# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

## LOS ANGELES REGION

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## ORDER NO. R4-2011-0190
## NPDES NO. CA0002020

## WASTE DISCHARGE REQUIREMENTS FOR TESORO REFINING AND MARKETING COMPANY TESORO SULFUR RECOVERY PLANT

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

**Table 1. Discharger Information**

| | |
|---|---|
| **Discharger** | Tesoro Refining and Marketing Company |
| **Name of Facility** | Tesoro Sulfur Recovery Plant |
| **Facility Address** | 23208 South Alameda Street |
| | Carson, CA 90745 |
| | Los Angeles County |
| The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge. | |

The discharge by the Tesoro Refining and Marketing Company from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

| Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|
| 001 | Treated storm water, commingled with boiler blowdown, cooling tower blowdown, and miscellaneous wash waters | 33°48'47" N | 118°13'47" W | Dominguez Channel Estuary |

**Table 3. Administrative Information**

| | |
|---|---|
| This Order was adopted by the Regional Water Quality Control Board on: | **December 8, 2011** |
| This Order shall become effective on: | **January 7, 2012** |
| This Order shall expire on: | **November 10, 2016** |
| The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than: | **180 days prior to the Order expiration date** |

IT IS HEREBY ORDERED, that Order No. R4-2006-0005 is terminated upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted pursuant thereto, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted pursuant thereto, the Discharger shall comply with the requirements in this Order.

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 8, 2011.

Samuel Unger

Samuel Unger, Executive Officer

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## I. FACILITY INFORMATION

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

**Table 4. Facility Information**

| | |
|---|---|
| **Discharger** | Tesoro Refining and Marketing Company |
| **Name of Facility** | Tesoro Sulfur Recovery Plant |
| **Facility Address** | 23208 South Alameda Street |
| | Carson, CA 90745 |
| | Los Angeles County |
| **Facility Contact, Title, and Phone** | Robert Stockdale, Senior Environmental Engineer, 310-522-6281 |
| **Mailing Address** | 2101 E. Pacific Coast Highway, Wilmington, CA 90744 |
| **Type of Facility** | Industrial Sulfur Recovery Plant |
| **Facility Design Flow** | 0.65 million gallons per day (MGD) |

## II. FINDINGS

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

**A. Background.** Tesoro Refining and Marketing Company (hereinafter Discharger or Tesoro) is currently discharging treated wastewater and commingled storm water pursuant to Order No. R4-2006-0005 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0002020. The Discharger submitted a Report of Waste Discharge (ROWD), dated June 11, 2010, and applied for an NPDES permit renewal to discharge up to 0.65 MGD of treated wastewater and commingled storm water from the Tesoro Sulfur Recovery Plant. The application was deemed complete on December 16, 2010.

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. Facility Description**. Tesoro is the current owner and operator of the Sulfur Recovery Plant (Facility) located at 23208 South Alameda Street, Carson, California. The Facility was formerly owned and operated by Equilon Enterprises LLC (dba) Shell Oil Products, US. Tesoro purchased the Los Angeles Refinery including the Sulfur Recovery Plant on May 10, 2007.

The Discharger recovers sulfur from refinery process streams via pipeline from the Los Angeles Refinery located at 2101 East Pacific Coast Highway, Wilmington, California. The Facility treats and discharges storm water runoff commingled with boiler blowdown, cooling tower blowdown, and miscellaneous wash waters. Treatment of commingled storm water and process waters consists of two combination skimming and settling basins, followed by a main settling basin. The Facility maintains a 7,506-barrel holding tank to store excess flow volume and more severely contaminated effluent that would require further treatment prior to disposal. Under most conditions, the Facility's effluent is pumped to the Los Angeles Refinery for further treatment prior to discharge to the Los Angeles County Sanitation District. The discharge of treated wastewater and commingled storm water through Discharge Point No. 001 (see Table 2 on cover page) to the Dominguez Channel, a water of the United States, within the estuary, occurs only during significant storm events. No discharges have occurred during the term of the existing permit (Order No. R4-2006-0005) or the previous permit (Order No. 00-133). Attachment B depicts a topographic map of the area around the Facility. Attachment C depicts the flow schematic of the Facility.

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

pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with Section 13260).

**D. 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 Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through K are also incorporated into this Order.

**E. California Environmental Quality Act (CEQA).** Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.

**F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at part 122.44, Title 40 of the Code of Federal Regulations[1], 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 part 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

**G. Water Quality-Based Effluent Limitations.** Section 301(b) of the CWA and part 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR part 122.44(d)(1)(i) mandates 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) USEPA criteria guidance under CWA Section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in part 122.44(d)(1)(vi).

**H. Watershed Management Approach and Total Maximum Daily Loads (TMDLs)**

The Regional Water Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed management may include

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

diverse issues as defined by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the Watershed Management Approach integrates the Regional Water Board's many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and nonpoint sources. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis to establish water quality based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. The TMDLs will establish waste load allocations (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody. The Facility discharges to Dominguez Channel Estuary within the Dominguez Channel/Los Angeles/Long Beach Harbor watershed management area (WMA).

The USEPA approved the State Water Resources Control Board's (State Water Board) 2010 California 303(d) List of impaired water bodies on November 12, 2010. 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 2010 303(d) List and have been scheduled for TMDL development. The 2010 State Water Board 303(d) List classifies the the Dominguez Channel Estuary (unlined portion below Vermont Avenue) as impaired due to ammonia, benthic community effects, benzo(a)pyrene (PAHs), benzo(a)anthracene, chlordane (tissue), chrysene ($C_1$-$C_4$), coliform bacteria, DDT (tissue and sediment), dieldrin (tissue), lead (tissue), PCBs (polychlorinated biphenyls), phenanthrene, pyrene, and zinc (sediment).

On May 5, 2011, the Regional Water Board adopted the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters;* however, it is not effective until approved by the State Water Board, the Office of Administrative Law (OAL), and USEPA. Therefore, no conditions or limitations are based on TMDLs in this Order.

**I. Water Quality Control Plans.** 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. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). The Dominguez Channel Estuary is not designated as MUN. Beneficial uses applicable to the Dominguez Channel Estuary are as follows:

**Table 5. Basin Plan Beneficial Uses**

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

[1] Access prohibited by Los Angeles County Department of Public Works

Requirements of this Order implement the Basin Plan.

**J. Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of* California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland and coastal surface waters. Requirements of this Order implement the Thermal Plan.

**K. Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality 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 was approved by OAL on September 14, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of 0.233 mg/L. These objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations.

**L. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA 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, USEPA adopted the CTR. The CTR promulgated new toxics criteria for

California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

**M. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the 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 USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

**N. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. The SIP further stipulates that unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. The SIP provision has expired, thus no compliance schedules are included in this Order.

**O. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes [40 CFR. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

**P. 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 biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), chemical oxygen demand (COD), phenolic compounds, settleable solids, sulfides, total petroleum hydrocarbons (TPH), turbidity, xylenes, total chromium, hexavalent chromium, phenol, and toluene. Restrictions on these constituents are discussed in section IV.B.2 of the Fact Sheet. The CWA requires that the technology-based effluent limitations be established based on several levels of controls that include the best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and new source performance

standards (NSPS). The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations 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. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

The WQBELs consist of restrictions on pH, temperature, total residual chlorine, acute toxicity, arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, zinc, cyanide, benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethene, tetrachloroethylene, and trichloroethylene. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to part 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by 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 part 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**Q. Antidegradation Policy**. 40 CFR part 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters 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. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of Section 131.12 and State Water Board Resolution No. 68-16.

**R. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at Title 40, Code of Federal Regulations Part 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. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

**S. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

**T. Monitoring and Reporting.** Part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code Sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

**U. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with part 122.41, and additional conditions applicable to specified categories of permits in accordance with part 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under part 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

**V. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsection VI.C.2 and VI.C.3. of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

**W. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

**X. 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 of this Order.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R4-2006-0005 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 federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

## III. DISCHARGE PROHIBITIONS

**A.** Wastes discharged shall be limited to a maximum of 0.65 MGD of treated storm water commingled with boiler blowdown, cooling tower blowdown, and miscellaneous clean up water as described in the findings. The discharge of wastes from accidental spills or other sources is prohibited.

**B.** Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Dominguez Channel, or other waters of the State, are prohibited.

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

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

**E.** 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 Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

**F.** The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

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

## IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

### A. Effluent Limitations-Discharge Point No. 001

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

**a.** The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001, as described in the attached Monitoring and Reporting Program (MRP) (Attachment E):

**Table 6. Effluent Limitations for Discharge Point No. 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 | 26 | 48 | -- | -- |
| | lbs/day[1] | 143 | 260 | -- | -- |
| Oil and Grease | mg/L | -- | 15 | -- | -- |
| | lbs/day[1] | -- | 81 | -- | -- |
| Total Suspended Solids (TSS) | mg/L | 22 | 34 | -- | -- |
| | lbs/day[1] | 117 | 182 | -- | -- |
| ***Non-Conventional Pollutants*** | | | | | |
| Chemical Oxygen Demand (COD) | mg/L | 180 | 360 | -- | -- |
| | lbs/day[1] | 975 | 1,950 | -- | -- |
| Chromium, Total | µg/L | 216 | 600 | -- | -- |
| | lbs/day[1] | 1.2 | 3.3 | -- | -- |
| Total Residual Chlorine | mg/L | -- | 0.1 | -- | -- |
| | lbs/day[1] | -- | 0.5 | -- | -- |
| Phenolic Compounds | mg/L | 0.17 | 0.35 | -- | -- |
| | lbs/day[1] | 0.91 | 1.9 | -- | -- |
| Settleable Solids | mL/L | -- | 0.3 | -- | -- |
| Sulfides | mg/L | -- | 0.1 | -- | -- |
| | lbs/day[1] | -- | 0.5 | -- | -- |
| Temperature | °F | -- | -- | -- | 86 |
| TPH[2] | µg/L | -- | 100 | -- | -- |
| | lbs/day[1] | -- | 0.54 | -- | -- |
| Turbidity | NTU | -- | 75 | -- | -- |
| Xylenes | µg/L | -- | 10 | -- | -- |
| | lbs/day[1] | -- | 0.05 | -- | -- |
| ***Priority Pollutants*** | | | | | |
| Arsenic, Total Recoverable | µg/L | 29.5 | 59 | -- | -- |
| | lbs/day[1] | 0.16 | 0.32 | -- | -- |
| Cadmium, Total Recoverable | µg/L | 7.7 | 15.4 | -- | -- |
| | lbs/day[1] | 0.04 | 0.08 | -- | -- |
| Chromium (VI), Total Recoverable | µg/L | 30 | 60 | -- | -- |
| | lbs/day[1] | 0.15 | 0.34 | -- | -- |
| Copper, Total Recoverable | µg/L | 2.9 | 5.8 | -- | -- |
| | lbs/day[1] | 0.02 | 0.03 | -- | -- |

| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Lead, Total Recoverable | µg/L | 7.0 | 14 | -- | -- |
| | lbs/day[1] | 0.04 | 0.08 | -- | -- |
| Mercury, Total Recoverable | µg/L | 0.05 | 0.10 | -- | -- |
| | lbs/day[1] | 0.0003 | 0.0005 | -- | -- |
| Nickel, Total Recoverable | µg/L | 6.8 | 13.6 | -- | -- |
| | lbs/day[1] | 0.04 | 0.08 | -- | -- |
| Selenium, Total Recoverable | µg/L | 58 | 117 | -- | -- |
| | lbs/day[1] | 0.31 | 0.63 | -- | -- |
| Silver, Total Recoverable | µg/L | 1.1 | 2.2 | -- | -- |
| | lbs/day[1] | 0.006 | 0.012 | -- | -- |
| Zinc, Total Recoverable | µg/L | 47 | 95 | -- | -- |
| | lbs/day[1] | 0.25 | 0.51 | -- | -- |
| Cyanide, Total (as CN) | µg/L | 0.5 | 1.0 | -- | -- |
| | lbs/day[1] | 0.003 | 0.005 | -- | -- |
| Benzene | µg/L | 71 | 142 | -- | -- |
| | lbs/day[1] | 0.38 | 0.77 | -- | -- |
| Carbon Tetrachloride | µg/L | 4.4 | 8.8 | -- | -- |
| | lbs/day[1] | 0.02 | 0.05 | -- | -- |
| 1,2-Dichloroethane | µg/L | 99 | 199 | -- | -- |
| | lbs/day[1] | 0.54 | 1.1 | -- | -- |
| 1,1- Dichloroethene | µg/L | 3.2 | 6.4 | -- | -- |
| | lbs/day[1] | 0.02 | 0.03 | -- | -- |
| Phenol | mg/L | -- | 1.0 | -- | -- |
| | lbs/day[1] | -- | 5.4 | -- | -- |
| Tetrachloroethylene | µg/L | 8.9 | 17.8 | -- | -- |
| | lbs/day[1] | 0.05 | 0.10 | -- | -- |
| Toluene | µg/L | -- | 10 | -- | -- |
| | lbs/day[1] | -- | 0.05 | -- | -- |
| Trichloroethylene | µg/L | 81 | 162 | -- | -- |
| | lbs/day[1] | 0.44 | 0.88 | -- | -- |

[1] Mass limitations (lbs/day) are based on a maximum flow of 0.65 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 ($C_{23+}$).

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

**i.** The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay test shall be at least 90%, and

**ii.** No single test shall produce less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the Monitoring and Reporting Program (MRP) No. 1511 (Attachment E).

The Discharger shall conduct acute toxicity monitoring as specified in the MRP.

**2. Interim Effluent Limitations**

Not Applicable

**B. Land Discharge Specifications**

Not Applicable

**C. Reclamation Specifications**

Not Applicable

## V. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitation

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the Dominguez Channel Estuary.

**1.** The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.2 units.

**2.** Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 80°F as a result of waste discharged.

**3.** In marine waters designated for water contact recreation (REC-1), the waste discharged shall not cause the following standarss 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 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.** Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

**5.** Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994 Basin Plan, to be consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989"*. Adopted on March 4, 2004, Resolution No. 2004-022 was approved by State Water Board, OAL and USEPA on July 22, 2004, September 14, 2004, and May 19, 2005, respectively and is now in effect.

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

**7.** 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.

**8.** Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.

**9.** 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.

**10.** Accumulation of bottom deposits or aquatic growths.

**11.** Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

**12.** The presence of substances that result in increases of BOD that adversely affect beneficial uses.

**13.** 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.

**14.** Alteration of turbidity, or apparent color beyond present natural background levels.

**15.** Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.

**16.** Degrade surface water communities and populations including vertebrate, invertebrate, and plant species.

**17.** Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

**18.** Create nuisance, or adversely affect beneficial uses of the receiving water.

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

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

**a.** This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of parts 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

**b.** The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in the municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

**c.** Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

**d.** The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.

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

**f.** Oil or oily material, chemicals, refuse, or other pollutionable 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.

