] | -- | 0.92 | -- | -- | -- |
| Turbidity | NTU | 50 | 75 | -- | -- | -- |
| ***Priority Pollutants*** | | | | | | |
| Copper, Total Recoverable[3,4] | µg/L | 3.1 | 6.1 | -- | -- | -- |
| | lbs/day[1] | 0.03 | 0.1 | -- | -- | -- |
| Lead, Total Recoverable[3,4] | µg/L | 7 | 14 | -- | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- | -- |
| Nickel, Total Recoverable | µg/L | 7 | 14 | -- | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- | -- |
| Thallium, Total Recoverable | µg/L | 6.3 | 13 | -- | -- | -- |
| | lbs/day[1] | 0.1 | 0.1 | -- | -- | -- |
| Zinc, Total Recoverable[3,4] | µg/L | 70 | 141 | -- | -- | -- |
| | lbs/day[1] | 0.6 | 1.3 | -- | -- | -- |
| Cyanide, Total (as CN) | µg/L | 0.5 | 1.0 | -- | -- | -- |
| | lbs/day[1] | 0.005 | 0.01 | -- | -- | -- |
| 4,4'-DDT[3,4, A] | µg/L | 0.0006 | 0.001 | -- | -- | -- |
| | lbs/day[1] | 5.4E-06 | 1.1E-05 | -- | -- | -- |
| Total PCBs[3,4,5] | µg/L | 0.0002 | 0.0003 | -- | -- | -- |
| | lbs/day[1] | 1.6E-06 | 3.1E-06 | -- | -- | -- |
| ***PAHs*** | | | | | | |
| Benzo(a)pyrene[4,A] | µg/L | -- | -- | -- | -- | 0.049[6] |
| Chrysene[4,A] | µg/L | -- | -- | -- | -- | 0.049[6] |

1 Mass (lbs/day) limitations are based on a maximum flow of 1.1 MGD and calculated as follows:

Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

2 TPH equals the sum of TPH gasoline ($C_4$-$C_{12}$), TPH diesel ($C_{13}$-$C_{22}$), and TPH oil ($C_{23+}$).

3 The effluent limitations are based on the U.S. Environmental Protection Agency (U.S. EPA) approved Harbor Toxics TMDL WLAs and calculated using the CTR-SIP procedures.

4 During each reporting period, if effluent monitoring results exceed both a TSS effluent limit and a CTR TMDL-based effluent limit or performance goal for copper, lead, zinc, 4,4-DDT, total PCBs, benzo(a)pyrene, or chrysene, implementation of the effluent sediment monitoring program is required for that priority pollutant. Sediment monitoring of the effluent shall begin during the first discharge event following the effluent exceedances. An effluent sediment monitoring result at or below the interim sediment allocation in Table 7, page 24 of this Order, demonstrates attainment with the interim sediment allocation and additional sediment monitoring of the effluent is not required. A sediment monitoring result that exceeds the interim sediment allocation requires additional sediment monitoring of the effluent during discharge but not more frequently than once per year until the three-year average concentration for sediment monitoring results is at or below the interim sediment allocation.

5 Total PCBs (polychlorinated biphenyls) means the sum of chlorinated biphenyls whose analytical characteristics resembles those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

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[6] CTR human health criteria are not promulgated for total PAHs. Therefore, performance goals are based on CTR human health criteria for the individual PAHs, benzo(a)pyrene and chrysene. Benzo(a)pyrene and chrysene are selected because the State's 2010 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired for these PAH compounds. These performance goals are not enforceable effluent limitations. Rather, they act as triggers to determine when sediment monitoring is required for these compounds.

[A] Samples analyzed must be unfiltered samples.

**b. Bacteria Limitations Requirements.**

1. Rolling 30-day Geometric Mean Limits

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

2. Single Sample Limits

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

**c. Acute Toxicity Limitation Requirements.** There shall be no acute toxicity in the discharge. The acute toxicity of the effluent shall be such that:

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

**D. Compliance Summary**

During the term of Order No. R4-2013-0157, no discharges occurred. Therefore, there were no violations of effluent limitations. There were also no other types of permit violations during the term of Order No. R4-2013-0157.

TSO No. R4-2013-0158 was issued concurrently with Order No. R4-2013-0157. The TSO provided interim effluent limitations for 4,4'-DDT and total PCBs, and time for the Discharger to investigate and implement any required upgrades or control measures to ensure compliance with the final effluent limitations for 4,4'-DDT and total PCBs contained in Order No. R4-2013-0157. The actions/measures undertaken were water column and sediment sampling from the settling basin and stormwater basin. The results were documented in the semi-annual progress reports submitted to the Regional Water Board. The most recent progress report was submitted on July 31, 2018. The sampling conducted per the workplan indicated that the 4,4'-DDT and total PCBs concentrations in the Facility's stormwater were below the limits established in Order No. R4-2013-0157. The Discharger complied with the provisions and requirements of TSO No. R4-2013-0158.

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### 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 of the Order, subject to the WDRs in this Order.

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

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA. See also *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4th 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 specifically identify beneficial uses for the Cerritos Channel, but does identify existing and potential uses for the Los Angeles-Long Beach Inner Harbor, to which the Cerritos Channel is tributary. Beneficial uses applicable to the Cerritos Channel are as follows.

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

| Discharge Point | Receiving Water Name | Beneficial Use(s) |
|---|---|---|
| 001 | Cerritos Channel Within Los Angeles/Long Beach Inner Harbor | Existing:<br>Industrial service supply (IND); navigation (NAV); non-contact water recreation (REC-2); commercial and sport fishing (COMM); marine habitat (MAR); rare, threatened, or endangered species (RARE)<br><br>Potential:<br>Water contact recreation (REC-1); shellfish harvesting (SHELL) |

2. **Enclosed Bays and Estuaries Policy.** The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Control Board (State Water Board) in 1974, and amended by Resolution No. 95-84 on November 16, 1995: The Enclosed Bays and Estuaries Policy states that:

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> *"It is the policy of the State Water Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Water Board only when the Regional Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

The discharge from the Tesoro Los Angeles Refinery – Calciner Operations is comprised primarily of storm water runoff mixed with a small amount of wastewater. Discharges to the Cerritos Channel, within the Los Angeles-Long Beach Inner Harbor, would only occur during significant storm events. Since the discharge is not municipal wastewater or industrial process wastewater, which are prohibited, this discharge is permitted. This Order also contains provisions necessary to protect all beneficial uses of the receiving water.

3. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on May 18, 1972, and again on September 18, 1975 (Resolution No. 75-89). The Thermal Plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region.* The white paper evaluated the optimum temperatures for aquatic species routinely present in surface water bodies within the Los Angeles Region including: steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and is included in this Order. This temperature limitation is based on the foregoing and best professional judgment (BPJ).

4. **Sediment Quality.** The State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality on September 16, 2008, and it became effective on August 25, 2009 (Enclosed Bays and Estuaries Plan). The Enclosed Bays and Estuaries Plan supersedes other narrative sediment quality objectives and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement sediment quality objectives of the Enclosed Bays and Estuaries Plan

5. **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 applicable to all surface waters in California.

6. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by

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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. The SIP is used to develop requirements included in this Order. (See section IV.C.1 of this Fact Sheet.)

7. **Antidegradation Policy.** CWA section 303 and 40 C.F.R. section 131.12 require that the state water quality standards include an antidegradation policy consistent with the federal law and 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.

8. **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.

9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 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 federal and state Endangered Species Act.

10. **Trash Provisions.** The State Water Board adopted the "Amendment to the Ocean Plan and Part I Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (Trash Provisions) through Resolution No. 2015-0019, which was approved by the Office of Administrative Law (OAL) on December 2, 2015, and became effective upon U.S. EPA approval on January 12, 2016. The Trash Provisions established a narrative water quality objective and a prohibition on the discharge of trash to be implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements.

    The Trash Provisions 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 Provisions. There are currently no Trash TMDLs for the Cerritos Channel within Los Angeles-Long Beach Inner Harbor, therefore the discharges described in this Order are

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subject to the Trash Provisions. This Order incorporates the requirements of the Trash Provisions through the prohibition of trash discharges to the discharge point. This Order also requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include specific BMPs used as storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Cerritos Channel within Los Angeles-Long Beach Inner Harbor. The Discharger is required to detail and submit to the Regional Water Board the updated SWPPP.