**g.** A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

**h.** After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

**i.** Violation of any term or condition contained in this Order;

**ii.** Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

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

**i.** If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

**j.** The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

**k.** The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

**l.** All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

**m.** In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.

**n.** The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

**o.** The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

**p.** The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

**q.** The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

**i.** Name and general composition of the chemical,

**ii.** Frequency of use,

**iii.** Quantities to be used,

**iv.** Proposed discharge concentrations, and

**v.** USEPA registration number, if applicable.

**r.** Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

**s.** In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, Average Monthly Effluent Limitation (AMEL), Maximum Daily Effluent Limitation (MDEL), instantaneous, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213)-576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

**t.** Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211.)

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

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

## 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 will revise and modify this Order in accordance with such more stringent standards.

**b.** This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the reasonable potential analysis.

**c.** This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to include requirements for the

implementation of the watershed management approach or to include new Minimum Levels (MLs).

**d.** This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Dominguez Channel Estuary.

**e.** 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.

**f.** This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

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

**a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation TRE workplan (1-2 pages) **within 90 days** of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:

**i.** A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;

**ii.** A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;

**iii.** If a Toxicity Identification Evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (section V of the MRP, Attachment E provides references for the guidance manuals that should be used for performing TIEs).

**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 management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged

directly to waters of the State. 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 in storm water. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. Further, the Discharger shall assure that the storm water discharges from the Facility would neither cause, nor contribute to the exceedance of water quality standards and objectives, nor create conditions of nuisance in the receiving water, and that the unauthorized discharges (i.e., spills) to the receiving water have been effectively prohibited. In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters. In addition, the BMPP shall address minimizing cooling tower blowdown and miscellaneous wash waters during periods of discharge and where possible, include estimates of volume reduction that can be achieved.

**c.** An updated Spill Prevention Control and Countermeasure (SPCC) Plan that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events must be developed. The SPCC Plan shall be reviewed at a minimum once per year and updated as needed.

The Plans 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 points; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material.

The Discharger shall implement the SWPPP, BMPP, and SPCC **within 10 days** of the approval by the Executive Officer or **no later than 90 days** after submission to the Regional Water Board, whichever comes first. The plans shall be reviewed annually and updated information shall be submitted to the Regional Water Board within 30 days of revision.

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

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

**5. Special Provisions for Municipal Facilities (POTWs Only)**

Not Applicable

**6. Other Special Provisions**

Not Applicable

### 7. 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 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 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 = $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

### D. Mass-based Effluent Limitations.

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for ND and the estimated concentration for DNQ for the calculation of the monthly average concentration. To be consistent with Limitations and Discharge Requirements, section VII.B, if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

### E. Multiple Sample Data.

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

those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

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

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

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

**1.** If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

**2.** If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger 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.

When all sample results are greater than or equal to the reported ML (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as ND or DNQ (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

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

**4.** If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL, then the Discharger is in violation of the AMEL.

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

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

**H. Instantaneous Minimum Effluent Limitation.**

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

**I. 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).

# ATTACHMENT A – DEFINITIONS

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

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.

**Best Management Practices (BMPs)**
BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural control, and operation maintenance procedures, which can be applied before, during, and/or after pollution-producing activities.

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

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

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

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

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

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

**Detected, but Not Quantified (DNQ)**
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

**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 USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Reporting Level (RL)**
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the 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.

**Satellite Collection System**
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

**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.

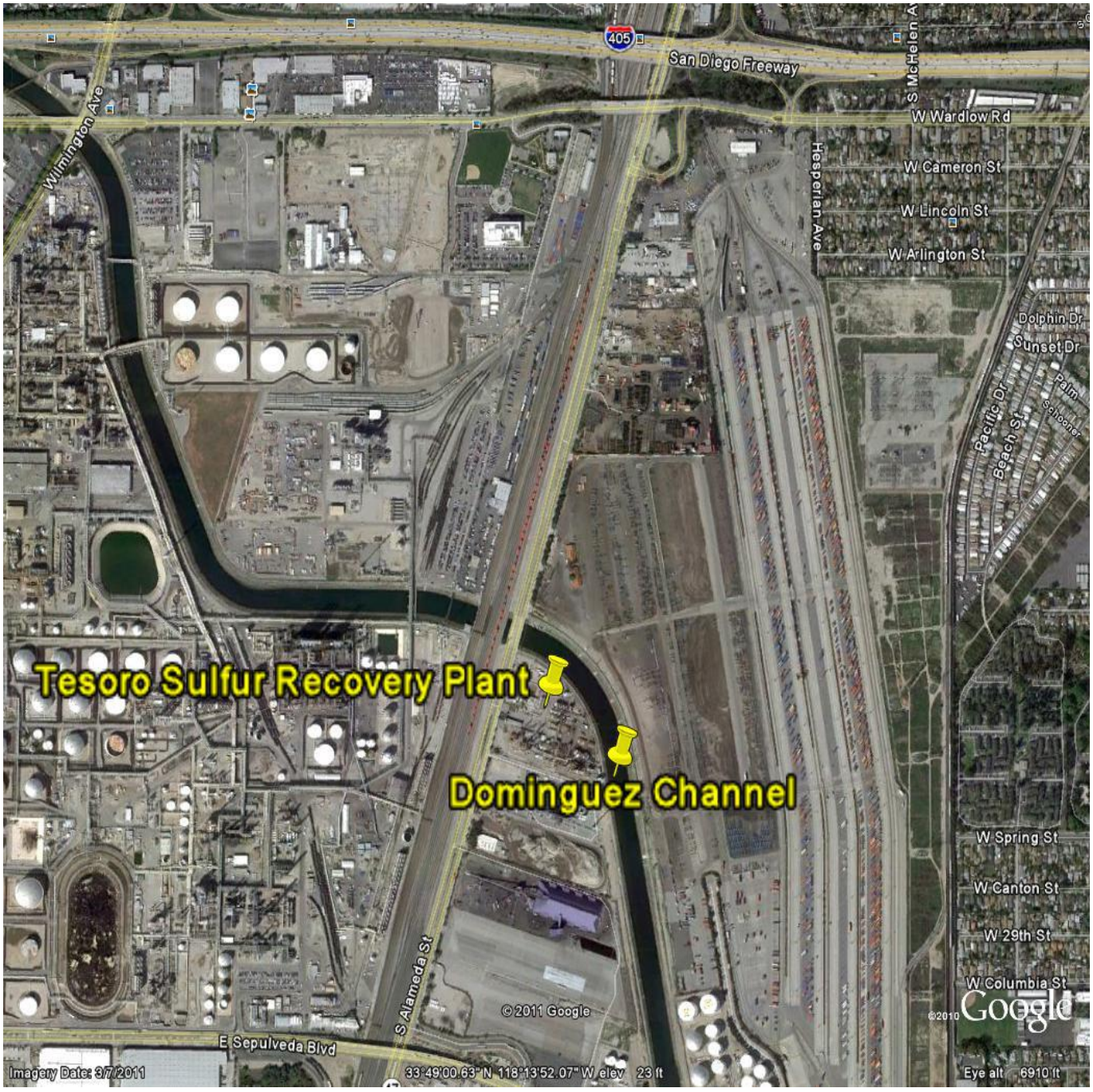
**Toxicity Reduction Evaluation (TRE)**
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first 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.)

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AMEL | Average Monthly Effluent Limitation |
| B | Background Concentration |
| BAT | Best Available Technology Economically Achievable |
| Basin Plan | *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* |
| BCT | Best Conventional Pollutant Control Technology |
| BMP | Best Management Practices |
| BMPP | Best Management Practices Plan |
| BPJ | Best Professional Judgment |
| BOD | Biochemical Oxygen Demand 5-day @ 20 °C |
| BPT | Best Practicable Treatment Control Technology |
| C | Water Quality Objective |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CTR | California Toxics Rule |
| CV | Coefficient of Variation |
| CWA | Clean Water Act |
| CWC | California Water Code |
| Discharger | Tesoro Refining and Marketing Company |
| DMR | Discharge Monitoring Report |
| DNQ | Detected But Not Quantified |
| ELAP | California Department of Public Health Environmental Laboratory Accreditation Program |
| ELG | Effluent Limitations, Guidelines and Standards |
| Facility | Tesoro Sulfur Recovery Plant |
| gpd | gallons per day |
| IC | Inhibition Coefficient |
| $IC_{15}$ | Concentration at which the organism is 15% inhibited |
| $IC_{25}$ | Concentration at which the organism is 25% inhibited |
| $IC_{40}$ | Concentration at which the organism is 40% inhibited |
| $IC_{50}$ | Concentration at which the organism is 50% inhibited |
| LA | Load Allocations |
| 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 |
| MRP | Monitoring and Reporting Program |
| ND | Not Detected |
| NOEC | No Observable Effect Concentration |
| NPDES | National Pollutant Discharge Elimination System |

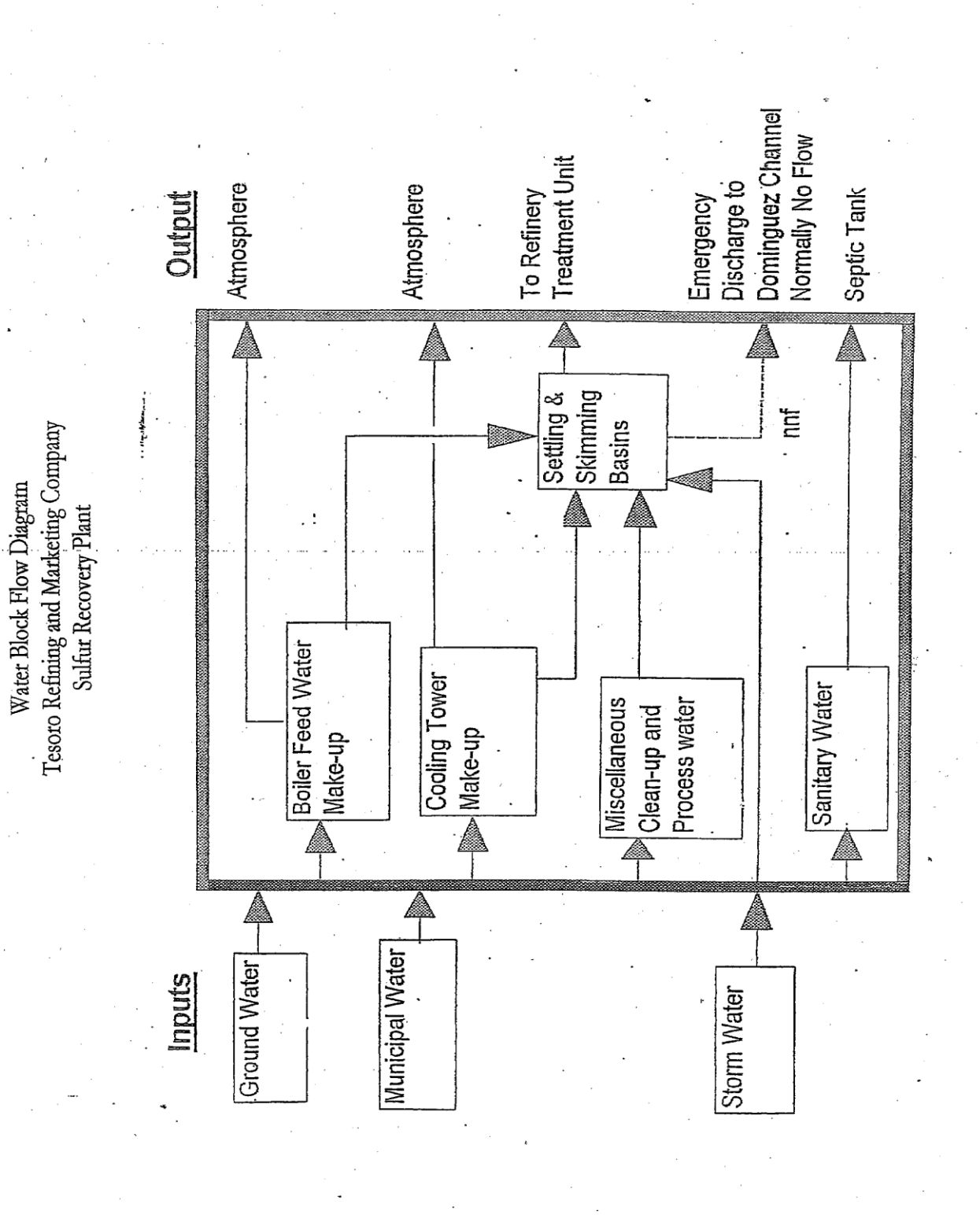
| | |
|---|---|
| NSPS | New Source Performance Standards |
| NTR | National Toxics Rule |
| OAL | Office of Administrative Law |
| PMEL | Proposed Maximum Daily Effluent Limitation |
| PMP | Pollutant Minimization Plan |
| POTW | Publicly Owned Treatment Works |
| QA | Quality Assurance |
| QA/QC | Quality Assurance/Quality Control |
| Ocean Plan | *Water Quality Control Plan for Ocean Waters of California* |
| Regional Water Board | California Regional Water Quality Control Board, Los Angeles Region |
| RPA | Reasonable Potential Analysis |
| SCP | Spill Contingency Plan |
| SIP | State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)* |
| SMR | Self Monitoring Reports |
| State Water Board | California State Water Resources Control Board |
| SWPPP | Storm Water Pollution Prevention Plan |
| TAC | Test Acceptability Criteria |
| Thermal Plan | *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* |
| TIE | Toxicity Identification Evaluation |
| TMDL | Total Maximum Daily Load |
| TOC | Total Organic Carbon |
| TRE | Toxicity Reduction Evaluation |
| TSD | Technical Support Document |
| TSS | Total Suspended Solid |
| $TU_c$ | Chronic Toxicity Unit |
| USEPA | United States Environmental Protection Agency |
| WDR | Waste Discharge Requirements |
| WET | Whole Effluent Toxicity |
| WLA | Waste Load Allocations |
| WQBELs | Water Quality-Based Effluent Limitations |
| WQS | Water Quality Standards |
| % | Percent |