11. **Mercury Provisions.** The State Water Board adopted "*Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California - Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions*" (Mercury Provisions) through Resolution 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 MS4 discharges and discharges regulated by the Industrial General Permit (NPDES No. CAS000001); mine site remediation; nonpoint source discharges; dredging activities; and wetland projects.

    The Mercury Provisions contain implementation provisions that apply to individual industrial discharges. It requires the application of section 1.3 of the SIP with modifications to determine whether a discharge has reasonable potential to cause or contribute to an exceedance of the water column concentration for mercury and developed effluent limitations for mercury based on the water quality objective applicable to the receiving water in accordance with Chapter IV.D.2.b. (See section IV.C.3. for SIP procedures). There was no discharge from the Facility since January 2005, and there is insufficient data to conduct reasonable potential analysis (RPA) to determine and establish effluent limitations for mercury in the permit. In addition, no mercury TMDL has been developed for the Cerritos Channel within the Los Angeles-Long Beach Inner Harbors. Therefore, no effluent limitation for mercury is included in this Order This Order retains the annual monitoring for mercury from the prior Order.

### 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 Waters (2014-2016 303(d) List) 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 and have been scheduled for TMDL development.

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The Facility discharges to the Cerritos Channel, within the Los Angeles-Long Beach Inner Harbor. The 2014-2016 303(d) List of impaired water bodies includes the Los Angeles-Long Beach Inner Harbor. The pollutants of concern include benthic community effects, benzo(a)pyrene (3,4-benzopyrene-7-d), chrysene (C1-C4), copper, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), toxicity, and zinc.

The following are summaries of the TMDLs for the Los Angeles/Long Beach Harbor Inner Harbor:

1. **Los Angeles Harbor Bacteria TMDL.** The Regional Water Board approved the Los Angeles Harbor Bacteria TMDL through Resolution 2004-011 on July 1, 2004. The State Water Board, Office of Administrative Law (OAL), and U.S. EPA approved the TMDL on October 21, 2004, January 5, 2005, and March 1, 2005, respectively. The Bacteria TMDL became effective on March 10, 2005. The Bacteria TMDL addresses Inner Cabrillo Beach and the Main Ship Channel of the Los Angeles Inner Harbor. This Order includes bacteria limitations based on water quality standards (WQS) applicable to Cerritos Channel. These WQS (and WQBELs) are identical to the WQS used to develop the Bacteria TMDL that is applicable to the Main Ship Channel immediately downstream of Cerritos Channel.

2. **Harbor Toxics TMDL**. The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters* (Harbor Toxics TMDL). The Harbor Toxic TMDL was approved by the State Water Board on February 7, 2012, the OAL on March 21, 2012, and the U.S. EPA on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, this Order contains effluent limitations and monitoring requirements consistent with the assumptions and requirements of the applicable waste load allocations (WLAs) in the TMDL.

   For Cerritos Channel which is located within the Long Beach Inner Harbor, the Harbor Toxics TMDL included:

   **a.** Sediment interim concentration-based allocations (in mg/kg sediment) for copper, lead, zinc, DDT, PAHs, and PCBs (Attachment A to Resolution No. R11-008, p. 11).

   **b.** Receiving (salt) water column concentration-based waste load allocations (WLAs) for copper, lead, zinc, 4,4'-DDT, and total PCBs (Attachment A to Resolution No. R11-008, pp. 13-14).

   **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.

   The provisions included here include the WLAs established in the Harbor Toxics TMDL.

   **<u>Implementation of the Harbor Toxics TMDL</u>**.

   The provisions of this Order implement and are consistent with the assumptions and requirements of the WLAs established in the Harbor Toxics TMDL.

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a. **Water Column WLAs.** This Order includes WQBELs that are statistically-calculated based on saltwater water column final concentration-based WLAs in µg/L for copper (3.73), lead (8.52), zinc (85.6), 4,4'-DDT (0.00059), and total PCBs (0.00017), which are referred to in this Order as CTR TMDL-based WLAs (WLAs for copper, lead, and zinc are expressed as total recoverable metals). The TMDL's WLAs for total recoverable metals were converted from saltwater California Toxics Rule (CTR) dissolved metals criteria using CTR saltwater default translators. The WQBELs were statistically calculated from the WLAs according to provisions in section 1.4 of the State Implementation Policy (SIP). See section IV.C.1 of this Fact Sheet.

   The Regional Water Board has determined that the WQBELs established in this Order (i.e., copper, lead, zinc, 4,4'-DDT, and total PCBs) are consistent with, and constitute equivalency with, the Harbor Toxics TMDL's water WLAs and sediment-based allocations for non-MS4 point sources, including irregular discharges. The concentration of the pollutants in the effluent provides a measure of the pollutants discharged from the Facility to the Cerritos Channel within the Long Beach Inner Harbor.

b. **Interim and Final Sediment Allocation.** The Harbor Toxics TMDL includes interim and final bed sediment load allocations that apply to the Long Beach Inner Harbor. The interim bed sediment load allocations identified in the TMDL were calculated using data from existing bed sediments. The final bed sediment load allocations identified in the TMDL were set equal to the sediment targets. Therefore, the interim and final sediment allocations identified in the TMDL refer to allocations to the bed sediments in the receiving water and identify the receiving water conditions to be achieved, which WQBELs must protect.

   As the discharge from the Facility only occurs during significant storm events when the retention basin reaches full capacity, and no discharge has occurred since January 2005, the Facility is considered an "irregular discharger" as specified in the TMDL. Based on the TMDL, the "irregular discharger" is assigned concentration-based water column WLAs equal to the CTR saltwater targets for metals and the CTR human health targets for organic compounds. For these dischargers, the direct application of sediment allocations to the effluent is problematic because the volume of effluent necessary to collect a sufficient amount of total suspended solids (TSS) for sediment analysis is very large and would require a level of planning that would be infeasible to implement for an irregular discharge. The alternative of analyzing bed sediments in the receiving water to demonstrate compliance with the TMDL is also problematic because it is not possible to link bed sediment pollutant levels with the quality of the discharge due to the infrequent nature of the Facility's discharge in combination with contributions of pollutants from other ongoing discharges.

   The Harbor Toxics TMDL includes interim bed sediment load allocations (in mg/kg dry sediment) for copper (142), lead (50.4), zinc (240.6), DDT (0.070), PAHs (4.58) and PCBs (0.060) at the Long Beach Inner Harbor. The Harbor Toxics TMDL also includes water column WLAs for these parameters that are applicable to the Long Beach Inner Harbor, except for the PAHs. As previously discussed, WQBELs for copper, lead zinc, DDT, and PCBs are established in this Order based on Harbor Toxics TMDL WLAs. To determine reasonable potential, effluent monitoring requirements for PAHs are included in this Order.

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c. **Water Column, Sediment, and Fish Tissue Monitoring for Greater Los Angeles and Long Beach Harbor Waters 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 a Discharger who justifies the need for this amount of time to be included in a compliance plan. 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, sediment, and fish tissue in the Los Angeles Inner Harbor. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Discharger must inform the Regional Water Board if they plan to join a collaborative monitoring effort or develop a site-specific plan within 90 days after the effective date of the permit. If the Discharger is joining a collaborative effort, the notification must include documentation of such. If developing a site-specific Monitoring Plan (either individually or in a group of other dischargers), the Monitoring Plan and relevant documents must be submitted within 12 months after the effective date of the permit for public review and, subsequently, Executive Officer approval. Monitoring shall begin within 6 months after a Monitoring Plan is approved by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring.

## 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 Facility is a petroleum coke calcining facility. Discharges from the Facility include treated wastewater consisting of green coke drainage and miscellaneous wash water, boiler safety relief system blowdown, boiler feed water pump seal flush, cooling tower overflow, and storm water runoff. The list of pollutants of concern was developed based on constituents that are commonly found in discharges from calcining operations, materials stored or used on-site, and/or were historically detected in the effluent. Pollutants commonly associated with storm water and process wastewater discharges from this type of facility include biochemical oxygen demand (BOD), oil and grease, pH, total suspended solids (TSS), toxicity, settleable solids, turbidity, copper, nickel, thallium, zinc, cyanide, and bacteria indicators. Therefore, these constituents remain pollutants of concern. Storm water runoff and process waters that come into contact with green coke may become contaminated with various petroleum hydrocarbons, thus total petroleum hydrocarbons (TPH) is a pollutant of concern. The 2014-16 303(d) List includes the following pollutants of concern for the Los Angeles-Long Beach Inner Harbor: benthic community effects, benzo(a)pyrene (3,4-benzopyrene-7-d), chrysene (C1-C4), copper, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), toxicity, and zinc.

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

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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 the 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**

Discharge Prohibitions in this Order are based on the federal CWA, the Code of Federal Regulations (C.F.R.), the Basin Plan, the Water Code, State Water Board's plans and policies, U.S. EPA guidance and regulations, and previous permit provisions. This Order includes new provisions for trash and mercury in order to implement the statewide Trash Provisions and Mercury Provisions, respectively. The provisions included in this Order are consistent with the requirements set for other dischargers within the Los Angeles Region that are regulated by NPDES permits.

**B. Technology-Based Effluent Limitations (TBELs)**

**1. Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 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 in accordance with the methodology developed by the U.S. EPA, as published in the Federal Register notice on July 9, 1986 (51 FR 24974). 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.

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**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.

**2. Applicable Technology-Based Effluent Limitations**

Discharges from the Facility are not subject to the federal ELGs in Part 419, that are applicable to the discharges of wastewater from petroleum refining operations. Part 419 defines feedstocks for petroleum refining as "crude oil and natural gas liquids". This facility uses green coke, a petroleum refinery by-product, as a feedstock to the calcining operations. Further, the petroleum refining industry is defined by Standard Industrial Classification (SIC) code 2911, and this facility is classified under SIC code 2999 (manufacture of calcined petroleum coke). For these reasons, the Regional Water Board has determined that this facility is not subject to Part 419.

Because green coke contains residual hydrocarbons that may enter wash water and storm water runoff, this Order continues to include effluent limitations for TPH equal to 100 µg/L. This limitation has been achievable through source control and treatment at facilities engaged in various petroleum operations and is consistent with permits for similar facilities within the Los Angeles Region. This limitation was established based on BPT.

Order No. R4-2013-0157 included effluent limitations for BOD, oil and grease, TSS, settleable solids, TPH, and turbidity based on BPJ. In setting these limitations, the Regional Water Board considered the factors listed in 40 C.F.R. section 125.3(d) and chose to apply BCT for these conventional pollutants. Pursuant to state and federal antibacksliding regulations, this Order retains effluent limitations for these pollutants as technology-based effluent limitations. These limitations are consistent with technology-based limitations included in other Orders within the State for similar types of discharges.

The technology-based requirements in this Order are based on 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), oil and grease, turbidity, settleable solids, total petroleum hydrocarbons (TPH), and biochemical oxygen demand (BOD) at Discharge Point 001. The limitations for these pollutants are consistent with technology-based effluent limitations (TBELs) 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.

Order No. R4-2013-0157 required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update and continue to implement the SWPPP. The SWPPP will outline site-specific management

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processes for minimizing storm water contamination and for preventing contaminated storm water from being discharged directly to the receiving water. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. This Order requires the Discharger to update and continue to implement a SWPPP consistent with requirements in Attachment G.

This Order requires the Discharger update and continues to implement a Best Management Practices Plan that addresses specific areas considered sources of pollutants. The BMPs shall include measures to minimize the amount of pollutants entering the discharge. It also requires the Discharger to update the Spill Control Plan (SCP). The SCP Plan is required in order to report on preventative and contingency cleanup procedures for controlling accidental discharges and for minimizing the adverse effects of such events.

The combination of the SWPPP, BMPs, and SCP Plan and permit limitations 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 following table summarizes the technology-based effluent limitations for Discharge Point 001.

**Table F-4. Summary of Technology-based Effluent Limitations**

| Parameter | Units | Effluent Limitations[1] | |
|---|---|---|---|
| | | Average Monthly | Maximum Daily |
| Biochemical Oxygen Demand (BOD) (5-day@20 Deg. C)[2,3] | mg/L | 20 | 30 |
| | lbs/day[1] | 183 | 275 |
| Oil and Grease[2,3] | mg/L | 10 | 15 |
| | lbs/day[1] | 92 | 138 |
| Total Suspended Solids (TSS)[2,3] | mg/L | 30 | 75 |
| | lbs/day[1] | 275 | 688 |
| Settleable Solids[3] | mL/L | 0.1 | 0.2 |
| Turbidity[3] | NTU | 50 | 75 |
| Total Petroleum Hydrocarbons (TPH)[2,3] | µg/L | -- | 100 |
| | lbs/day[1] | -- | 0.92 |

1. The mass (lbs/day) limitations are based on a maximum flow of 1.1. MGD and is calculated as follows:

   Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day

2. Limit based on BPT from refineries, tank farms and petroleum transfer stations in the Region.

3. TBELs for this parameter is based on BPT requirements (40 C.F.R. section 125.3(d)(1); 40 C.F.R. section 125.3(c)(2)).

## 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.

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR. The SIP contains specific procedures for determining reasonable potential and, if necessary, calculating WQBELs for the discharge of wastewater from the Tesoro Los Angeles Refinery - Calciner Operations.

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

As noted in Section III of this 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 Cerritos Channel within Los Angeles-Long Beach Inner Harbor are summarized in Section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to Cerritos Channel within Los Angeles-Long Beach Inner Harbor. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, in accordance with section 131.38(c)(3), saltwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. As indicated in the Harbor Toxics TMDL, the salinity in the Los Angeles-Long Beach Inner Harbor at the location of the discharge supports marine aquatic life. Therefore, the CTR criteria for saltwater aquatic life or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Cerritos Channel, within the Los Angeles-Long Beach Inner Harbor, a water of the United States.

The following table summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations historically in the effluent or receiving water:

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

| CTR No. | Constituent | Selected Criteria | CTR/NTR Water Quality Criteria | | |
|---|---|---|---|---|---|
| | | | Saltwater | | Human Health for Consumption of: |
| | | | Acute | Chronic | Organisms Only |
| | | µg/L | µg/L | µg/L | µg/L |
| 6 | Copper, Total Recoverable | 3.73 | 5.78 | 3.73 | -- |
| 9 | Nickel, Total Recoverable | 8.28 | 74.75 | 8.28 | 4600 |
| 12 | Thallium | 6.3 | -- | -- | 6.3 |
| 13 | Zinc, Total Recoverable | 85.6 | 95.14 | 85.62 | -- |
| 14 | Cyanide | 1.00 | 1.00 | 1.00 | 220,000 |

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

Table F-6 summarizes the applicable WLAs for copper, lead, zinc, 4,4'-DDT and total PCBs contained in the Harbor Toxics TMDL. These WLAs are applicable to Discharge Point 001 discharging to the Cerritos Channel within Los Angeles-Long Beach Inner Harbor. This Order implements the applicable WLAs as required in the Harbor Toxics TMDL. The WLAs are converted into effluent limitations by applying the CTR-SIP procedures in accordance to the TMDL.

**Table F-6. Harbor Toxics TMDL WLAs Applicable to Discharge Point 001**

| Constituents | Units | WLA |
|---|---|---|
| Copper, Total Recoverable[1] | µg/L | 3.73 |
| Lead, Total Recoverable[1] | µg/L | 8.52 |
| Zinc, Total Recoverable[1] | µg/L | 85.6 |
| 4,4'-DDT | µg/L | 0.00059 |
| Total PCBs[2] | µg/L | 0.00017 |

[1] WLAs for metals are converted from saltwater dissolved CTR criteria using CTR saltwater default translators.