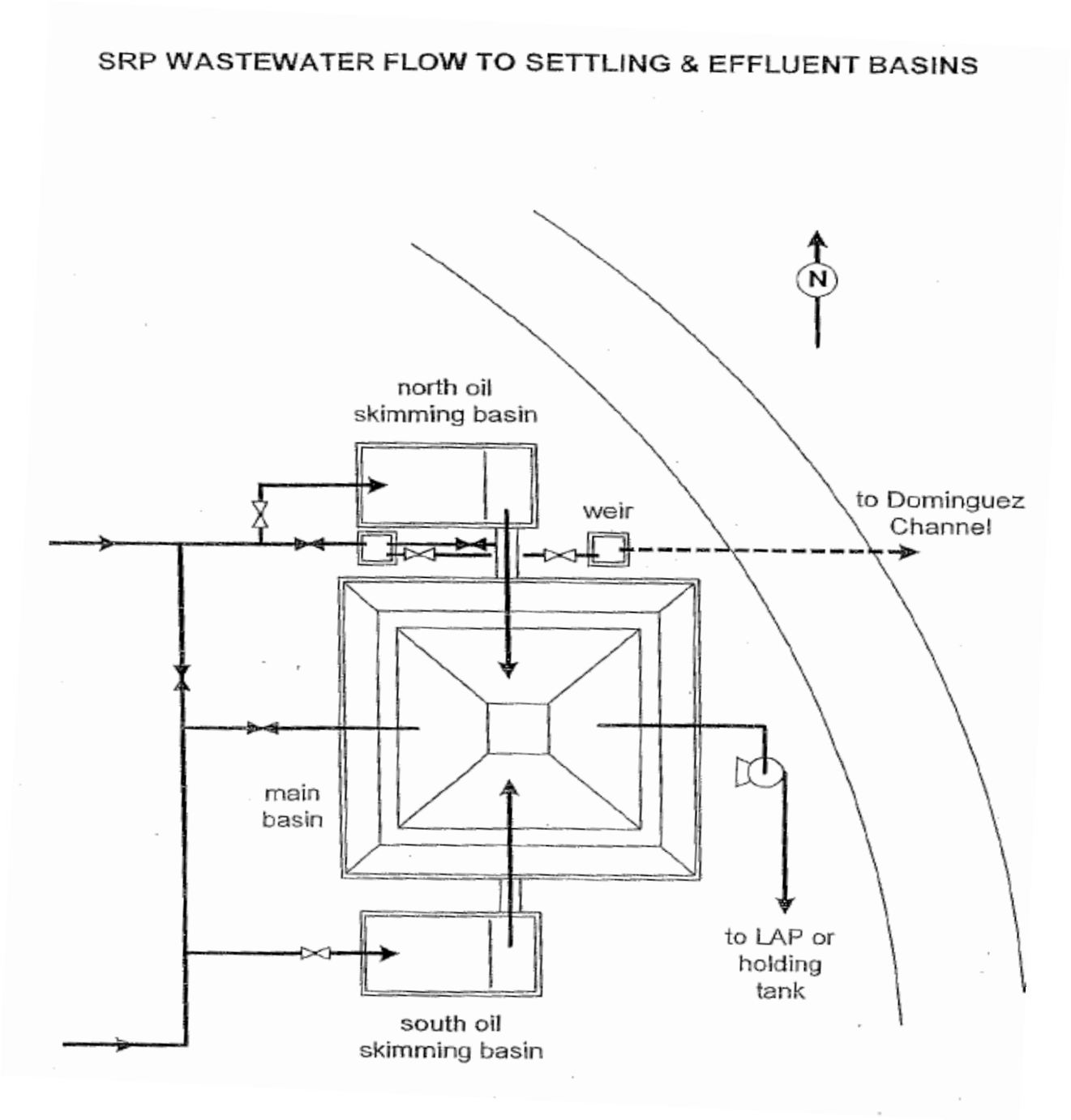
## ATTACHMENT B – MAP




TESORO REFINING AND MARKETING COMPANY
TESORO SULFUR RECOVERY PLANT
Carson-Los Angeles County
Discharge to Dominguez Channel Estuary – N 33º 48’ 47” W 118º 13’ 47”

## ATTACHMENT C – FLOW SCHEMATIC




SRP WASTEWATER FLOW TO SETTLING & EFFLUENT BASINS
N
north oil
skimming basin
weir
to Dominguez
Channel
main
basin
to LAP or
holding
tank
south oil
skimming basin

# ATTACHMENT D – STANDARD PROVISIONS

## I. STANDARD PROVISIONS – PERMIT COMPLIANCE

### A. Duty to Comply

**1.** The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [part 122.41(a)].

**2.** The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement [part 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 [part 122.41(c)].

### C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [part 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 [part 122.41(e)].

### E. Property Rights

**1.** This Order does not convey any property rights of any sort or any exclusive privileges [part 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 [part 122.5(c)].

## F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [section 122.41(i)] [Water Code section 13383]:

**1.** Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [part 122.41(i)(1)];

**2.** Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [part 122.41(i)(2)];

**3.** Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [part 122.41(i)(3)]; and

**4.** Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location [part 122.41(i)(4)].

## G. Bypass

**1.** Definitions

**a.** "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [part 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 [part 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 [part 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 [part 122.41(m)(4)(i)]:

**a.** Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [part 122.41(m)(4)(i)(A)];

**c.** 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 [part 122.41(m)(4)(i)(B)]; and

**d.** The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [part 122.41(m)(4)(i)(C)].

**4.** The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [part 122.41(m)(4)(ii)].

**5.** Notice

**a.** Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [part 122.41(m)(3)(i)].

**b.** Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) [part 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 [part 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 [part 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 [part 122.41(n)(3)]:

**a.** An upset occurred and that the Discharger can identify the cause(s) of the upset [part 122.41(n)(3)(i)];

**b.** The permitted facility was, at the time, being properly operated [part 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) [part 122.41(n)(3)(iii)]; and

**d.** The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [part 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 [part 122.41(n)(4)].

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [part 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 [part 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 [part 122.41(l)(3) and section 122.61].

## III. STANDARD PROVISIONS – MONITORING

**A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [part 122.41(j)(1)].

**B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [part 122.41(j)(4) and part 122.44(i)(1)(iv)].

## IV. STANDARD PROVISIONS – RECORDS

**A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [part 122.41(j)(2)].

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

**1.** The date, exact place, and time of sampling or measurements [part 122.41(j)(3)(i)];

**2.** The individual(s) who performed the sampling or measurements [part 122.41(j)(3)(ii)];

**3.** The date(s) analyses were performed [part 122.41(j)(3)(iii)];

**4.** The individual(s) who performed the analyses [part 122.41(j)(3)(iv)];

**5.** The analytical techniques or methods used [part 122.41(j)(3)(v)]; and

**6.** The results of such analyses [part 122.41(j)(3)(vi)].

**C. Claims of confidentiality for the following information will be denied [part 122.7(b)]:**

**1.** The name and address of any permit applicant or Discharger [part 122.7(b)(1)]; and

**2.** Permit applications and attachments, permits and effluent data [part 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 USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [part 122.41(h)] [Water Code section 13267].

## B. Signatory and Certification Requirements

**1.** All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [part 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. [part 122.22(a)(1)].

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

**a.** The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above [part 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.) [part 122.22(b)(2)]; and

**c.** The written authorization is submitted to the Regional Water Board and State Water Board [part 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 [part 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." [part 122.22(d)].

## C. Monitoring Reports

**1.** Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [part 122.22(l)(4)].

**2.** Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [part 122.41(l)(4)(i)].

**3.** If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [part 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 [part 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 [part 122.41(l)(5)].

## E. Twenty-Four Hour Reporting

**1.** The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates

and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [part 122.41(l)(6)(i)].

**2.** The following shall be included as information that must be reported within 24 hours under this paragraph [part 122.41(l)(6)(ii)]:

**a.** Any unanticipated bypass that exceeds any effluent limitation in this Order [part 122.41(l)(6)(ii)(A)].

**b.** Any upset that exceeds any effluent limitation in this Order [part 122.41(l)(6)(ii)(B)].

**3.** The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [part 122.41(l)(6)(iii)].

## 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 [part 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 part 122.29(b) [part 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 [part 122.41(l)(1)(ii)].

The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [part 122.41(l)(1)(ii)].

## G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [part 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 [part 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 USEPA, the Discharger shall promptly submit such facts or information [part 122.41(l)(8)].

## 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 13385, 13386, and 13387.

**B.** The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*part 122.41(a)(2)*] [*Water Code sections 13385 and 13387*].

**C.** Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*part 122.41(a)(3)*].

**D.** The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*part 122.41(j)(5)*].

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

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [part 122.42(a)]:

**1.** That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [part 122.42(a)(1)]:

**a.** 100 micrograms per liter (µg/L) [part 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 [part 122.42(a)(1)(ii)];

**c.** Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [part 122.42(a)(1)(iii)]; or

**d.** The level established by the Regional Water Board in accordance with part 122.44(f) [part 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" [part 122.42(a)(2)]:

**a.** 500 micrograms per liter (µg/L) [part 122.42(a)(2)(i)];

**b.** 1 milligram per liter (mg/L) for antimony [part 122.42(a)(2)(ii)];

**c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [part 122.42(a)(2)(iii)]; or

**d.** The level established by the Regional Water Board in accordance with part 122.44(f) [part 122.42(a)(2)(iv)].

# ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 1511)

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## List of Tables

## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 1511

The Code of Federal Regulations part 122.48 requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

### I. GENERAL MONITORING PROVISIONS

**A.** An effluent sampling station shall be established for Discharge Point No. 001 and shall be located where representative samples of that 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 parts 136.3, 136.4, and 136.5 (revised March 12, 2007); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in 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.

**E.** For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (USEPA) guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

**F.** Each monitoring report must affirm in writing that “all analyses were conducted at a laboratory certified for such analyses by the Department of Public Health or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP”.

**G.** 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.

**H.** Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

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 CFR Part 136 (revised March 12, 2007);

**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 USEPA-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.

**I.** Water/wastewater samples must be analyzed within allowable holding time limits as specified in part 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.

**J.** 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.

**K.** The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

**L.** The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.

**M.** When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

**N.** For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.

**O.** In the event wastes are transported to a different disposal site during the report 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.

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

**Q.** Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports.

## II. MONITORING LOCATIONS

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

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

| Discharge Point Name | Monitoring Location Name | Monitoring Location Description |
|---|---|---|
| 001 | EFF-001 | Final Effluent at the Discharge Point to the Dominguez Channel Estuary (Latitude 33º 48' 47" N, Longitude 118º 13' 47" W). |
| -- | 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 in the Dominguez Channel Estuary. |

## III. INFLUENT MONITORING REQUIREMENTS

Not Applicable

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location EFF-001

**1.** The Discharger shall monitor treated storm water commingled with boiler blowdown, cooling tower blowdown, and miscellaneous wash waters at Monitoring Location EFF-001 as follows.

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

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Flow | MGD[1] | Meter | 1/ Discharge Event[3] | -- |
| ***Conventional Pollutants*** | | | | |
| pH | s.u. | Grab | 1/Discharge Event[3] | [4] |

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Biochemical Oxygen Demand (5-day @ 20 deg. C) (BOD) [2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Oil and Grease[2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Total Suspended Solids (TSS) [2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| ***Non-Conventional Pollutants*** | | | | |
| Ammonia, Total (as N) | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Chemical Oxygen Demand (COD) [2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Total Coliform | MPN/100 ml | Grab | 1/Discharge Event[3] | [4] |
| Fecal Coliform | MPN/100 ml | Grab | 1/Discharge Event[3] | [4] |
| Enterococcus | MPN/100 ml | Grab | 1/Discharge Event[3] | [4] |
| Methyl Tert-butyl Ether (MTBE) [2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Phenolic Compounds[2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Settleable Solids | ml/L | Grab | 1/Discharge Event[3] | [4] |
| Sulfate[2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Sulfides[2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Temperature | °F | Grab | 1/Discharge Event[3] | [4] |
| Tertiary Butyl Alcohol (TBA) [2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Total Petroleum [2]Hydrocarbons (TPH) as Gasoline ($C_4$-$C_{12}$) [2] | µg/L | Grab | 1/Discharge Event[3] | EPA Method 503.1 or 8015B |
| TPH as Diesel ($C_{13}$-$C_{22}$) [2] | µg/L | Grab | 1/Discharge Event[3] | EPA Method 503.1, 8015B, or 8270 |
| TPH as Oil ($C_{23+}$)[2] | µg/L | Grab | 1/Discharge Event[3] | EPA Method 503.1, 8015B, or 8270 |
| Total Residual Chlorine[2] | mg/L | Grab | 1/Discharge Event[3] | [4] |
| Turbidity | NTU | Grab | 1/Discharge Event[3] | [4] |
| Xylenes[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Alpha Gross Particle Activity | pCi/L | Grab | 1/Discharge Event[3] | [4] |
| Beta Gross Particle Activity | pCi/L | Grab | 1/Discharge Event[3] | [4] |
| Total Radium (226 and 228) | pCi/L | Grab | 1/Discharge Event[3] | [4] |
| Radium-226 | pCi/L | Grab | 1/Discharge Event[3] | [4] |
| Acute Toxicity | % Survival | Grab | 1/Discharge Event[3] | [4, 5] |
| ***Priority Pollutants*** | | | | |
| Arsenic, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Cadmium, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Chromium, Total | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Chromium (VI), Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Copper, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Lead, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Mercury, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Nickel, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Selenium, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Silver, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Zinc, Total Recoverable[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Cyanide, Total[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Benzene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Carbon Tetrachloride[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Chloroform[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| 1,2-Dichlorobenzene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| 1,4-Dichlorobenzene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| 1,1-Dichloroethane (1,1-DCA)[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| 1,2-Dichloroethane[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| 1,1-Dichloroethene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Ethylbenzene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Methylene Chloride[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Phenol[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Tetrachloroethylene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Trichloroethylene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Toluene[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Vinyl Chloride[2] | µg/L | Grab | 1/Discharge Event[3] | [4] |
| Remaining Priority Pollutants[6, 2] | µg/L | Grab | 1/Year[7] (First Discharge of the Year) | [4] |
| TCDD Equivalents[8, 2] | µg/L | Grab | 1/Year[7] (First Discharge of the Year) | [4] |

[1] MGD= million gallons per day.

[2] 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

[3] During periods of extended discharge, no more than **one sample per week** (or a 7-day period) is required. For alpha gross particle activity, beta gross particle activity, total radium (226 and 228), radium-226, and acute toxicity no more than **one sample per month** is required during extended discharge. Sampling shall be performed during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report.

If 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.

[4] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants, the methods must meet the lowest MLs specified in 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.

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

[6] Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations

and Discharge Requirements of this Order, and included as Attachment I.

[7] 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.

[8] 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 |
| 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. Acute Toxicity

### 1. Definition of Acute Toxicity

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

**a.** The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

**b.** No single test shall produce less than 70% survival.

### 2. Acute Toxicity Effluent Monitoring Program

**a. Method.** The Discharger shall conduct acute toxicity tests (96-hour static renewal toxicity tests) on effluent grab samples, by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821/R-02/012) or a more recent edition to ensure compliance. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

**b. Test Species.** The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0), shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish effluent. However, if the salinity of the receiving water is between 1 to 32 parts per thousand (ppt), the Discharger may have the option of using the inland silverside, *Menidia beryllina* (Acute Toxicity Test Method 2006.0), instead of the topsmelt. The method for topsmelt (Larval Survival and Growth Test Method 1006.0) is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition, August 1995* (EPA/600/R-95/136).

**c. Alternate Reporting.** For the acute toxicity testing with topsmelt, the Discharger may elect to report the results or endpoint from the first 96 hours of the chronic toxicity test as the results of the acute toxicity test, using USEPA's August 1995 method (EPA/600/R-95/136) to conduct the chronic toxicity test.

**d. Acute Toxicity Accelerated Monitoring.** If either of the above requirements (sections 1.a and 1.b) is not met, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period (or over the next six discharge events). The Discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 5 business days of the receipt of the result. If the additional

tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing.

**e. Toxicity Identification Evaluation**

i. If the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement the Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

ii. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70% survival, the Discharger shall immediately begin a TIE and implement Initial Investigation TRE workplan. Once the sources are identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

## B. Quality Assurance

**1.** Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

**2.** If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.

**3.** Control and dilution water should be receiving water (if non-toxic) or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the water the test species are grown in (culture water), a second control using culture water shall be used.

## C. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE workplan to the Executive Officer of the Regional Water Board for approval within **90 days** of the effective date of this permit. If the Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

**1.** A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

**2.** A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,

**3.** If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See MRP Section V.E.3 for guidance manuals.

## D. Steps in TRE and TIE Procedures

**1.** If results of the implementation of the facility's initial investigation TRE workplan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of completion of the initial investigation TRE. The detailed workplan shall include, but not be limited to:

**a.** Further actions to investigate and identify the cause of toxicity;

**b.** Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;

**c.** A schedule for these actions.

**2.** The following section summarizes the stepwise approach used in conducting the TRE

**a.** Step 1 includes basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;

**b.** Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;

**c.** If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE and employment of all reasonable efforts using currently available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity;

**d.** Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;

**e.** Step 5 evaluates in-plant treatment options; and,

**f.** Step 6 consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to

be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there are no longer toxicity (six consecutive chronic toxicity test results are less than or equal to 1.0 TUc or six consecutive acute toxicity test results are greater than 90% survival).

**3.** The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.

**4.** If a TRE/TIE is initiated prior to completion of the accelerated testing required by this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

**5.** Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.

**6.** The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

## E. Ammonia Removal

**1.** 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.

**2.** 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.

## F. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival for acute toxicity test results with the self monitoring reports (SMR) for the month in which the test is conducted. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to section V.A.2.d., then those results also shall be submitted with the SMR for the period in which the investigation occurred.

**1.** The full report shall be submitted on or before the end of the month in which the SMR is submitted.

**2.** The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit; and (4) the printout of the ToxCalc or CETIS (Comprehensive Environmental Toxicity Information System) program results.

**3.** Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test:

**a.** Sample date(s);

**b.** Test initiation date;

**c.** Test species;

**d.** End point values for each dilution (e.g., number of young, growth rate, percent survival);

**e.** $LC_{50}$ value(s) in percent effluent;

**f.** $TU_a$ values $\left( TU_a = \frac{100}{LC_{50}} \right)$ ;

**g.** $IC_{15}$, $IC_{25}$, $IC_{40}$ and $IC_{50}$ values in percent effluent;

**h.** Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);

**i.** NOEC and LOEC values for reference toxicant test(s);

**j.** $IC_{25}$ value for reference toxicant test(s);

**k.** Any applicable charts; and

**l.** Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

**4.** The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

**5.** The Discharger shall notify by telephone or electronically, this Regional Water Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

## VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable

## VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable

## VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

### A. Monitoring Location RSW-001

**1.** The Discharger shall monitor the Dominguez Channel Estuary, at Monitoring Location RSW-001, 50 feet upstream of Discharge Point No. 001, 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] | [2] |
| pH | s.u. | Grab | 1/Year[1] | [2] |
| Dissolved Oxygen | mg/L | Grab | 1/Year[1] | [2] |
| Salinity | mg/L | Grab | 1/Year[1] | [2] |

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|---|---|---|---|---|
| Temperature | ºF | Grab | 1/Year[1] | [2] |
| Priority Pollutants[3] | µg/L | Grab | 1/Year[1] | [2] |
| TCDD Equivalents[4] | µg/L | Grab | 1/Year[1] | [2] |

[1] Monitoring is only required during years in which a discharge occurs. Annual samples shall be collected during the first discharge of the year. Receiving water samples are collected at the same time as effluent samples, if possible, or at the first safe opportunity.

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

[3] 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.

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

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

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 |
| 1,2,3,7,8 - penta CDF | 50 | 0.05 |
| 2,3,4,7,8 - penta CDF | 50 | 0.5 |
| 1,2,3,4,7,8 - hexa CDF | 50 | 0.1 |
| 1,2,3,6,7,8 - hexa CDF | 50 | 0.1 |
| 1,2,3,7,8,9 - hexa CDF | 50 | 0.1 |
| 2,3,4,6,7,8 - hexa CDF | 50 | 0.1 |
| 1,2,3,4,6,7,8 - hepta CDFs | 50 | 0.01 |
| 1,2,3,4,7,8,9 - hepta CDFs | 50 | 0.01 |
| Octa CDF | 100 | 0.0001 |

## IX. OTHER MONITORING REQUIREMENTS

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

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

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

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

### 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.

**2. Visual Observation.** The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A “significant storm water discharge” is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period. Visual observations shall be performed during daylight and under conditions where it is safe for employees to view the discharge.

## 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 report shall so state.

3. 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.

4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

5. The Discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section V.F.

## B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be 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 USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

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

| Sampling Frequency | Monitoring Period Begins On… | Monitoring Period | SMR Due Date |
|---|---|---|---|
| 1/ Discharge Event | **January 7, 2012** | 1st day of calendar month through last day of calendar month | November 1<br>February 1<br>May 1<br>August 1 |
| 1/Year | January 7, 2012 | January 1 through December 31 | February1 |

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

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

**b.** Sample results less than the Reporting Limit (RL), but greater than or equal to the laboratory's MDL, shall be reported as DNQ. The estimated chemical concentration of the sample shall also be reported.

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

**c.** Sample results less than the laboratory's MDL shall be reported as 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.

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

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

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

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

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

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

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

**c.** SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

**California Regional Water Quality Control Board**
**Los Angeles Region**
**320 W. 4th Street, Suite 200**
**Los Angeles, CA 90013**

## C. Discharge Monitoring Reports (DMRs)

Not Applicable

## D. Other Reports

**1.** Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:

**a.** Initial Investigation TRE workplan

**b.** Updated SWPPP

**c.** Updated BMPP

**d.** The SPCC Plan

# ATTACHMENT F – FACT SHEET

## Table of Contents

## List of Tables

## ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

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

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

| | |
|---|---|
| **WDID** | 4B192121002 |
| **Discharger** | Tesoro Refining and Marketing Company |
| **Name of Facility** | Tesoro Sulfur Recovery Plant |
| **Facility Address** | 23208 S. Alameda Street |
| | Carson, CA 90745 |
| | Los Angeles County |
| **Facility Contact, Title and Phone** | Robert Stockdale, Senior Environmental Engineer (310) 522-6281 |
| **Authorized Person to Sign and Submit Reports** | David W. Reed, Vice President, Los Angeles Refinery (310) 522-6441 |
| **Mailing Address** | 2101 E. Pacific Coast Highway, Wilmington, CA 90744 |
| **Billing Address** | Same as Mailing Address |
| **Type of Facility** | Industrial Sulfur Recovery Plant |
| **Major or Minor Facility** | Minor |
| **Threat to Water Quality** | Category 2 |
| **Complexity** | Category C |
| **Pretreatment Program** | Not Applicable |
| **Reclamation Requirements** | Not Applicable |
| **Facility Permitted Flow** | 0.65 million gallons per day (MGD) |
| **Facility Design Flow** | 0.65 MGD |
| **Watershed** | Dominguez Channel |
| **Receiving Water** | Dominguez Channel Within the Estuary |
| **Receiving Water Type** | Inland Surface Water |

**A.** Tesoro Refining and Marketing Company (hereinafter Discharger) is the owner and operator of the Tesoro Sulfur Recovery Plant (hereinafter Facility) located at 23208 South Alameda Street, Carson, California. The Facility was formerly owned and

operated by Equilon Enterprises LLC (dba) Shell Oil Products, US. Tesoro purchased the Los Angeles Refinery including the Sulfur Recovery Plant on May 10, 2007.

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 treated storm water runoff commingled with boiler blowdown, cooling tower blowdown and miscellaneous wash waters to the Dominguez Channel Estuary, a water of the United States. The discharge is currently regulated by Order No. R4-2006-0005 which was adopted on January 19, 2006, and expires on December 10, 2011.

**C.** The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on June 15, 2010. The application was deemed complete on December 16, 2010. A site visit was conducted on May 16, 2011, to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Facility is a component of the Tesoro Los Angeles Refinery (Refinery) located at 2101 East Pacific Coast Highway, Wilmington, California. The Refinery is approximately 1.25 miles south of the Facility. The Refinery processes approximately 100,000 barrels per day of crude oil. The crude oil is converted into various grades of automotive and aviation gasoline, jet fuels, diesel fuels, bunker fuels and petroleum coke.

The Facility recovers sulfur from refinery process streams received via pipeline from the Refinery. The sulfur recovery process at the Facility involves circulation and regeneration of diethanolamine (DEA) between units at the Facility and the Refinery. The DEA from the Facility is continuously circulated through individual fuel gas contactors or absorbers and also liquid propylene ($C_3$) contactors at the Refinery. At the Refinery, DEA absorbs sulfur from hydrocarbon gas, generating a rich amine solution. The rich amine solution is pumped to the Facility whereby it is steam stripped to remove hydrogen sulfide gas, and converted to a lean amine solution, which circulates back to the Refinery. The Facility also receives sour water from the Refinery, which is treated through a sour water stripper to remove hydrogen sulfide gas. The stripped sour water waste stream is pumped back to the Refinery for treatment and discharge to the sanitary sewer. The hydrogen sulfide gas recovered from the DEA solution and sour water strippers is routed to Claus reactors which convert hydrogen sulfide gas to elemental sulfur. Elemental sulfur is stored as a liquid in underground tanks or pits and distributed by truck at the loading rack area.

The Facility generates wastewaters including boiler blowdown, cooling tower blowdown, miscellaneous wash waters (i.e., wash water from unit housekeeping and condensates), and storm water runoff. This Order regulates the emergency discharge of process wastewater commingled with storm water runoff.

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

Storm water commingled with boiler blowdown, cooling tower blowdown, and miscellaneous wash waters drains to trenches and flows by gravity to the North and South Skim Ponds. The skim ponds are equipped with weirs for oil skimming. Each skim pond has a bypass pipe to route storm water between skim ponds to manage volume. Portable bypass pumps can be brought in if necessary to maintain the basin level or pump water to a holding tank. Oil that accumulates in the skim ponds is recovered by a vacuum truck, transported to an oil storage tank, and reprocessed at the Refinery.

From the skim ponds, storm water enters the main settling basin, which provides additional settling. From the main settling basin, the treated commingled waste stream is typically pumped to the Refinery treatment system and then discharged to the Los Angeles County Sanitation District, under Industrial Wastewater Discharge Permit No. 20098. The industrial permit limits the daily average flow to 2,900,000 gallons per day (gpd), with a 5-minute peak flow rate limit of 10,000 gallons per minute (14,400,000 gpd).

Periodically, the Discharger visually monitors and samples the main settling basin at the Facility. If sulfides are detected, the water from the main settling basin is treated with bleach prior to pumping to the Refinery treatment system. If sulfides are not detected, wastewater may be pumped directly to the Refinery treatment system. Alternatively, if other contaminants are detected at high levels, or if additional storage is necessary, wastewater may be routed to a holding tank. The holding tank provides storage for storm water during heavy precipitation and/or allows the Discharger to slowly reintroduce high level contaminants to the main settling basin. Wastewater with high level contaminants may also be stored in the holding tank, then routed to storage tanks at the Refinery for further evaluation and treatment.

The Discharger dedicates three pumps for transferring effluent water from the main settling basin to the Refinery treatment system. All three pumps are operated automatically and are designed to automatically shut down at 6 feet above the bottom of the sump, so that the basin is never completely emptied. Portable bypass pumps can be brought in if necessary to maintain the basin level or pump water to the holding tank.

During significant storm events when the Facility and Refinery treatment systems are hydraulically overloaded, the treated, combined wastewater and commingled storm water is discharged through Discharge Point No. 001 to the Dominguez Channel Estuary, a water of the United States.

The permitted flow of 0.65 MGD is based on previous discharge events. During heavy precipitation events that may lead to a discharge, the Facility has the capability to schedule cooling tower blowdown and wash water operations to minimize contributions to the treatment system. The most recent discharge event occurred in 2001. No discharges occurred during the term of Order No. R4-2006-0005, as indicated in the self monitoring reports (SMRs) from the first quarter 2007 through first quarter 2011.

### B. Discharge Points and Receiving Waters

The Discharger proposes to discharge 0.65 MGD of wastewater from the Facility, on an emergency basis, to the Dominguez Channel Estuary, a water of the United States via Discharge Point No. 001 (Latitude 33º48'47" N, Longitude 118º13'47" W).

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

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

No discharges occurred through Discharge Point No. 001 during the term of the existing Order No. R4-2006-0005.

### D. Compliance Summary

During the term of Order No. R4-2006-0005, no discharges occurred. Therefore, there were no violations of effluent limitations.

### E. Planned Changes

There are no planned changes to this Facility.

## III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

### A. Legal Authorities

This Order is issued pursuant to Section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with Section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with Section 13260).

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

Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100 through 21177.

### C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) adopted a *Water Quality Control Plan Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (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. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). The Dominguez Channel Estuary is not designated as MUN. Beneficial uses applicable to the Dominguez Channel Estuary are as follows:

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

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

[1] Access prohibited by Los Angeles County Department of Public Works

Requirements of this Order implement the Basin Plan.

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

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

Discharges to the Dominguez Channel Estuary would occur during heavy precipitation events. The Discharger has the capability to schedule cooling tower blowdown and wash waters such that the contributions to the discharge would be minimized. As a result, the discharge would be comprised mostly of storm water runoff and therefore is not considered to be industrial process wastewater for the intent of the Enclosed Bays and Estuaries Policy. Nonetheless, this Order contains provisions necessary to protect the beneficial uses of the receiving water.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. Additionally, a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region.* The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. Based on the white paper, maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and is included in this Order.

3. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality 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 was approved by the State Water Board on July 22, 2004, Office of Administrative Law on September 15, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989."* The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

   For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a one-hour average concentration of unionized ammonia of 0.233 mg/L. The proposed objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The proposed amendment includes an implementation procedure to convert unionized ammonia objectives to total ammonia effluent limits. The proposed amendment also simplifies the implementation procedures for translating ammonia objectives into effluent limits in situations where a mixing zone has been authorized by the Regional Water Board. Finally, the proposed amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The proposed objectives will apply only to inland surface waters not characteristic of freshwater (including enclosed bays, estuaries and wetlands) and do not impact the Ammonia Water Quality Objectives for ocean waters contained in the California Ocean Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA 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, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA 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 USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

6. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

7. **Antidegradation Policy.** 40 CFR part 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of part 131.12 and State Water Board Resolution No. 68-16.

8. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at Title 40, Code of Federal Regulations[1] Part 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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.

### D. Impaired Water Bodies on CWA 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 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt total maximum daily loads (TMDLs) that will specify waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2010 303(d) list of impaired water bodies on November 12, 2010. Certain receiving waters in the Los Angeles watershed do not fully support beneficial uses and therefore have been classified as impaired on the 2010 303(d) list and have been scheduled for TMDL development.

The estuary portion of the Dominguez Channel extends from Vermont Avenue to the Consolidated Slip, within the Los Angeles Harbor. The 2010 State Water Resources Control Board (State Water Board) California 303(d) List includes the classification of Dominguez Channel Estuary. The pollutants/stressors of concern for the Dominguez Channel Estuary include ammonia, coliform bacteria, DDT (tissue and sediment), PCBs, zinc (sediment), benthic community effects, benzo(a)anthracene, benzo(a)pyrene (3,4-benzopyrene-7-d), chrysene, phenanthrene, pyrene, chlordane (tissue), dieldrin (tissue), lead (tissue), and sediment toxicity. The inclusion of the Dominguez Channel on the 2010 303(d) list documents the waterbody's lack of assimilative capacity for the pollutants of concern. A TMDL is developed for the pollutants of concern in a 303(d)-listed waterbody to facilitate recovery of waterbody's ability to fully support its beneficial uses.

**Harbor Toxics TMDL.** On May 5, 2011, the Regional Water Board adopted the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters.* However, the TMDL is not effective until approved by the State Water Board, the Office of Administrative Law (OAL), and USEPA. Therefore, no conditions or limitations are based on TMDLs in this Order.

### E. Other Plans, Polices and Regulations

Not Applicable

## IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: part 122.44(a) requires that permits include applicable technology-based limitations and standards; and part 122.44(d) requires that permits

include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The list of pollutants of concern is based on constituents that were historically found in the effluent, stored on site with the potential to come into contact with storm water, as well as pollutants that are commonly associated with sulfur recovery waste streams. Contributing waste streams consist of cooling tower blowdown, boiler blowdown, storm water runoff, and miscellaneous clean up water. Typical pollutants present in these waste streams may include ammonia, residual chlorine, solids, oil and grease, sulfides, phenol, metals, petroleum hydrocarbons, methyl-tertiary butyl ether, tertiary butyl alcohol, and volatile organic compounds. In addition, biochemical oxygen demand (BOD), total suspended solids (TSS), chemical oxygen demand (COD), oil and grease, phenols, total chromium, chromium (VI), and total phenolics, are regulated under the Petroleum Refining Point Source Category (40 CFR Part 419) Effluent Limitation Guidelines and Standards (ELGs). The *Development Document for Effluent Limitations Guidelines and Standards for the Petroleum Refining Point Source Category* indicates these pollutants may be present in storm water discharges. Additional pollutants of concern were identified in Order No. R4-2006-0005 and remain as pollutants of concern in this Order.

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

## A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges to the Dominguez Channel Estuary that are regulated by an NPDES permit.

## B. Technology-Based Effluent Limitations

### 1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at part 122.44, Title 40 of the Code of Federal Regulations, 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 part 125.3.

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

**a.** Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

**b.** Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

**c.** Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

**d.** New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and part 125.3 of the Code of Federal Regulations authorize the use of 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 permit writer must consider specific factors outlined in part 125.3.

### 2. Applicable Technology-Based Effluent Limitations

The Facility is a sulfur recovery plant which processes waste streams from the Los Angeles Refinery. According to Table III-7 in the Development Document for Effluent Limitations Guidelines and Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014) sulfur recovery is a distinct process that may be utilized for the refining of crude petroleum and its fractionation products; therefore, the discharge from the refinery is subject to ELGs. As defined in 40 CFR Part 419, for the discharge of contaminated runoff commingled with refinery wastewater, the BPT effluent limitations for BOD, TSS, COD, oil and grease, phenolic compounds, total chromium, and chromium (VI) established in 40 CFR parts 419.12(e)(2), 419.22(e)(2), 419.32(e)(2), 419.42(e)(2), and 419.52(e)(2) are the same for all categories. Similarly, the BAT limitations for COD, phenols, total

chromium, and chromium (VI) established in 40 CFR parts 419.12(e)(2), 419.22(e)(2), 419.32(e)(2), 419.42(e)(2), and 419.52(e)(2) are the same for all categories. In addition, the BCT limitations for BOD, TSS, and oil and grease established in 40 CFR parts 419.13(e)(2), 419.23(e)(2), 419.33(e)(2), and 419.53(e)(2) are the same for all the categories. Order No. R4-2006-0005 established effluent limitations based on the requirements contained in 40 CFR Part 419 applicable to contaminated runoff.

For the discharge through Discharge Point No. 001, the BPT, BAT and BCT limitations for BOD, TSS, COD, oil and grease, phenols, total chromium, and chromium (VI) are applicable. Cooling tower blowdown and miscellaneous wash waters were evaluated with respect to applicability of production-based ELGs under 40 CFR parts 419.22(a), 419.23(a), and 419.24(a), which, when calculated, would result in stringent effluent limitations. The discharge covered by this Order is not typical of day-to-day refinery operations in that the Facility can schedule or postpone cooling tower blowdown and miscellaneous wash waters to minimize or eliminate their contribution to the discharge. In addition, because discharge occurs infrequently as a result of significant storm events, it is composed mostly of storm water runoff and the discharge characteristics are not tied to production. Therefore, based on BPJ, the Regional Water Board has determined that the waste characteristics of contaminated storm water and wastewater from the Refinery that is mixed with the storm water for discharge through Discharge Point No. 001 are comparable.

In this Order the mass-based limitations for BOD, TSS, COD, oil and grease, phenols, phenolic compounds, total chromium, and chromium (VI) are the most stringent of the BPT, BAT, and BCT limitations and are calculated using the maximum flow reported by the Facility in the ROWD. Because the discharge occurs only during emergency (significant storm events) to prevent flooding, the maximum flow is considered a reliable estimate of an actual discharge flow rate from the Facility. The example below demonstrates how BPT, BAT, and BCT limitations were calculated and utilized as effluent limitations in this Order.

**a.** Example of Mass-based ELG calculation for BOD

For BOD, the ELGs establish a daily maximum effluent limitation of 0.4 lbs/1,000 gallons of commingled storm water and process wastewaters and a 30-day average of 0.22 lbs/1,000 gallons of commingled storm water and process wastewaters.

The following formula was used to calculate the mass-based limitations for BOD:

Mass-based (lbs/day) = (Flow in gpd/1,000 gallons) x ELG Effluent Limitation

Flow = 650,000 gallons
ELG Effluent Limitation (Daily Max) = 0.40 lbs/1,000 gallons
ELG Effluent Limitation (30-day Average) = 0.22 lbs/1,000 gallons

Daily Maximum:

lbs/day = (650,000/1,000) x 0.40 = 260

30-Day Average:

lbs/day = (650,000/1,000) x 0.22 = 143

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

Concentration-based (mg/L) = (ELG Effluent Limitation in lbs/1,000 gallons) ÷ 0.00834 (conversion factor)

Daily Maximum:

mg/L = 0.40 ÷ 0.00834 = 48 mg/L

30-Day Average:

mg/L = 0.22 ÷ 0.00834 = 26 mg/L

Specific effluent guideline calculations for the remaining ELG-based parameters are contained in Attachment K. Effluent limitations for BOD, TSS, COD, phenolic compounds, and hexavalent chromium contained in Order No. R4-2006-0005 are based on ELG calculations and remain unchanged for this Order. In this Order, the effluent limitations for total chromium, based on ELG calculations, replace the effluent limitations in Order No. R4-2006-0005, which were based on a maximum contaminant level (MCL). Although the total chromium limitations in this Order are less stringent than in the previous Order, they are consistent with the exceptions in the anti-backsliding regulations. Further discussion is provided in the Fact Sheet section IV.D.1.

Order No. R4-2006-0005 contained a BPJ, daily maximum effluent limitation for oil and grease equal to 15 mg/L that was carried over from the previous Order. The BPJ limitation was based on requirements in NPDES permits for similar facilities within the Region. This limitation is more stringent than the daily maximum limitation calculated based on ELGs for oil and grease. Therefore, this Order carries over the daily maximum oil and grease limitation of 15 mg/L.

The effluent limitations for settleable solids, sulfides, total petroleum hydrocarbons (TPH), turbidity, xylenes, phenol, and toluene are carried over from Order No. R4-

2006-0005. These BPJ limitations are consistent with those established for similar facilities within the Los Angeles Region.

This Order requires the Discharger to update and continue to implement the SWPPP, BMPP to prevent hazardous waste/material from being discharged to waters of the State. In order to prevent major oil spills from coming into contact with surface water, this Order requires the Discharger to update and implement a Spill Prevention, Control, and Countermeasures (SPCC) plan. Further discussion of SWPPP, BMPP, and SPCC Plan are provided in VII.B.3 of this Fact Sheet and Attachment G. The combination of the SWPPP, BMPP, and SPCC, and existing Order limitations based on ELGs shall serve as technology-based effluent limitations, in order to carry out the purposes and intent of the CWA.

Table F-3 summarizes the technology-based effluent limitations for Discharge Point No. 001.

**Table F-3. Summary of Technology-based Effluent Limitations for Discharge Point No. 001**

| Parameter | Units | Average Monthly | Maximum Daily |
|---|---|---|---|
| ***ELG Based Limitations*** | | | |
| Biochemical Oxygen Demand (5-day @ 20 Deg. C) (BOD) | mg/L | 26 | 48 |
| | lbs/day[1] | 143 | 260 |
| Total Suspended Solids (TSS) | mg/L | 22 | 34 |
| | lbs/day[1] | 117 | 182 |
| Chemical Oxygen Demand (COD) | mg/L | 180 | 360 |
| | lbs/day[1] | 975 | 1,950 |
| Phenolic Compounds | mg/L | 0.17 | 0.35 |
| | lbs/day[1] | 0.91 | 1.9 |
| Chromium, Total | µg/L | 216 | 600 |
| | lbs/day[1] | 1.2 | 3.3 |
| Chromium (VI) | µg/L | 30 | 60 |
| | lbs/day[1] | 0.15 | 0.34 |
| ***BPJ Limitations*** | | | |
| Oil and Grease | mg/L | -- | 15[2] |
| | lbs/day[1] | -- | 81[2, 3] |
| Phenol | mg/L | -- | 1.0 |
| | lbs/day[1] | -- | 5.4 |
| Settleable Solids | ml/L | -- | 0.3 |

| Parameter | Units | Average Monthly | Maximum Daily |
|---|---|---|---|
| Sulfides | mg/L | -- | 0.1 |
| | lbs/day[1] | -- | 0.5 |
| Toluene | µg/L | -- | 10 |
| | lbs/day[1] | -- | 0.054 |
| Total Petroleum Hydrocarbons (TPH)[4] | µg/L | -- | 100 |
| | lbs/day[1] | -- | 0.54 |
| Turbidity | NTU | -- | 75 |
| Xylenes | µg/L | -- | 10 |
| | lbs/day[1] | -- | 0.05 |
| Turbidity | NTU | -- | 75 |

[1] The mass (lbs/day) limitations are based on a maximum flow of 0.65 MGD and is calculated as follows:

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

[2] The BPJ technology-based limit from Order No. R4-2006-0005 is carried over to this order as it is more stringent than the MDEL calculated based on ELGs.

[3] The mass limitation in Order No. R4-2006-0005 appears to be a typographical error. The mass limit for this Order is consistent with the mass limitation in the Fact Sheet of Order No. R4-2006-0005.

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

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

### 1. Scope and Authority

Section 301(b) of the CWA and part 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR part 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in part 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 specific procedures for determining reasonable potential for discharges from the Facility, and if necessary for calculating WQBELs, are contained in the SIP.

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

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

Order No. R4-2006-0005 included effluent limitations for the constituents (shown in Table F-4 below) based on Order No. 00-113 (previous Order). The effluent limitations in Order No. 00-113 were based on the maximum contaminant level (MCL) for municipal and domestic supply (MUN) beneficial uses. Since there was no discharge during the Order term (after 5 years) and there was no data available to conduct reasonable potential analysis to establish WQBELs, the effluent limitations in Order No. 00-113 were carried over in Order No. R4-2006-0005 to prevent backsliding [Section 402(0) of the CWA].

**Table F-4. Pollutants With Effluent Limits in Order No. R4-2006-0005 Based on MCLs**

| Parameter | Average Monthly | Maximum Daily | Drinking Water Standard |
|---|---|---|---|
| Arsenic | -- | 50 | Former MCL[1] |
| Cadmium | -- | 10 | Former MCL[1] |
| Chromium, Total | | 50 | MCL |
| Lead | -- | 50 | Former MCL[1] |
| Mercury | -- | 2.0 | Former MCL[1] |
| Selenium, Total Recoverable | -- | 10 | Former MCL[1] |
| Cyanide, Total (as CN) | -- | 200 | USEPA MCL |
| Carbon Tetrachloride | -- | 0.5 | MCL |
| Chloroform | -- | 100 | Former MCL for Total Trihalomethanes[2] |
| 1,1-Dichloroethane | -- | 5 | MCL |
| 1,1-Dichloroethene | -- | 6 | MCL |
| 1,2-Dichloroethane | -- | 0.5 | MCL |
| Ethylbenzene | -- | 680 | Former California MCL[3] |

| Parameter | Average Monthly | Maximum Daily | Drinking Water Standard |
|---|---|---|---|
| Methylene Chloride | -- | 5 | MCL |
| Tetrachloroethylene | -- | 5 | MCL |
| Trichloroethylene | -- | 5 | MCL |
| Vinyl Chloride | -- | 0.5 | MCL |
| 1,2-Dichlorobenzene | -- | 600 | MCL |
| 1,4-Dichlorobenzene | -- | 5 | MCL |

1. National Primary Interim Drinking Water Standards, December 24, 1975, effective June 24, 1977.
2. Effective November 29, 1979.
3. Effective February 25, 1989.

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The Basin Plan designates beneficial uses of ground waters in the Los Angeles Coastal Plain (i.e., Central Basin, West Coast Basin, Hollywood Basin and Santa Monica Basin). The beneficial uses include MUN. The Facility is located within the West Coast Basin and underlying the ground water that is classified as a MUN beneficial use. However, the Facility discharges to surface water, the Dominguez Channel, within the Estuary. This surface water is not designated as MUN or ground water recharge (GWR) beneficial uses in the Basin Plan. Therefore, the criteria based on MCL for MUN beneficial uses utilized in Order No. 00-113 are not applicable to the Facility's discharge to Dominguez Channel, within the Estuary. The CTR contained water quality criteria for priority pollutants and are applicable to the Dominguez Channel, within the Estuary. The CTR contains both saltwater and freshwater criteria including human health for consumption of water and organisms or organisms only. The Regional Water Board determined that the discharge is within estuarine waters, thus, saltwater CTR criteria are applicable. In addition, the SIP establishes implementation provisions for priority pollutant criteria and objectives. The effluent limitations for the constituents in Table F-4 were re-evaluated using the SIP procedures and CTR aquatic criteria for saltwater or human health for consumption of organisms only, whichever is more stringent. These criteria are used to prescribe the effluent limitations in this Order to protect the beneficial uses of Dominguez Channel, within the Estuary, a water of the United States.