[2] CTR human health criteria for PCBs applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses. PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. PCBs as congeners shall be individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate) using EPA Method 1668c. PCBs as congeners shall be analyzed using EPA Method 1668c for three years and an alternate method may be used if none of the PCB congeners are detected for three years using EPA Method 1668c. To facilitate interpretation of sediment/fish tissue data collected pursuant to the Harbors Toxics TMDL, PCB congeners whose analytical characteristics resemble those of PCB-8, 18, 28,

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37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 195, 201, 206 and 209 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate).

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### 3. Determining the Need for WQBELs

#### a. Reasonable Potential Analysis Methodology

In accordance with section 1.3 of the SIP, the Regional Water Board conducts a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. If there is an applicable TMDL-based WLA, then WQBELs are developed using the WLA pursuant to 40 C.F.R. section 122.44(d)(1)(vii)(B). 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 ≥ 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 have been no discharges from the Facility to surface waters since January 2005, and no monitoring data were available to conduct an RPA. No new RPA was conducted in preparing this Order. Therefore, the WQBELs for copper, lead, nickel, thallium, cyanide, zinc, 4,4'-DDT, and total PCBs in Order No. R4-2013-0157 are retained in this Order to adhere to anti-backsliding provisions in CWA sections 402(o)(1) and 303(d)(4). The WQBELs for copper, lead, zinc, 4,4'-DDT, and total PCBs in Order No. R4-2013-0157 were based on the Harbor Toxics TMDL WLAs. The 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 copper, lead, zinc, 4,4'-DDT, and total PCBs pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a separate reasonable potential analysis to determine effluent limitations at the

permitting stage, instead WQBELs are established consistent with the assumptions and requirements of a TMDL WLA. Similarly, the SIP at Section 1.3 recognizes that a separate reasonable potential analysis at the permitting stage is not appropriate if a TMDL has been developed. Table F-6 above summarizes the applicable WLAs for copper, lead, zinc, 4,4'-DDT and total PCBs contained in the Harbor Toxics TMDL.

The WQBELs for nickel, thallium, and cyanide in Order No. R4-2013-0157 were based on Order No. R4-2007-0031. The effluent limitations for these pollutants in Order No. R4-2007-0031 were calculated based on the results of the reasonable potential analysis of the monitoring data from January 2002 through December 2004.

Table F-7 summarizes the RPA conducted for Order No. R4-2007-0031. No new RPA was conducted for Order No. R4-2013-0157, since there had been no discharge during the term of Order No. R4-2007-0031.

**Table F-7. Summary of Prior Reasonable Potential Analysis in Order No. R4-2007-00031**

| *CTR No.* | Constituent | Applicable Water Quality Criteria (C) (µg/L) | Max Effluent Conc. (MEC) (µg/L) [1] | Maximum Detected Receiving Water Conc. (B) (µg/L) [1] | RPA Result Need Limit? | Reason |
|---|---|---|---|---|---|---|
| *1* | Antimony | 4300 | [2] | [2] | No | MEC<C |
| *2* | Arsenic | 36 | [2] | [2] | No | MEC<C |
| *3* | Beryllium | No Criteria | [2] | [2] | No | No Criteria |
| *4* | Cadmium | 9.4 | [2] | [2] | No | MEC<C |
| *5a* | Chromium (III) | No Criteria | [2] | [2] | No | No Criteria |
| *5b* | Chromium (VI) | 50 | [2] | [2] | No | MEC<C |
| ***6*** | **Copper** | **3.73** | [2] | [2] | **Yes** | **Existing Limit[3]** |
| ***7*** | **Lead** | **8.52** | [2] | [2] | **No** | **MEC<C** |
| *8* | Mercury | 0.051 | [2] | [2] | No | MEC<C |
| ***9*** | **Nickel** | **8.3** | [2] | [2] | **Yes** | **Existing Limit[3]** |
| *10* | Selenium | 71 | [2] | [2] | No | MEC<C |
| *11* | Silver | 2.2 | [2] | [2] | No | MEC<C |
| *12* | **Thallium** | 6.3 | [2] | [2] | **Yes** | **Existing Limit[3]** |
| ***13*** | **Zinc** | **85.6** | **670** | [2] | **Yes** | **MEC>C, Existing Limit[3]** |
| *14* | **Cyanide** | 1.0 | **20** | [2] | **Yes** | **MEC≥C** |
| *15* | Asbestos | 7 E 6 fibers/L | [2] | [2] | No | N/A |
| *16* | 2,3,7,8 TCDD | 1.4E-08 | [2] | [2] | No | MEC<C |
| | TCDD Equivalents | 1.4E-08 | [2] | [2] | No | N/A |
| *17* | Acrolein | 780 | [2] | [2] | No | MEC<C |
| *18* | Acrylonitrile | 0.66 | [2] | [2] | No | MEC<C |

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| *CTR No.* | Constituent | Applicable Water Quality Criteria (C) (µg/L) | Max Effluent Conc. (MEC) (µg/L) [1] | Maximum Detected Receiving Water Conc. (B) (µg/L) [1] | RPA Result Need Limit? | Reason |
|---|---|---|---|---|---|---|
| *19* | Benzene | 71 | [2] | [2] | No | MEC<C |
| *20* | Bromoform | 360 | [2] | [2] | No | MEC<C |
| *21* | Carbon Tetrachloride | 4.4 | [2] | [2] | No | MEC<C |
| *22* | Chlorobenzene | 21000 | [2] | [2] | No | MEC<C |
| *23* | Chlorodibromomethane | 34 | [2] | [2] | No | MEC<C |
| *24* | Chloroethane | No Criteria | [2] | [2] | No | No Criteria |
| *25* | 2-Chloroethylvinyl ether | No Criteria | [2] | [2] | No | No Criteria |
| *26* | Chloroform | No Criteria | [2] | [2] | No | No Criteria |
| *27* | Dichlorobromomethane | 46 | [2] | [2] | No | MEC<C |
| *28* | 1,1-Dichloroethane | No Criteria | [2] | [2] | No | No Criteria |
| *29* | 1,2-Dichloroethane | 99 | [2] | [2] | No | MEC<C |
| *30* | 1,1-Dichloroethylene | 3.2 | [2] | [2] | No | MEC<C |
| *31* | 1,2-Dichloropropane | 39 | [2] | [2] | No | MEC<C |
| *32* | 1,3-Dichloropropylene | 1700 | [2] | [2] | No | MEC<C |
| *33* | Ethylbenzene | 29000 | [2] | [2] | No | MEC<C |
| *34* | Methyl Bromide | 4000 | [2] | [2] | No | MEC<C |
| *35* | Methyl Chloride | No Criteria | [2] | [2] | No | No Criteria |
| *36* | Methylene Chloride | 1600 | [2] | [2] | No | MEC<C |
| *37* | 1,1,2,2-Tetrachloroethane | 11 | [2] | [2] | No | MEC<C |
| *38* | Tetrachloroethylene | 8.85 | [2] | [2] | No | MEC<C |
| *39* | Toluene | 200000 | [2] | [2] | No | MEC<C |
| *40* | 1,2-Trans-Dichloroethylene | 140000 | [2] | [2] | No | MEC<C |
| *41* | 1,1,1-Trichloroethane | No Criteria | [2] | [2] | No | No Criteria |
| *42* | 1,1,2-Trichloroethane | 42 | [2] | [2] | No | MEC<C |
| *43* | Trichloroethylene | 81 | [2] | [2] | No | MEC<C |
| *44* | Vinyl Chloride | 525 | [2] | [2] | No | MEC<C |
| *45* | 2-Chlorophenol | 400 | [2] | [2] | No | MEC<C |
| *46* | 2,4-Dichlorophenol | 790 | [2] | [2] | No | MEC<C |
| *47* | 2,4-Dimethylphenol | 2300 | [2] | [2] | No | MEC<C |
| *48* | 2-methyl-4,6-Dinitrophenol | 765 | [2] | [2] | No | MEC<C |
| *49* | 2,4-Dinitrophenol | 14000 | [2] | [2] | No | MEC<C |
| *50* | 2-Nitrophenol | No Criteria | [2] | [2] | No | No Criteria |
| *51* | 4-Nitrophenol | No Criteria | [2] | [2] | No | No Criteria |
| *52* | 3-Methyl-4-Chlorophenol | No Criteria | [2] | [2] | No | No Criteria |
| *53* | Pentachlorophenol | 7.9 | [2] | [2] | No | MEC<C |