Table F-5 summarizes the applicable water quality criteria/objective for priority pollutants that are limited in Order No. R4-2006-0005.

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

| CTR No. | Constituent | Selected Criteria | CTR/NTR Water Quality Criteria | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Freshwater | | Saltwater | | Human Health for Consumption of: | |
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms only |
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| 2 | Arsenic | 36 | N/A[1] | | 69 | 36 | N/A[1] | -- |

| CTR No. | Constituent | Selected Criteria | CTR/NTR Water Quality Criteria | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Freshwater | | Saltwater | | Human Health for Consumption of: | |
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms only |
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| 4 | Cadmium | 9.4 | | | 42 | 9.4 | | Narrative |
| 5b | Chromium (VI) | 50 | | | 1,108 | 50 | | -- |
| 6 | Copper | 3.7 | | | 5.8 | 3.7 | | -- |
| 7 | Lead | 8.5 | | | 220 | 8.5 | | Narrative |
| 8 | Mercury | 0.051 | | | -- | -- | | 0.051 |
| 9 | Nickel | 8.3 | | | 75 | 8.3 | | 4,600 |
| 10 | Selenium | 71 | | | 291 | 71 | | Narrative |
| 11 | Silver | 2.2 | | | 2.2 | -- | | -- |
| 13 | Zinc | 86 | | | 95 | 86 | | -- |
| 14 | Cyanide | 1.0 | | | 1.0 | 1.0 | | 220,000 |
| 19 | Benzene | 71 | | | | | | 71 |
| 21 | Carbon Tetrachloride | 4.4 | | | -- | -- | | 4.4 |
| 26 | Chloroform | No Criteria | | | -- | -- | | -- |
| 28 | 1,1-Dichloroethane | No Criteria | | | -- | -- | | -- |
| 29 | 1,2-Dichloroethane | 99 | | | -- | -- | | 99 |
| 30 | 1,1-dichloroethene | 3.2 | | | -- | -- | | 3.2 |
| 33 | Ethylbenzene | 29,000 | | | -- | -- | | 29,000 |
| 36 | Methylene Chloride | 1,600 | | | -- | -- | | 1,600 |
| 38 | Tetrachloro-ethylene | 8.9 | | | -- | -- | | 8.9 |
| 39 | Toluene | 200,000 | | | -- | -- | | 200,000 |
| 43 | Trichloroethylene | 81 | | | -- | -- | | 81 |
| 44 | Vinyl Chloride | 525 | | | -- | -- | | 525 |
| 54 | Phenol | 4,600,000 | | | -- | -- | | 4,600,000 |
| 75 | 1,2-Dichlorobenzene | 17,000 | | | | | | 17,000 |
| 77 | 1,4-Dichlorobenzene | 2,600 | | | | | | 2,600 |

[1] "N/A" indicates the receiving water body is not characterized as freshwater, nor are the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

## 3. Determining the Need for WQBELs

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

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

1) Trigger 1 – If the MEC ≥ C, a limit is needed.

2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

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

There were no discharges during the previous permit term, thus, there was insufficient data available to conduct a complete RPA. However, Trigger 3 is determined to be applicable for the pollutants identified in Table F-4. Process waters are included in the waste stream and the discharge has the potential to cause or contribute to an exceedance of the applicable water quality criteria to protect the beneficial uses of the receiving water.

### 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 of the WLA established as part of a TMDL.

**ii.** Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

**iii.** Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

**b.** The effluent limitations in the existing permit (Order No. R4-2006-0005) included MDELs only for copper, nickel, silver, zinc, set equal to acute, saltwater criteria and for benzene, set equal to the human health criterion. Because process waters are included in the waste stream and the discharge has the potential to cause or contribute to an exceedance of water quality objectives associated with the receiving water, AMELs and MDELs were calculated following the procedure based on the steady-state model, in Section 1.4 of the SIP. The results are provided in Attachment J.

**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 being allowed. However, in accordance with the reopener provision in section VI.C.1.e in the Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

**d.** WQBELs Calculation Example

Using nickel as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment J summarize the development and calculation of all WQBELs for this Order using the process described below.

The process for developing these limits is in accordance with Section 1.4 of the SIP. Two sets of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL. Attachment J summarizes the development and calculation of all WQBELs for this Order using the process 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 criterion, determine the effluent concentration allowance (ECA) using the following steady state mass balance equation:

$ECA = C + D(C-B)$ when $C > B$, and
$ECA = C$ when $C \leq B$,

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

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

$ECA = C$

For nickel the applicable ECAs are (reference Table F-5)

$ECA_{acute}$ = 75 µg/L

$ECA_{chronic}$= 8.3 µg/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 non-detect, the CV shall be set equal to 0.6. For nickel, the calculated CV of 0.6 was assumed.

For nickel, the following data were used to develop the acute and 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):

| CV | ECA Multiplier$_{acute}$ | ECA Multiplier$_{chronic}$ |
|---|---|---|
| 0.6 | 0.32 | 0.53 |

$LTA_{acute}$ = 75 µg/L x 0.32 = 24 µg/L

$LTA_{chronic}$ = 8.3 µg/L x 0.53 = 4.4 µg/L

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

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

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

$LTA_{nickel}$= $LTA_{chronic}$ = 4.4 µg/L

**Step 4:** Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

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

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

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

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

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

Nickel

AMEL = 4.4 µg/L x 1.55 = 6.8 µg/L

MDEL= 4.4 µg/L x 3.11 = 13.6 µg/L

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

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

For nickel,

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

**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.

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

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

| No. of Samples Per Month | CV | $Multiplier_{MDEL\ 99}$ | $Multiplier_{AMEL\ 95}$ | Ratio |
|---|---|---|---|---|
| 4 | 0.6 | 3.11 | 1.55 | 2.0 |

For nickel:

$MDEL_{human\ health}$= 4,600 µg/L x 2 = 9,200 µg/L

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

| $AMEL_{aquatic\ life}$ | $MDEL_{aquatic\ life}$ | $AMEL_{human\ health}$ | $MDEL_{human\ health}$ |
|---|---|---|---|
| 6.8 | 14 | 4,600 | 9,200 |

For nickel and cyanide, the lowest (most restrictive) effluent limits are based on aquatic toxicity and are incorporated in this Order.

There are no human health criteria for arsenic, cadmium, chromium VI, copper, lead, selenium, silver, and zinc. Therefore, the calculated effluent limitations are based on aquatic toxicity except for chromium VI which is based on ELGs. There are no aquatic life criteria for mercury, carbon tetrachloride, benzene, 1,1-dichloroethene, 1,2-dichloroethane, tetrachloroethylene, toluene, trichloroethylene. Therefore, the calculated effluent limitations are based on human health criteria. These limitations are expected to be protective of beneficial uses. No CTR criteria exist to calculate limitations for chloroform, 1,1-dichloroethane, or xylenes. This Order does not include limitations for these parameters. However, monitoring requirements for these pollutants are included in the Order.

### 5. WQBELS based on Basin Plan Objectives

The Basin Plan Objectives applicable to the Discharger are identified in Table F-6. These objectives were evaluated with respect to effluent monitoring data and Facility operations.

**Table F-6. Applicable Basin Plan Numeric Water Quality Objectives**

| Constituent | Units | Water Quality Objectives |
|---|---|---|
| pH | s.u. | The pH of bays and estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge. |
| Ammonia | mg un-ionized $NH_3$/L | *For Waters where Salinity is equal to or greater than 10 parts per thousand (ppt) more than 95% of the time:*<br>4-day average = 0.035 un-ionized $NH_3$/L<br>1-hour average = 0.233 un-ionized $NH_3$/L |
| Bacteria | MPN/100ml | *Marine Waters Designated for Water Contact Recreation (REC-1)*<br><u>Geometric Means Limits</u><br>i. Total coliform density shall not exceed 1,000/100 ml.<br>ii. Fecal coliform density shall not exceed 200/100 ml.<br>iii. Enterococcus density shall not exceed 35/100 ml.<br><u>Single Sample Limits</u><br>i. Total coliform density shall not exceed 10,000/100 ml.<br>ii. Fecal coliform density shall not exceed 400/100 ml.<br>iii. Enterococcus density shall not exceed 104/100 ml.<br>iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1. |
| Total Residual Chlorine | mg/L | 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. |

| Constituent | Units | Water Quality Objectives |
|---|---|---|
| Dissolved Oxygen | mg/L | For all waters, the mean annual dissolved oxygen concentration shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations. |
| Turbidity | NTU | Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%. |

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

**b. Bacteria**. The Discharger does not engage in activities that are likely to contribute bacteria to the effluent. In lieu of effluent limitations, this Order establishes new effluent monitoring requirements for bacteria as specified in the Monitoring and Reporting Program (MRP) to determine reasonable potential.

**c. Total Residual Chlorine**. the Discharger treats sulfides in the secondary settling basin by adding bleach. The effluent limitation for total residual chlorine from Order No. R4-2006-0005, which is equal to the Basin Plan Objective, is carried over to this Order.

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

**e. Turbidity**. The Basin Plan requirements for turbidity are as follows:

**i.** Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.

**ii.** 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.

**f. Temperature.** The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements of 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*, a maximum effluent temperature limitation of 86°F is included in the permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. This Order includes temperature limitation of 86°F.

**g. Ammonia**. No effluent or receiving water data were available to evaluate the discharge with respect to ammonia concentrations. This Order carries over monitoring requirements for ammonia.

## 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 by aquatic organisms. Detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. This Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Because the discharge is of short duration and infrequent in nature, no chronic toxicity limitations or monitoring requirements are included in this Order. The Order establishes an acute toxicity threshold, that when exceeded requires the Discharger to conduct accelerated toxicity testing and/or conduct toxicity reduction evaluation (TRE) and toxicity identification evaluation (TIE) studies. This Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

## 7. Final WQBELs

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

| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| pH | s.u. | -- | -- | 6.5 | 8.5 |
| Acute Toxicity | % Survival | [1] | | | |
| Temperature | °F | -- | -- | -- | 86 |

| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Total Residual Chlorine | mg/L | -- | 0.1 | -- | -- |
| | lbs/day[2] | -- | 0.5 | -- | -- |
| Arsenic, Total Recoverable | µg/L | 29.5 | 59 | -- | -- |
| | lbs/day[2] | 0.16 | 0.32 | -- | -- |
| Cadmium, Total Recoverable | µg/L | 7.7 | 15.4 | -- | -- |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- |
| Copper, Total Recoverable | µg/L | 2.9 | 5.8 | -- | -- |
| | lbs/day[2] | 0.02 | 0.03 | -- | -- |
| Lead, Total Recoverable | µg/L | 7 | 14 | -- | -- |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- |
| Mercury, Total Recoverable | µg/L | 0.05 | 0.10 | -- | -- |
| | lbs/day[2] | 0.0003 | 0.0005 | -- | -- |
| Nickel, Total Recoverable | µg/L | 6.8 | 13.6 | -- | -- |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- |
| Selenium, Total Recoverable | µg/L | 58 | 117 | -- | -- |
| | lbs/day[2] | 0.31 | 0.63 | -- | -- |
| Silver, Total Recoverable | µg/L | 1.1 | 2.2 | -- | -- |
| | lbs/day[2] | 0.006 | 0.012 | -- | -- |
| Zinc, Total Recoverable | µg/L | 47 | 95 | -- | -- |
| | lbs/day[2] | 0.25 | 0.51 | -- | -- |
| Cyanide Total (as CN) | µg/L | 0.50 | 1 | -- | -- |
| | lbs/day[2] | 0.003 | 0.005 | -- | -- |
| Benzene, Total Recoverable | µg/L | 71 | 142 | -- | -- |
| | lbs/day[2] | 0.38 | 0.77 | -- | -- |
| Carbon Tetrachloride | µg/L | 4.4 | 8.8 | -- | -- |
| | lbs/day[2] | 0.02 | 0.05 | -- | -- |
| 1,2-Dichloroethane | µg/L | 99 | 199 | -- | -- |
| | lbs/day[2] | 0.54 | 1.1 | -- | -- |
| 1,1-Dichloroethene | µg/L | 3.2 | 6.4 | -- | -- |
| | lbs/day[2] | 0.02 | 0.03 | -- | -- |
| Tetrachloroethylene | µg/L | 8.9 | 17.8 | -- | -- |
| | lbs/day[2] | 0.05 | 0.10 | -- | -- |
| Trichloroethylene | µg/L | 81 | 162 | -- | -- |
| | lbs/day[2] | 0.44 | 0.88 | -- | -- |

[1] The acute toxicity of the effluent shall be such that:

i. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay test shall be at least 90%, and

ii. No single test shall produce less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP (Attachment E).

[2] Based on a maximum flow of 0.65 MGD and is calculated as follows:
Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

## D. Final Effluent Limitations

Section 402(o) of the CWA and Part 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders based on the submitted sampling data. Most effluent limitations are being carried over from the previous Order No. R4-2006-0005. Removal of these numeric limitations would constitute backsliding under CWA section 402(o). New WQBELs were calculated for arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, zinc, cyanide, benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethene, tetrachloroethylene, and trichloroethylene, based on the CTR criteria and SIP procedures.

Effluent limitations for chloroform, 1,1-dichloroethane, ethylbenzene, methylene chloride, vinyl chloride, 1,2-dichlorobenzene, and 1,4-dichlorobenzene have been removed in this Order. The CTR criteria and SIP procedures were utilized to determine that no reasonable potential exists to exceed the applicable water quality criteria. The removal of the effluent limitations for these pollutants is consistent with the anti-backsliding requirements of sections 402(o)(2) and 303(d)(4) of the CWA, and 40 CFR part 122.44(l) of the federal regulations.

The calculated MDELs and AMELs for lead, mercury, nickel, and cyanide, in this Order, are more stringent than limitations in Order No. R4-2006-0005. The effluent limitations that are less stringent are consistent with the exceptions to anti-backsliding regulations, as discussed below.

This Order includes new effluent limitations for total chromium based on ELG as discussed in Fact Sheet, Section IV.B.2.a.