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| *CTR No.* | Constituent | Applicable Water Quality Criteria (C) (µg/L) | Max Effluent Conc. (MEC) (µg/L) [1] | Maximum Detected Receiving Water Conc. (B) (µg/L) [1] | RPA Result Need Limit? | Reason |
|---|---|---|---|---|---|---|
| *54* | Phenol | 4600000 | [2] | [2] | No | MEC<C |
| *55* | 2,4,6-Trichlorophenol | 6.5 | [2] | [2] | No | MEC<C |
| *56* | Acenaphthene | 2700 | [2] | [2] | No | MEC<C |
| *57* | Acenaphthylene | No Criteria | [2] | [2] | No | No Criteria |
| *58* | Anthracene | 110000 | [2] | [2] | No | MEC<C |
| *59* | Benzidine | 0.00054 | [2] | [2] | No | MEC<C |
| *60* | Benzo(a)Anthracene | 0.049 | [2] | [2] | No | MEC<C |
| *61* | Benzo(a)Pyrene | 0.049 | [2] | [2] | No | MEC<C |
| *62* | Benzo(b)Fluoranthene | 0.049 | [2] | [2] | No | MEC<C |
| *63* | Benzo(ghi)Perylene | No Criteria | [2] | [2] | No | No Criteria |
| *64* | Benzo(k)Fluoranthene | 0.049 | [2] | [2] | No | MEC<C |
| *65* | Bis(2-Chloroethoxy)Methane | No Criteria | [2] | [2] | No | No Criteria |
| *66* | Bis(2-Chloroethyl)Ether | 1.4 | [2] | [2] | No | MEC<C |
| *67* | Bis(2-Chloroisopropyl)Ether | 170000 | [2] | [2] | No | MEC<C |
| *68* | Bis(2-Ethylhexyl)Phthalate | 5.9 | [2] | [2] | No | MEC<C |
| *69* | 4-Bromophenyl Phenyl Ether | No Criteria | [2] | [2] | No | No Criteria |
| *70* | Butylbenzyl Phthalate | 5200 | [2] | [2] | No | MEC<C |
| *71* | 2-Chloronaphthalene | 4300 | [2] | [2] | No | MEC<C |
| *72* | 4-Chlorophenyl Phenyl Ether | No Criteria | [2] | [2] | No | No Criteria |
| *73* | Chrysene | 0.049 | [2] | [2] | No | MEC<C |
| *74* | Dibenzo(a,h)Anthracene | 0.049 | [2] | [2] | No | MEC<C |
| *75* | 1,2-Dichlorobenzene | 17000 | [2] | [2] | No | MEC<C |
| *76* | 1,3-Dichlorobenzene | 2600 | [2] | [2] | No | MEC<C |
| *77* | 1,4-Dichlorobenzene | 2600 | [2] | [2] | No | MEC<C |
| *78* | 3,3 Dichlorobenzidine | 0.077 | [2] | [2] | No | MEC<C |
| *79* | Diethyl Phthalate | 120000 | [2] | [2] | No | MEC<C |
| *80* | Dimethyl Phthalate | 2900000 | [2] | [2] | No | MEC<C |
| *81* | Di-n-Butyl Phthalate | 12000 | [2] | [2] | No | MEC<C |
| *82* | 2,4-Dinitrotoluene | 9.1 | [2] | [2] | No | MEC<C |
| *83* | 2,6-Dinitrotoluene | No Criteria | [2] | [2] | No | No Criteria |
| *84* | Di-n-Octyl Phthalate | No Criteria | [2] | [2] | No | No Criteria |
| *85* | 1,2-Diphenylhydrazine | 0.54 | [2] | [2] | No | MEC<C |
| *86* | Fluoranthene | 370 | [2] | [2] | No | MEC<C |
| *87* | Fluorene | 14000 | [2] | [2] | No | MEC<C |
| *88* | Hexachlorobenzene | 0.00077 | [2] | [2] | No | MEC<C |

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| *CTR No.* | Constituent | Applicable Water Quality Criteria (C) (µg/L) | Max Effluent Conc. (MEC) (µg/L) [1] | Maximum Detected Receiving Water Conc. (B) (µg/L) [1] | RPA Result Need Limit? | Reason |
|---|---|---|---|---|---|---|
| *89* | Hexachlorobutadiene | 50 | [2] | [2] | No | MEC<C |
| *90* | Hexachlorocyclopentadiene | 17000 | [2] | [2] | No | MEC<C |
| *91* | Hexachloroethane | 8.9 | [2] | [2] | No | MEC<C |
| *92* | Indeno(1,2,3-cd)Pyrene | 0.049 | [2] | [2] | No | MEC<C |
| *93* | Isophorone | 600 | [2] | [2] | No | MEC<C |
| *94* | Naphthalene | No Criteria | [2] | [2] | No | No Criteria |
| *95* | Nitrobenzene | 1900 | [2] | [2] | No | MEC<C |
| *96* | N-Nitrosodimethylamine | 8.1 | [2] | [2] | No | MEC<C |
| *97* | N-Nitrosodi-n-Propylamine | 1.4 | [2] | [2] | No | MEC<C |
| *98* | N-Nitrosodiphenylamine | 16 | [2] | [2] | No | MEC<C |
| *99* | Phenanthrene | No Criteria | [2] | [2] | No | No Criteria |
| *100* | Pyrene | 11000 | [2] | [2] | No | MEC<C |
| *101* | 1,2,4-Trichlorobenzene | No Criteria | [2] | [2] | No | No Criteria |
| *102* | Aldrin | 0.00014 | [2] | [2] | No | MEC<C |
| *103* | alpha-BHC | 0.013 | [2] | [2] | No | MEC<C |
| *104* | beta-BHC | 0.046 | [2] | [2] | No | MEC<C |
| *105* | gamma-BHC | 0.063 | [2] | [2] | No | MEC<C |
| *106* | delta-BHC | No Criteria | [2] | [2] | No | No Criteria |
| *107* | Chlordane | 0.00059 | [2] | [2] | No | MEC<C |
| *108* | 4,4'-DDT | 0.00059 | [2] | [2] | No | MEC<C |
| *109* | 4,4'-DDE | 0.00059 | [2] | [2] | No | MEC<C |
| *110* | 4,4'-DDD | 0.00084 | [2] | [2] | No | MEC<C |
| *111* | Dieldrin | 0.00014 | [2] | [2] | No | MEC<C |
| *112* | alpha-Endosulfan | 0.0087 | [2] | [2] | No | MEC<C |
| *113* | beta-Endolsulfan | 0.0087 | [2] | [2] | No | MEC<C |
| *114* | Endosulfan Sulfate | 240 | [2] | [2] | No | MEC<C |
| *115* | Endrin | 0.0023 | [2] | [2] | No | MEC<C |
| *116* | Endrin Aldehyde | 0.81 | [2] | [2] | No | MEC<C |
| *117* | Heptachlor | 0.00021 | [2] | [2] | No | MEC<C |
| *118* | Heptachlor Epoxide | 0.00011 | [2] | [2] | No | MEC<C |
| *119-125* | Polychlorinated biphenyls (PCBs) | 0.00017 | [2] | [2] | No | MEC<C |
| *126* | Toxaphene | 0.0002 | [2] | [2] | No | MEC<C |

[1] Based on monitoring data collected during the term of Order No. R4-2007-0031.
[2] Results are non-detect or no monitoring data is available.
[3] Limit in prior Order No. R4-2002-0031.

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**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.** WQBELs for copper, lead, zinc, 4,4-DDT, and PCBs are established based on the final WLAs established in the Harbor Toxics TMDL.

**c.** Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is included. However, in accordance with the reopener provision in Section VI.C.1.e, 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.

**d.** The process for developing these limits is in accordance with Section 1.4 of the SIP. Two sets of Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitation (MDEL) values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

**e. WQBELs Calculation Example**

Using total recoverable copper as an example, the following demonstrates how WQBELs were established for this Order. The development and calculation of all WQBELs in this Order are described below:

*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 criteria, determine the effluent concentration allowance (ECA) using the following steady state equation:

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

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 110 mg/L (as $CaCO_3$) was used for development of hardness-dependent criteria, and a pH of 7.2 s.u. was used for pH-dependent criteria.
D = The dilution credit, and
B = The ambient background concentration

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When a WLA has been established through a TMDL for a parameter, the WLA is set equal to the ECA. The Harbor Toxics TMDL establishes the copper water column concentration-based WLA as equal to the saltwater chronic aquatic life criterion.