### 1. Satisfaction of Anti-Backsliding Requirements

Effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with some exceptions. As discussed below this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Order No. R4-2006-0005 established effluent limitations for pollutants listed in Table F-4, (Fact Sheet, Section IV.C.2) based on MCLs. As discussed in Fact Sheet, Section IV.C.2, it was determined that the effluent limitations based on MCLs are not applicable to the Facility's discharge to Dominguez Channel, within the Estuary. In addition, effluent limitations for copper, nickel, silver, zinc, and benzene were based on acute aquatic life criteria, without consideration of chronic criteria. The CTR contained water quality criteria for priority pollutants and are applicable to

the Dominguez Channel, within the Estuary. Further, the SIP establishes implementation provisions for priority pollutant criteria and objectives.

The effluent limitations included in this Order were established using SIP procedures and CTR criteria applicable for the beneficial uses of the receiving water, resulting in some effluent limitations that are less stringent than in the previous Order. The effluent limitations for arsenic, cadmium, copper, silver, zinc, benzene, and 1,2-dichloroethane included MDELs that are less stringent than the MDELs in the previous Order No. R4-2006-0005. However, the AMELs of these pollutants were more stringent than the MDELs included in Order No. R4-2006-0005. The effluent limitations for both MDELs and AMELs for selenium, carbon tetrachloride, 1,2-dichloroethane, tetrachloroethylene, and trichloroethylene are less stringent than the MDELs included in Order No. R4-2006-0005. In addition, the effluent limitations for ethylbenzene, methylene chloride, vinyl chloride, 1,2-dichlorobenzene, and 1,4-dichlorobenzene were removed because these constituents did not show reasonable potential to exceed the CTR water quality criteria. This Order requires continued monitoring for these pollutants.

Anti-backsliding provisions in 40 CFR 122.44(l)(2)(i)(B)(2), allow for relaxation of effluent limitations when a technical mistake was made in establishing the original limitations. Order No. R4-2006-0005 included effluent limitations based on mistaken application of criteria, therefore, the new effluent limitations in this Order are consistent with anti-backsliding provisions. Furthermore, the removal of effluent limitations for some pollutants is consistent with the anti-backsliding provisions in 40 CFR 122.44(l)(2)(i)(B)(1) and requirements of the CWA, based on the consideration of new information (i.e., RPA).

**2. Satisfaction of Antidegradation Policy**

Section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

The final limitations in this Order meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or water quality degradation. This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. Further, compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Therefore, the issuance of this permit is consistent with the state's antidegradation policy.

### 3. 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, COD, oil and grease, TSS, phenolic compounds, settleable solids, sulfides, TPH, turbidity, total chromium, xylenes, chromium (VI), phenol, and toluene 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. These limitations are not more stringent than required by the CWA.

This Order includes WQBELs for pH, temperature, total residual chlorine, acute toxicity, arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, zinc, cyanide, benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethene, tetrachloroethylene, and trichloroethylene at Discharge Point No. 001. WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. The remaining water quality objectives and beneficial uses implemented by this Order (specifically bacteria and ammonia) were approved by USEPA on September 25, 2002, and May 19, 2005, respectively. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**Table F-9. Summary of Final Effluent Limitations for Discharge Point No. 001**

| Parameter | Units | Effluent Limitations | | | | Basis[1] |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| ***Conventional Pollutants*** | | | | | | |
| pH | s.u. | -- | -- | 6.5 | 8.5 | E, BP |
| BOD | mg/L | 26 | 48 | -- | -- | E, ELG |
| | lbs/day[2] | 143 | 260 | -- | -- | |
| Oil and Grease | mg/L | -- | 15 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 81[3] | -- | -- | |
| TSS | mg/L | 22 | 34 | -- | -- | E, ELG |
| | lbs/day[2] | 117 | 182 | -- | -- | |
| ***Non-conventional Pollutants*** | | | | | | |
| Acute Toxicity | % Survival | [4] | | | | E, BP |
| Chemical Oxygen Demand (COD) | mg/L | 180 | 360 | -- | -- | E, ELG |
| | lbs/day[2] | 975 | 1,950 | -- | -- | |

| Parameter | Units | Effluent Limitations | | | | Basis[1] |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| Chromium, Total | µg/L | 216 | 600 | -- | -- | E, ELG |
| | lbs/day[2] | 1.2 | 3.3 | -- | -- | |
| Total Residual Chlorine | mg/L | -- | 0.1 | -- | -- | E, BP |
| | lbs/day[2] | -- | 0.5 | -- | -- | |
| Phenolic Compounds | mg/L | 0.17 | 0.35 | -- | -- | E, ELG |
| | lbs/day[2] | 0.91 | 1.9 | -- | -- | |
| Settleable Solids | ml/L | -- | 0.3 | -- | -- | E, BPJ |
| Sulfides | mg/L | -- | 0.1 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 0.5 | -- | -- | |
| Temperature | °F | -- | -- | -- | 86 | E, TP |
| TPH[5] | µg/L | -- | 100 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 0.54 | -- | -- | |
| Turbidity | NTU | -- | 75 | -- | -- | E, BPJ |
| Xylenes | µg/L | -- | 10 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 0.05 | -- | -- | |
| ***Priority Pollutants*** | | | | | | |
| Arsenic, Total Recoverable | µg/L | 29.5 | 59 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.16 | 0.32 | -- | -- | |
| Cadmium, Total Recoverable | µg/L | 7.7 | 15.4 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- | |
| Chromium (VI), Total Recoverable | µg/L | 30 | 60 | -- | -- | E, ELG |
| | lbs/day[2] | 0.15 | 0.34 | -- | -- | |
| Copper, Total Recoverable | µg/L | 2.9 | 5.8 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.02 | 0.03 | -- | -- | |
| Lead, Total Recoverable | µg/L | 7.0 | 14 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- | |
| Mercury, Total Recoverable | µg/L | 0.05 | 0.10 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.0003 | 0.0005 | -- | -- | |
| Nickel, Total Recoverable | µg/L | 6.8 | 13.6 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.04 | 0.08 | -- | -- | |
| Selenium, Total Recoverable | µg/L | 58 | 117 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.31 | 0.63 | -- | -- | |
| Silver, Total Recoverable | µg/L | 1.1 | 2.2 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.006 | 0.012 | -- | -- | |

| Parameter | Units | Effluent Limitations | | | | Basis[1] |
|---|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| Zinc, Total Recoverable | µg/L | 47 | 95 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.25 | 0.51 | -- | -- | |
| Cyanide, Total (as CN) | µg/L | 0.5 | 1.0 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.003 | 0.005 | -- | -- | |
| Benzene | µg/L | 71 | 142 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.38 | 0.77 | -- | -- | |
| Carbon Tetrachloride | µg/L | 4.4 | 8.8 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.024 | 0.048 | -- | -- | |
| 1,2-Dichloroethane | µg/L | 99 | 199 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.54 | 1.1 | -- | -- | |
| 1,1-Dichloroethene | µg/L | 3.2 | 6.4 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.02 | 0.03 | -- | -- | |
| Phenol | mg/L | -- | 1.0 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 5.4 | -- | -- | |
| Tetrachloro-ethylene | µg/L | 8.9 | 18 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.05 | 0.10 | -- | -- | |
| Toluene | µg/L | -- | 10 | -- | -- | E, BPJ |
| | lbs/day[2] | -- | 0.05 | -- | -- | |
| Trichloroethylene | µg/L | 81 | 162 | -- | -- | CTR/SIP |
| | lbs/day[2] | 0.44 | 0.88 | -- | -- | |

[1] BP = Basin Plan; TP = Thermal Plan; E = Existing Order No. R4-2006-0005; CTR = California Toxic Rule; SIP = State Implementation Policy, and BPJ = Best Professional Judgment.

BPJ = Best Professional Judgment is the method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data. BPJ limitations are established in cases in which effluent limitation guidelines are not available for a particular pollutant of concern. Authorization for using BPJ limitations is found under section 401(a)(1) of the Clean Water Act and under 40 CFR section 125.3.

[2] Based on a maximum flow of 0.65 MGD and is calculated as follows:

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

[3] The mass limitation in Order No. R4-2006-0005 appears to be a typographical error. The mass limit for this Order is consistent with the mass limitation in the Fact Sheet of Order No. R4-2006-0005.

[4] The acute toxicity of the effluent shall be such that:

i. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay test shall be at least 90%, and

ii. No single test shall produce less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP (Attachment E).

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

#### 4. Mass-based Effluent Limitations

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)

### E. Interim Effluent Limitations

Not Applicable

### F. Land Discharge Specifications

Not Applicable

### G. Reclamation 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 (part 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 and are based on the water quality objectives contained in the Basin Plan.

### B. Groundwater

Not Applicable

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code Sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The MRP, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

## A. Influent Monitoring

Not Applicable

## B. Effluent Monitoring

Monitoring for pollutants expected to be present in the discharge will be required as established in the tentative MRP (Attachment E) and as required in the SIP. To demonstrate compliance with established effluent limitations, the Order carries over the monitoring requirements from Order No. R4-2006-0005, with some exceptions. Since the discharge is infrequent, collection of more samples over the duration of a discharge is needed to adequately characterize the effluent quality. This Order changes the maximum frequency during extended discharge from once per month to once per week for most of the pollutants in order to collect additional samples for effluent characterization. The monitoring frequency for the radioactive pollutants and acute toxicity remains the same.

Monitoring for once per discharge event for fecal coliform and enterococcus has been included based on the Basin Plan objectives for marine environments.

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

## C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. 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 limitations for acute toxicity and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, section IV.A.

Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The discharges from the Facility are short and infrequent in nature; therefore, chronic toxicity testing will not be required.

### 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 Discharger is required to conduct upstream receiving water monitoring for the CTR priority pollutants, and TCDD equivalents at Monitoring Location RSW-001. Additionally, the Discharger must analyze pH of the upstream receiving water at the same time as the samples are collected for priority pollutants analysis. This Order includes new monitoring requirements for ammonia and dissolved oxygen to determine compliance with receiving water limitations and Basin Plan objectives.

#### 2. Groundwater

Not Applicable

### E. Other Monitoring Requirements

Not Applicable

## VII. RATIONALE FOR PROVISIONS

### A. Standard Provisions

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

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

### B. Special Provisions

#### 1. Reopener Provisions

These provisions are based on part 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations,

modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

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

**a. Initial Investigation Toxicity Reduction Evaluation Workplan.** This provision is based on section 4 of the SIP, Toxicity Control Provisions.

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

**a. Storm Water Pollution Prevention Plan (SWPPP).** The previous Order required the Discharger to develop and implement a SWPPP. This Order will require the Discharger to update and continue to implement a SWPPP. The revised SWPPP will reflect current operations, treatment activities, and staff responsible for implementing and supporting the SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water contamination and for preventing contaminated storm water from being discharged directly into surface waters. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. The SWPPP must be consistent with requirements in Attachment G. SWPPP requirements are included as Attachment G, based on 40 CFR Part 122.44(k).

**b. Best Management Practices Plan (BMPP).** The previous Order required the Discharger to develop and implement a BMPP in order to reduce the amount of pollutants entering the discharge. This Order requires the Discharger to update and continue to implement the BMPP, consistent with Order No. R4-2006-0005. The BMPP may be included as a component of the SWPPP. The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment, to ensure that unauthorized non-storm water discharges (i.e. spills) do not occur at the Facility. The BMPP must include all discharges of process waters commingled with storm water, as permitted by this Order. Specifically, the BMPP shall address minimizing cooling tower blowdown and miscellaneous wash waters during periods of discharge and where possible, include estimates of volume reduction that can be achieved. In addition, the BMPP shall address specific areas that are considered sources of pollutants and shall include measures to minimize pollutants entering the discharge. The BMPP shall be consistent with requirements provided in Attachment G.

**c. Spill Prevention Control and Countermeasures Plan.** As specified in 40 CFR part 112, the owner or operator of an aboveground storage tank which stores more than 1,320 gallons of oil is required to submit an SPCC plan, with some exceptions. This Order requires the Discharger to implement an SPCC Plan for the Facility to protect the receiving water in the event of an oil spill. The Discharger shall review and update, if necessary, the SPCC after each incident and make it available for the facility personnel at all times.

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

This provision is based on the requirements of 40 CFR part 122.41(e) and the previous Order.

### 5. Special Provisions for Municipal Facilities (POTWs Only)

Not Applicable

### 6. Other Special Provisions

Not Applicable

### 7. Compliance Schedules

Not Applicable

## VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a NPDES permit for Tesoro Refining and Marketing Company, Tesoro Sulfur Recovery Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

### A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

### B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on October 28, 2011.

## C. Public Hearing

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

Date: December 8, 2011
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is **http://www.waterboards.ca.gov/losangeles** where you can access the current agenda for changes in dates and locations.

## D. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of Title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with Section 11500 of the Government Code) will not apply to this proceeding.

*Ex Parte Communications Prohibited:* As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Water Board must be directed to staff.

## E. Parties to the Hearing

The following are the parties to this proceeding:

**1.** The applicant/permittee

Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

## F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the

Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business on October 28, 2011. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

## G. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 3 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of 15 business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

## H. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, 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. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

The State Water Board's mailing address is the following:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 110, 1101 I Street
Sacramento, CA 95812-0110

## I. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information 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 Regional Water Board by calling (213) 576 – 6600.

## J. 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.

## K. Additional Information

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

# 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 6-months from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

## II. Objectives

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

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

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

## III. Planning and Organization

### A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the 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 General permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

## IV. Site Map

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

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

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

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

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

| **IMPLEMENTATION PHASE** |
| --- |
| Train employees<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 |

The following information shall be included on the site map:

**A.** The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

**B.** The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

**C.** An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

**D.** Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. 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 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 A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that 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 non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

   The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to 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 non-storm water discharges and associated drainage area.

   Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D of the storm water general permit are prohibited by this Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D of the general storm water permit are authorized by this Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials 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.

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

## VII. Assessment of Potential Pollutant Sources

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

1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

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

**B.** Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

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

## VIII. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

### TABLE B

### EXAMPLE
### ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES
### SUMMARY

| Area | Activity | Pollutant Source | Pollutant | Best Management Practices |
|---|---|---|---|---|
| Vehicle & Equipment Fueling | Fueling | Spills and leaks during delivery.<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><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 A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions,

visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

**B. Structural BMPs.**

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

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

2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

## IX. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the

revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. **A review of all visual observation records, inspection records, and sampling and analysis results.**

**B.** A visual inspection of all 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 A.10.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 General 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.D.5 of Attachment D.