For total recoverable copper, the applicable WLA identified for the Cerritos Channel within the Long Beach Harbor is

$$ECA = WLA_{chronic} = 3.73\ \mu g/L$$

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

$$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$$

$$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic\ 99}$$

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 Not Detected, the CV shall be set equal to 0.6. If the data set is greater than 10 samples, and at least 20% of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

For total recoverable copper, based on the Harbor Toxics TMDL, the following data were used to develop the chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

| No. of Samples | CV | ECA $Multiplier_{acute}$ | ECA $Multiplier_{chronic}$ |
|---|---|---|---|
| 0 | 0.60 | Not Applicable | 0.527 |

<u>Total Recoverable Copper:</u>

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

$$LTA_{copper} = 3.73\ \mu g/L \times 0.527 = 1.97\ \mu g/L$$

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

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

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

$LTA = LTA_{copper} = 1.97\ \mu g/L$

**Step 4**: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitation (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 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For total recoverable copper, the following data were used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

| No. of Samples Per Month | CV | $Multiplier_{MDEL\ 99}$ | $Multiplier_{AMEL\ 95}$ |
|---|---|---|---|
| 4 | 0.6 | 3.11 | 1.55 |

**<u>Total Recoverable Copper:</u>**

$AMEL = 1.97\ \mu g/L \times 1.55 = 3.1\ \mu g/L$

$MDEL = 1.97\ \mu g/L \times 3.11 = 6.1\ \mu g/L$

*Calculation of human health AMEL and MDEL:*

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

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

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

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$

There are no human health criteria for total recoverable copper.

**Step 7:** Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

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| $AMEL_{aquatic\ life}$ | $MDEL_{aquatic\ life}$ | $AMEL_{human\ health}$ | $MDEL_{human\ health}$ |
|---|---|---|---|
| 3.1 µg/L | 6.1 µg/L | Not Applicable | Not Applicable |

The lowest (most restrictive) effluent limits are based on aquatic health and were incorporated into this Order. For copper, there is no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs.

***Final WQBELs for copper:***

**AMEL = 3.1 µg/L**
**MDEL = 6.1 µg/L**

WLAs for copper, lead, zinc, 4,4'-DDT and total PCBs have been established in the Harbor Toxics TMDL; therefore, effluent limitations for these parameters are established based on the Harbor Toxics TMDL WLAs. Order No. R4-2013-0157, the previous NPDES permit which regulated discharges from this location, contained effluent limitations for nickel, thallium, and cyanide based on reasonable potential of past monitoring data and best professional judgement. Since no new data is available to evaluate reasonable potential, effluent limitations for these pollutants are also included in this Order.

**5. WQBELs Based on Basin Plan Objectives**

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

**a. pH**. This Order includes instantaneous minimum and maximum effluent limitations for pH to ensure compliance with the Basin Plan objectives.

**b. Ammonia.** The Basin Plan objectives for ammonia are expressed as a function of pH and temperature. No ammonia effluent data are available for a RPA. This Order requires the Discharger to conduct effluent and receiving water monitoring for ammonia, pH, temperature, and salinity in order to provide data necessary to calculate ammonia objectives and conduct future RPAs.

**c. Bacteria.** A Bacteria TMDL has been developed for the Inner Cabrillo Beach and the Main Ship Channel of the Los Angeles Inner Harbor. Therefore, this Order includes bacteria limitations based on water quality standards (WQS) applicable to Cerritos Channel. These WQS (and WQBELs) are identical to the WQS used to develop the Bacteria TMDL that is applicable to the Main Ship Channel immediately downstream of Cerritos Channel.

**d. Dissolved Oxygen.** This Order applies the water quality objective for dissolved oxygen as a receiving water limitation.

**e. Temperature.** This Order includes an instantaneous effluent temperature limitation of 86°F based on the Thermal Plan and consistent with a white paper entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. This effluent limitation was determined to be appropriate for the protection of the Basin Plan objective for temperature.

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f. **Turbidity**. Where natural turbidity is between 0 to 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%. This Order applies the water quality objective for turbidity as a receiving water limitation in addition to the technology-based effluent limitation.

**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 R4-2013-0157 included acute toxicity limitations and monitoring requirements at Discharge Point 001 in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. There was no acute toxicity monitoring conducted at Discharge Point 001 during the term of Order No. R4-2013-0157 due to the lack of discharge events.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Therefore, this Order discontinues the acute toxicity limitation and prescribes the chronic toxicity limitation to address both acute and chronic toxicity endpoints in organisms exposed to the discharge. This Order establishes a MDEL of "Pass or % effect<50" as a chronic toxicity effluent limitation.

In 2010, U.S. EPA endorsed the peer-reviewed Test of Significant Toxicity (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 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 approach. 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:

$H_o$: Mean response (In-stream Waste Concentration (IWC) in % effluent) ≤ 0.75 mean response (Control).

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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 IWC 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 ≥0.50.

This Order includes a chronic toxicity limitation and chronic toxicity monitoring with statistical analysis using TST methods. Nevertheless, this Order contains a reopener to allow the Regional Water Board and USEPA to modify the permit in the future, if necessary, to make it consistent with any new policy, plan, law, or regulation.

**7. Final WQBELs**

**Table F-8. Summary of Final WQBELs at Discharge Point 001**

| Parameter | Units | Water Quality-Based Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| pH | Standard units | -- | -- | 6.5 | 8.5 |
| Chronic Toxicity[1] | Pass or Fail, % Effect (TST statistical approach) | -- | Pass or % Effect < 50 | -- | -- |
| Temperature | Degrees F | -- | -- | -- | 86 |
| Total Coliform | CFU/100mL or MPN/100 mL | [2] | | | |
| Fecal Coliform | CFU/100mL or MPN/100 mL | [2] | | | |
| *Enterococcus* | CFU/100mL or MPN/100 mL | [2] | | | |
| Copper, Total Recoverable[4] | µg/L | 3.1 | 6.1 | -- | -- |
| | lbs/day[3] | 0.03 | 0.1 | -- | -- |
| Lead, Total Recoverable[4] | µg/L | 7 | 14 | -- | -- |
| | lbs/day[3] | 0.1 | 0.1 | -- | -- |
| Nickel, Total Recoverable[5] | µg/L | 7 | 14 | -- | -- |
| | lbs/day[3] | 0.1 | 0.1 | -- | -- |
| Thallium, Total Recoverable[5] | µg/L | 6.3 | 13 | -- | -- |
| | lbs/day[3] | 0.1 | 0.1 | -- | -- |
| Zinc, Total Recoverable[4] | µg/L | 70 | 141 | -- | -- |
| | lbs/day[3] | 0.6 | 1.3 | -- | -- |
| Cyanide, Total (as CN)[5] | µg/L | 0.5 | 1.0 | -- | -- |
| | lbs/day[3] | 0.005 | 0.01 | -- | -- |
| 4,4-DDT[4] | µg/L | 0.0006 | 0.001 | -- | -- |
| | lbs/day[3] | 5.4E-06 | 1.1E-05 | -- | -- |
| PCBs, Total[4] | µg/L | 0.0002 | 0.0003 | -- | -- |
| | lbs/day[3] | 1.6E-06 | 3.1E-06 | -- | -- |

[1] Report "Pass" or "Fail" and "% Effect" for Maximum Daily Effluent Limitation (MDEL).

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[2] Bacterial limitations are established for both geometric means and single samples. The geometric mean values should be calculated based on a statically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period).

a. Rolling 30-day Geometric Mean Limits
   i. Total coliform density shall not exceed 1,000/100 ml.
   ii. Fecal coliform density shall not exceed 200/100 ml.
   iii. *Enterococcus* density shall not exceed 35/100 ml.

b. Single Sample Maximum (SSM)
   i. Total coliform density shall not exceed 10,000/100 ml.
   ii. Fecal coliform density shall not exceed 400/100 ml.
   iii. *Enterococcus* density shall not exceed 104/100 ml.
   iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1

[3] Mass loading limitations are based on the maximum flows at Discharge Point 001 (1.1 million gallons per day (MGD)) and are calculated as follows:

Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day

[4] The final effluent limitations for these parameters are derived from their final waste load allocations as set forth in the Harbor Toxics TMDL. Consistent with the TMDL, the waste load allocations were translated into effluent limitations by applying the procedures in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP).

[5] The final effluent limitations for these parameters are based on Order No. R4-2013-0157.

## D. Final Effluent Limitation Considerations

### 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. Effluent limitations may be relaxed when new information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance which would have justified a less stringent effluent limitation. The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R4-2013-0157 with the exception of the removal of the acute toxicity effluent limitations. This Order replaces the acute toxicity limitation with a chronic toxicity limitation. Acute toxicity evaluates lethality. Chronic toxicity evaluates lethality and it also evaluates reductions in reproduction and growth. Therefore, the chronic toxicity limitation is more stringent than the acute toxicity limitation. As such, replacement of the acute toxicity limitation does not constitute backsliding.

### 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 and ensures that any discharges permitted herein will not violate the antidegradation policies.

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This Order does not provide for an increase in the permitted design flow and the final limitations in this Order hold the Discharger to performance levels that will not cause or contribute to degradation of water quality. Therefore, the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

**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 operation.

Mass based effluent limitations are established using the following formula:

Mass (lbs/day) = flow rate (MGD) x 8.34 x 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)

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

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, oil and grease, TSS, settleable solids, turbidity, and TPH at Discharge Point No. 001. Restrictions on these parameters are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

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

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### 5. Summary of Final Effluent Limitations

**Table F-9. Summary Final Effluent Limitations at Discharge Point 001**

| Parameter | Units | Effluent Limitations | | | | Basis[1] |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instanta-neous Minimum | Instanta-neous Maximum | |
| ***Conventional Pollutants*** | | | | | | |
| pH | s.u. | -- | -- | 6.5 | 8.5 | E, BP |
| Biochemical Oxygen Demand 5-day @ 20°C (BOD) | mg/L | 20 | 30 | -- | -- | E, BPJ |
| | lbs/day[2] | 183 | 275 | -- | -- | |
| Oil and Grease | mg/L | 10 | 15 | -- | -- | E, BPJ |
| | lbs/day[2] | 92 | 138 | -- | -- | |
| Total Suspended Solids (TSS) | mg/L | 30 | 75 | -- | -- | E, BPJ |
| | lbs/day[2] | 275 | 688 | -- | -- | |
| ***Non-Conventional Pollutants*** | | | | | | |
| Settleable Solids | ml/L | 0.1 | 0.2 | -- | -- | BPJ, E |
| Temperature | °F | -- | -- | -- | 86 | BP, TP, WP, BPJ, E |
| Total Petroleum Hydrocarbons (TPH)[3] | µg/L | -- | 100 | -- | -- | BPJ, E |
| | lbs/day[2] | -- | 0.92 | -- | -- | |
| Turbidity | NTU | 50 | 75 | -- | -- | BPJ, E |
| Chronic Toxicity[4] | Pass or Fail, % Effect (TST) | -- | Pass or % Effect <50 | -- | -- | BP |
| Total Coliform | CFU/100mL or MPN/100mL | 5 | | -- | -- | E, BPJ, BP |
| Fecal Coliform | CFU/100mL or MPN/100mL | 5 | | -- | -- | E, BPJ, BP |
| Enterococcus | CFU/100mL or MPN/100mL | 5 | | -- | -- | E, BPJ, BP |
| ***Priority Pollutants*** | | | | | | |
| Copper, Total Recoverable[6] | µg/L | 3.1 | 6.1 | -- | -- | E, TMDL, CTR-SIP |
| | lbs/day[2] | 0.03 | 0.1 | -- | -- | |
| Lead, Total Recoverable[6] | µg/L | 7 | 14 | -- | -- | E, TMDL, CTR-SIP |
| | lbs/day[2] | 0.1 | 0.1 | -- | -- | |
| Nickel, Total Recoverable | µg/L | 7 | 14 | -- | -- | BPJ, E, CTR- SIP |
| | lbs/day[2] | 0.1 | 0.1 | -- | -- | |
| Thallium, Total Recoverable | µg/L | 6.3 | 13 | -- | -- | BPJ, E, CTR- SIP |
| | lbs/day[2] | 0.1 | 0.1 | -- | -- | |
| Zinc, Total Recoverable[6] | µg/L | 70 | 141 | -- | -- | E, TMDL, CTR-SIP |
| | lbs/day[2] | 0.6 | 1.3 | -- | -- | |
| Cyanide, Total (as CN) | µg/L | 0.5 | 1.0 | -- | -- | BPJ, E, CTR- SIP |
| | lbs/day[2] | 0.005 | 0.01 | -- | -- | |

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| Parameter | Units | Effluent Limitations | | | | Basis[1] |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instanta-neous Minimum | Instanta-neous Maximum | |
| 4,4'-DDT[6,7] | µg/L | 0.0006 | 0.001 | -- | -- | E, TMDL, CTR-SIP |
| | lbs/day[2] | 5.4E-06 | 1.1E-05 | -- | -- | |
| Total PCBs[6,7,8] | µg/L | 0.0002 | 0.0003 | -- | -- | E, TMDL, CTR-SIP |
| | lbs/day[2] | 1.6E-06 | 3.1E-06 | -- | -- | |

1 E = Existing Order No. R4-2013-0157; BPJ = Best Professional Judgment; BP = Basin Plan; TP = Thermal Plan; WP = White Paper; TMDL = Total Maximum Daily Load, CTR = California Toxics Rule; SIP = State Implementation Policy.

2 Mass-based effluent limitations based on a maximum flow of 1.1 MGD and calculated as follows:

Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge and actual measured concentration.

3 TPH equals the sum of TPH gasoline ($C_4$-$C_{12}$), TPH diesel ($C_{13}$-$C_{22}$), and TPH oil ($C_{23+}$).

4 The maximum daily effluent limitation (MDEL) for chronic toxicity shall be reported as "Pass" or "Fail" and "% Effect". The MDEL is exceeded when a toxicity test results in a "Fail," and the percent effect is greater than or equal to 0.50.

5 Bacterial limitations are established for both geometric means and single samples. The geometric mean values should be calculated based on a statically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period).

a. Rolling 30-day Geometric Mean Limits
   i. Total coliform density shall not exceed 1,000/100 ml.
   ii. Fecal coliform density shall not exceed 200/100 ml.
   iii. Enterococcus density shall not exceed 35/100 ml.

b. Single Sample Limits (SSM)
   i. Total coliform density shall not exceed 10,000/100 ml.
   ii. Fecal coliform density shall not exceed 400/100 ml.
   iii. Enterococcus density shall not exceed 104/100 ml.
   iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to total coliform exceeds 0.1.

6 The effluent limitations are based on the U.S. EPA approved Harbor Toxics TMDL WLAs and calculated using the CTR-SIP procedures.

7 Samples analyzed must be unfiltered samples.

8 PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260. PCBs as congeners shall be individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate) using EPA Method 1668c. PCBs as congeners shall be analyzed using EPA Method 1668c for three years and an alternate method may be used if none of the PCB congeners are detected for three years using EPA Method 1668c. To facilitate interpretation of sediment/fish tissue data, PCB congeners whose analytical characteristics resemble those of PCB-8, 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 195, 201, 206 and 209 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate).

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

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

**G. 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. As such, they are a required part of the proposed Order.

### A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water.

### 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 were based on 40 C.F.R. part 123 and the previous Order No. R4-2013-0078. 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.

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

**a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

**b. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for the Great Los Angeles and Long Beach Harbor Waters Compliance Monitoring Program.** This provision implements the Compliance Monitoring Program as required in the Harbor Toxics TMDL. The Compliance Monitoring Program includes water column monitoring, sediment monitoring and fish tissue monitoring at monitoring stations in the Los Angeles Inner Harbor. The Discharger may join a collaboration group or develop a site-specific plan to comply with this requirement.

To comply with the requirements in Order R4-2013-0157, Tesoro Refining & Marketing Company LLC – Calciner Operations has joined a collaboration group and entered into an Agreement as of August 26, 2014, with the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority (Collaboration Group) for the implementation of the Harbor Toxics TMDL coordinated compliance monitoring and reporting plan for Greater Los Angeles and Long Beach Harbor Waters. The Collaboration Group has submitted annual reports (2015, 2016, and 2017) to the Regional Water Board.

The Discharger is required to notify the Regional Water Board, within 90 days of the effective date of the Order, whether the Discharger will continue to participate with the Collaboration Group to complete the regional monitoring required by the Harbor Toxics TMDL and included in section VI.C.2.b of the Waste Discharge Requirements of the Order, or if the Discharger will develop a site-specific plan. The Discharger shall provide documentation of the intent to continue to be a part of the Collaborating Group. If developing a site-specific plan, the Discharger shall provide that plan to the Regional Water Board within 12 months from the effective date of the 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. Best Management Practices and Pollution Prevention**

**a. Storm Water Pollution Prevention Plan**

The previous Order required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update, as necessary, and continue to implement the 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 Cerritos Channel. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water, and to prevent the entrainment of trash in storm water that is discharged directly into surface waters. SWPPP requirements are included as Attachment G, based on 40 C.F.R. section 122.44(k).

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

This Order requires the Discharger to develop and implement a BMPP. The BMPP may be included as a component of the SWPPP. 40 C.F.R. section 122.44(k) requires that permits include best management practices when reasonably necessary to achieve the effluent limitations and standards or to carry out the purpose and intent of the CWA. Consistent with 40 C.F.R. section 122.44(k), this Order requires the Discharger to update and implement a BMPP. The purpose of the BMPP is to establish site-specific procedures that minimize the amount of pollutants entering wastewater discharges from materials being stored and activities being conducted throughout the entire 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.

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

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

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

This provision included in Section VI.C. of the Waste Discharge Requirements of this Order is based on the requirements of 40 C.F.R. section 122.41(e).

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

**6. Compliance Schedules – Not Applicable**

## VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

### A. Influent Monitoring – Not Applicable

### B. Effluent Monitoring

Monitoring for pollutants expected to be present in the discharge will be required at Discharge Points 001 as established in the MRP (Attachment E) and as required in the SIP. To demonstrate compliance with established effluent limitations, the Order retains the monitoring requirements from Order No. R4-2013-0157 with the exception of acute toxicity (see section VII.C of this Fact Sheet for a discussion of toxicity requirements).

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

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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. 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. This Order includes effluent limitations and monitoring requirements for chronic toxicity.

**D. Receiving Water Monitoring**

**1. Surface Water**

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the temperature, CTR priority pollutants, TCDD equivalents, and ammonia at Monitoring Location RSW-001 during years in which a discharge occurs. Additionally, the Discharger must analyze pH and salinity of the upstream receiving water at the same time as the samples are collected for priority pollutants analyses.

This Order includes monitoring requirements for the downstream location, Monitoring Location RSW-002 during years in which a discharge occurs. Monitoring for dissolved oxygen is required to demonstrate compliance with Basin Plan Objectives. Monitoring for pH, temperature, and salinity is required to calculate ammonia objectives. Salinity is necessary to adjust the ammonia water quality objective, expressed as un-ionized ammonia, to total ammonia as per the Basin Plan.

Monitoring for total residual chlorine at a frequency of once per year at Monitoring Locations RSW-001 and RSW-002 has been included to determine compliance with the Basin Plan Objective.

**2. Groundwater – Not Applicable**

**E. Other Monitoring Requirements**

**1. Storm Water Monitoring Requirements**

In order to evaluate the effectiveness of the SWPPP, BMPP, and SCP, this Order requires rainfall monitoring and visual storm water monitoring during discharge events. This Order requires the Discharger to report on the effectiveness of the plans and update them as needed to ensure all actual or potential sources of pollutants in the wastewater and storm water discharged from the Facility are addressed in the SWPPP, BMPP, and SCP.

**2. Regional Monitoring**

Regional monitoring is required to determine compliance with the assigned wasteload and load allocations specified in the Harbor 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 Harbor Toxics TMDL. If the Discharger intends to address the Plan requirements in combination with another facility or by joining

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a group already formed, the Plan must address monitoring requirements for all water bodies to which discharges occur.

## VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Facility. As a step in the WDR/NPDES permit adoption process, the Regional Water Board staff developed tentative WDR and NPDES permit, and released it for comment to the public (see section C below). The Regional Water Board encourages public participation in the WDR/NPDESan NPDES permit.

### 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 with a copy to Rosario.Aston@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 **February 14, 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:** | **March 14, 2019** |
| **Time:** | **9:00 a.m.** |
| **Location:** | **Port of Long Beach, Hearing Room**<br>**4801 Airport Plaza Drive**<br>**Long Beach, 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. Reconsideration 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

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Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov
For instructions on how to file a petition for review, see:
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, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Rosario Aston at Rosario.Aston@waterboards.ca.gov or at (213) 576-6653.

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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

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subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

**TABLE A**

**FIVE PHASES FOR DEVELOPING AND IMPLEMENTING NDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS**

| **PLANNING AND ORGANIZATION** |
|---|
| Form Pollution Prevention Team<br>Review other plans |

| **ASSESSMENT PHASE** |
|---|
| Develop a site map<br>Identify potential pollutant sources<br>Inventory of materials and chemicals<br>List significant spills and leaks<br>Identify non-storm water discharges<br>Assess pollutant risks |

| **BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE** |
|---|
| Non-structural BMPs<br>Structural BMPs<br>Select activity and site-specific BMPs |

| **IMPLEMENTATION PHASE** |
|---|
| Train employees<br>Implement BMPs<br>Conduct recordkeeping and reporting |

| **EVALUATION / MONITORING** |
|---|
| Conduct annual site evaluation<br>Review monitoring information<br>Evaluate BMPs<br>Review and revise SWPPP |

## 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:

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**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[1] 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.

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

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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 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

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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.

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**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.<br><br>Spills caused by topping off fuel tanks.<br><br>Hosing or washing down fuel oil fuel area.<br><br>Leaking storage tanks.<br><br>Rainfall running off fuel oil, and rainfall running onto and off fueling area | fuel oil | Use spill and overflow protection.<br><br>Minimize run-on of storm water into the fueling area.<br><br>Cover fueling area.<br><br>Use dry cleanup methods rather than hosing down area.<br>Implement proper spill prevention control program.<br><br>Implement adequate preventative maintenance program to preventive tank and line leaks.<br><br>Inspect fueling areas regularly to detect problems before they occur.<br><br>Train employees on proper fueling, cleanup, and spill response techniques. |

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

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

**A. Non-Structural BMPs**

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

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

**B. Structural BMPs**

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

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

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

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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 within10 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.

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**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 MINIMIUM LEVELS (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.

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| 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 | | |
| 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 | | |

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| Table 2b - SEMI-VOLATILE SUBSTANCES* | GC | GCMS | LC | COLOR |
|---|---|---|---|---|
| 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.

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| 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 |

* 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

| 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 | |
| 42 | 1,12-Trichloroethane | 79005 | [1] |
| 43 | Trichloroethylene | 79016 | [1] |
| 44 | Vinyl Chloride | 75014 | [1] |
| 45 | 2-Chlorophenol | 95578 | [1] |
| 46 | 2,4-Dichlorophenol | 120832 | [1] |

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| CTR Number | Parameter | CAS Number | Analytical Methods |
|---|---|---|---|
| 47 | 2,4-Dimethylphenol | 105679 | [1] |
| 48 | 2-Methyl-4,6-Dinitrophenol | 534521 | [1] |
| 49 | 2,4-Dinitrophenol | 51285 | [1] |
| 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] |

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| CTR Number | Parameter | CAS Number | Analytical Methods |
|---|---|---|---|
| 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] |
| 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] |

[1] Pollutants shall be analyzed using the methods described in 40 C.F.R. Part 136.

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