## X. SWPPP General Requirements

A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

**B.** The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

**C.** The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

**D.** The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.

**E.** When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

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

## ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

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

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

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

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

| Table 2b - SEMI-VOLATILE SUBSTANCES* | GC | GCMS | LC | COLOR |
|---|---|---|---|---|
| N-Nitroso-dimethyl amine | 10 | 5 | | |
| N-Nitroso -di n-propyl amine | 10 | 5 | | |
| Naphthalene | 10 | 1 | 0.2 | |
| Nitrobenzene | 10 | 1 | | |
| Pentachlorophenol | 1 | 5 | | |
| Phenanthrene | | 5 | 0.05 | |
| Phenol ** | 1 | 1 | | 50 |
| Pyrene | | 10 | 0.05 | |

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

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

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

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

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

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

**Techniques:**

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

## ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

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

| CTR Number | Parameter | CAS Number | Suggested Analytical Methods |
|---|---|---|---|
| 43 | Trichloroethylene | 79016 | [1] |
| 44 | Vinyl Chloride | 75014 | [1] |
| 45 | 2-Chlorophenol | 95578 | [1] |
| 46 | 2,4-Dichlorophenol | 120832 | [1] |
| 47 | 2,4-Dimethylphenol | 115679 | [1] |
| 48 | 2-Methyl-4,6-Dinitrophenol | 534521 | [1] |
| 49 | 2,4-Dinitrophenol | 51285 | [1] |
| 50 | 2-Nitrophenol | 88755 | [1] |
| 51 | 4-Nitrophenol | 110027 | [1] |
| 52 | 3-Methyl-4-Chlorophenol | 59507 | [1] |
| 53 | Pentachlorophenol | 87865 | [1] |
| 54 | Phenol | 118952 | [1] |
| 55 | 2,4,6-Trichlorophenol | 88062 | [1] |
| 56 | Acenaphthene | 83329 | [1] |
| 57 | Acenaphthylene | 208968 | [1] |
| 58 | Anthracene | 120127 | [1] |
| 59 | Benzidine | 92875 | [1] |
| 60 | Benzo(a)Anthracene | 56553 | [1] |
| 61 | Benzo(a)Pyrene | 50328 | [1] |
| 62 | Benzo(b)Fluoranthene | 205992 | [1] |
| 63 | Benzo(ghi)Perylene | 191242 | [1] |
| 64 | Benzo(k)Fluoranthene | 207089 | [1] |
| 65 | Bis(2-Chloroethoxy)Methane | 111911 | [1] |
| 66 | Bis(2-Chloroethyl)Ether | 111444 | [1] |
| 67 | Bis(2-Chloroisopropyl)Ether | 118601 | [1] |
| 68 | Bis(2-Ethylhexyl)Phthalate | 117817 | [1] |
| 69 | 4-Bromophenyl Phenyl Ether | 111553 | [1] |
| 70 | Butylbenzyl Phthalate | 85687 | [1] |
| 71 | 2-Chloronaphthalene | 91587 | [1] |
| 72 | 4-Chlorophenyl Phenyl Ether | 7005723 | [1] |
| 73 | Chrysene | 218019 | [1] |
| 74 | Dibenzo(a,h)Anthracene | 53703 | [1] |
| 75 | 1,2-Dichlorobenzene | 95501 | [1] |
| 76 | 1,3-Dichlorobenzene | 541731 | [1] |
| 77 | 1,4-Dichlorobenzene | 116467 | [1] |
| 78 | 3,3'-Dichlorobenzidine | 91941 | [1] |
| 79 | Diethyl Phthalate | 84662 | [1] |
| 80 | Dimethyl Phthalate | 131113 | [1] |
| 81 | Di-n-Butyl Phthalate | 84742 | [1] |
| 82 | 2,4-Dinitrotoluene | 121142 | [1] |
| 83 | 2,6-Dinitrotoluene | 606202 | [1] |
| 84 | Di-n-Octyl Phthalate | 117840 | [1] |
| 85 | 1,2-Diphenylhydrazine | 122667 | [1] |
| 86 | Fluoranthene | 206440 | [1] |
| 87 | Fluorene | 86737 | [1] |
| 88 | Hexachlorobenzene | 118741 | [1] |

| CTR Number | Parameter | CAS Number | Suggested Analytical Methods |
|---|---|---|---|
| 89 | Hexachlorobutadiene | 87863 | [1] |
| 90 | Hexachlorocyclopentadiene | 77474 | [1] |
| 91 | Hexachloroethane | 67721 | [1] |
| 92 | Indeno(1,2,3-cd)Pyrene | 193395 | [1] |
| 93 | Isophorone | 78591 | [1] |
| 94 | Naphthalene | 91203 | [1] |
| 95 | Nitrobenzene | 98953 | [1] |
| 96 | N-Nitrosodimethylamine | 62759 | [1] |
| 97 | N-Nitrosodi-n-Propylamine | 621647 | [1] |
| 98 | N-Nitrosodiphenylamine | 86306 | [1] |
| 99 | Phenanthrene | 85018 | [1] |
| 110 | Pyrene | 129000 | [1] |
| 111 | 1,2,4-Trichlorobenzene | 120821 | [1] |
| 112 | Aldrin | 309002 | [1] |
| 113 | alpha-BHC | 319846 | [1] |
| 114 | beta-BHC | 319857 | [1] |
| 115 | gamma-BHC | 58899 | [1] |
| 116 | delta-BHC | 319868 | [1] |
| 117 | Chlordane | 57749 | [1] |
| 118 | 4,4'-DDT | 50293 | [1] |
| 119 | 4,4'-DDE | 72559 | [1] |
| 111 | 4,4'-DDD | 72548 | [1] |
| 111 | Dieldrin | 60571 | [1] |
| 112 | alpha-Endosulfan | 959988 | [1] |
| 113 | beta-Endosulfan | 33213659 | [1] |
| 114 | Endosulfan Sulfate | 1131178 | [1] |
| 115 | Endrin | 72208 | [1] |
| 116 | Endrin Aldehyde | 7421934 | [1] |
| 117 | Heptachlor | 76448 | [1] |
| 118 | Heptachlor Epoxide | 1124573 | [1] |
| 119 | PCB-1116 | 12674112 | [1] |
| 120 | PCB-1221 | 11114282 | [1] |
| 121 | PCB-1232 | 11141165 | [1] |
| 122 | PCB-1242 | 53469219 | [1] |
| 123 | PCB-1248 | 12672296 | [1] |
| 124 | PCB-1254 | 11197691 | [1] |
| 125 | PCB-1260 | 11196825 | [1] |
| 126 | Toxaphene | 8001352 | [1] |

[1] Pollutants shall be analyzed using the methods described in 40 CFR Part 136

# ATTACHMENT J – RPA ANALYSIS FOR CTR CONSTITUENTS

| CTR# | Parameters | Units | CV | MEC | CTR Water Quality Criteria (ug/L) | | | | | | Lowest C | REASONABLE POTENTIAL ANALYSIS (RPA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Freshwater | | Saltwater | | Human Health for consumption of: | | | MEC >= Lowest C | Tier 1 - Need limit? | B Available (Y/N)? | data points non-detects (Y/N)? | points ND Enter the min detection limit (MDL) | Enter the pollutant B detected max conc (ug/L) | If all B is ND, is MDL>C? | If B>C, effluent limit required | Tier 3 - other info. ? | RPA Result - Need Limit? | Reason |
| | | | | | C acute = CMC tot | chronic = CCC tot | C acute = CMC tot | C chronic = CCC tot | Water & organisms | Organisms only | | | | | | | | | | | | |
| 1 | Antimony | ug/L | 0.6 | | | | | | | 4300.00 | 4300.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 2 | Arsenic | ug/L | 0.6 | | | | 69.00 | 36.00 | | | 36.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 3 | Beryllium | ug/L | 0.6 | No Criteria | | | | | | Narrative | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 4 | Cadmium | ug/L | 0.6 | | | | 42.25 | 9.36 | | Narrative | 9.36 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 5a | Chromium (III) | | 0.6 | No Criteria | | | | | | Narrative | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 5b | Chromium (VI) | ug/L | 0.6 | | | | 1107.75 | 50.35 | | Narrative | 50.35 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 6 | Copper | ug/L | 0.6 | | | | 5.78 | 3.73 | | | 3.73 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 7 | Lead | ug/L | 0.6 | | | | 220.82 | 8.52 | | Narrative | 8.52 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 8 | Mercury | ug/L | 0.6 | | | | Reserved | Reserved | | 0.051 | 0.051 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 9 | Nickel | ug/L | 0.6 | | | | 74.75 | 8.28 | | 4600.00 | 8.28 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 10 | Selenium | ug/L | 0.6 | | | | 290.58 | 71.14 | | Narrative | 71.14 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 11 | Silver | ug/L | 0.6 | | | | 2.24 | | | | 2.24 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 12 | Thallium | ug/L | 0.6 | | | | | | | 6.30 | 6.30 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 13 | Zinc | ug/L | 0.6 | | | | 95.14 | 85.62 | | | 85.62 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 14 | Cyanide | ug/L | 0.6 | | | | 1.00 | 1.00 | | 220000.00 | 1.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 15 | Asbestos | Fiber s/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 16 | 2,3,7,8 TCDD | ug/L | 0.6 | | | | | | | 0.000000014 | 0.000000014 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| | TCDD Equivalents | ug/L | 0 | | | | | | | 0.000000014 | 0.000000014 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 17 | Acrolein | ug/L | 0.6 | | | | | | | 780 | 780 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 18 | Acrylonitrile | ug/L | 0.6 | | | | | | | 0.66 | 0.660 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 19 | Benzene | ug/L | 0.6 | | | | | | | 71 | 71.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 20 | Bromoform | ug/L | 0.6 | | | | | | | 360 | 360.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 21 | Carbon Tetrachloride | ug/L | 0.6 | | | | | | | 4.4 | 4.40 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 22 | Chlorobenzene | ug/L | 0.6 | | | | | | | 21000 | 21000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 23 | Chlorodibromomethane | ug/L | 0.6 | | | | | | | 34 | 34.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 24 | Chloroethane | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 25 | 2-Chloroethylvinyl ether | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 26 | Chloroform | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 27 | Dichlorobromomethane | ug/L | 0.6 | | | | | | | 46 | 46.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 28 | 1,1-Dichloroethane | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 29 | 1,2-Dichloroethane | ug/L | 0.6 | | | | | | | 99 | 99.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 30 | 1,1-Dichloroethylene | ug/L | 0.6 | | | | | | | 3.2 | 3.200 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 31 | 1,2-Dichloropropane | ug/L | 0.6 | | | | | | | 39 | 39.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 32 | 1,3-Dichloropropylene | ug/L | 0.6 | | | | | | | 1700 | 1700 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 33 | Ethylbenzene | ug/L | 0.6 | | | | | | | 29000 | 29000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 34 | Methyl Bromide | ug/L | 0.6 | | | | | | | 4000 | 4000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 35 | Methyl Chloride | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 36 | Methylene Chloride | ug/L | 0.6 | | | | | | | 1600 | 1600.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 37 | 1,1,2,2-Tetrachloroethane | ug/L | 0.6 | | | | | | | 11 | 11.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 38 | Tetrachloroethylene | ug/L | 0.6 | | | | | | | 8.85 | 8.9 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 39 | Toluene | ug/L | 0.6 | | | | | | | 200000 | 200000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 40 | 1,2-Trans-Dichloroethylene | ug/L | 0.6 | | | | | | | 140000 | 140000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 41 | 1,1,1-Trichloroethane | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 42 | 1,1,2-Trichloroethane | ug/L | 0.6 | | | | | | | 42 | 42.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 43 | Trichloroethylene | ug/L | 0.6 | | | | | | | 81 | 81.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 44 | Vinyl Chloride | ug/L | 0.6 | | | | | | | 525 | 525 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 45 | 2-Chlorophenol | ug/L | 0.6 | | | | | | | 400 | 400 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 46 | 2,4-Dichlorophenol | ug/L | 0.6 | | | | | | | 790 | 790 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 47 | 2,4-Dimethylphenol | ug/L | 0.6 | | | | | | | 2300 | 2300 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 48 | 4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol) | ug/L | 0.6 | | | | | | | 765 | 765.0 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 49 | 2,4-Dinitrophenol | ug/L | 0.6 | | | | | | | 14000 | 14000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 50 | 2-Nitrophenol | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 51 | 4-Nitrophenol | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 52 | 3-Methyl-4-Chlorophenol (aka P-chloro-m-resol) | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 53 | Pentachlorophenol | ug/L | 0.6 | | | | 13.00 | 7.90 | | 8.2 | 7.90 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 54 | Phenol | ug/L | 0.6 | | | | | | | 4600000 | 4600000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 55 | 2,4,6-Trichlorophenol | ug/L | 0.6 | | | | | | | 6.5 | 6.5 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 56 | Acenaphthene | ug/L | 0.6 | | | | | | | 2700 | 2700 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 57 | Acenaphthylene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 58 | Anthracene | ug/L | 0.6 | | | | | | | 110000 | 110000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 59 | Benzidine | ug/L | 0.6 | | | | | | | 0.00054 | 0.00054 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 60 | Benzo(a)Anthracene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 61 | Benzo(a)Pyrene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 62 | Benzo(b)Fluoranthene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 63 | Benzo(ghi)Perylene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 64 | Benzo(k)Fluoranthene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 65 | Bis(2-Chloroethoxy)Methane | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 66 | Bis(2-Chloroethyl)Ether | ug/L | 0.6 | | | | | | | 1.4 | 1.400 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 67 | Bis(2-Chloroisopropyl)Ether | ug/L | 0.6 | | | | | | | 170000 | 170000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 68 | Bis(2-Ethylhexyl)Phthalate | ug/L | 0.6 | | | | | | | 5.9 | 5.9 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 69 | 4-Bromophenyl Phenyl Ether | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 70 | Butylbenzyl Phthalate | ug/L | 0.6 | | | | | | | 5200 | 5200 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 71 | 2-Chloronaphthalene | ug/L | 0.6 | | | | | | | 4300 | 4300 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 72 | 4-Chlorophenyl Phenyl Ether | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 73 | Chrysene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |

| CTR# | Parameters | Units | CV | MEC | CTR Water Quality Criteria (ug/L) | | | | | | Lowest C | REASONABLE POTENTIAL ANALYSIS (RPA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Freshwater | | Saltwater | | Human Health for consumption of: | | | MEC >= Lowest C | Tier 1 - Need limit? | B Available (Y/N)? | data points non-detects (Y/N)? | points ND Enter the min detection limit (MDL) | Enter the pollutant B detected max conc (ug/L) | If all B is ND, is MDL>C? | If B>C, effluent limit required | Tier 3 - other info.? | RPA Result - Need Limit? | Reason |
| | | | | | C acute = CMC tot | chronic = CCC tot | C acute = CMC tot | C chronic = CCC tot | Water & organisms | Organisms only | | | | | | | | | | | | |
| 74 | Dibenzo(a,h)Anthracene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 75 | 1,2-Dichlorobenzene | ug/L | 0.6 | | | | | | | 17000 | 17000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 76 | 1,3-Dichlorobenzene | ug/L | 0.6 | | | | | | | 2600 | 2600 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 77 | 1,4-Dichlorobenzene | ug/L | 0.6 | | | | | | | 2600 | 2600 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 78 | 3,3 Dichlorobenzidine | ug/L | 0.6 | | | | | | | 0.077 | 0.08 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 79 | Diethyl Phthalate | ug/L | 0.6 | | | | | | | 120000 | 120000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 80 | Dimethyl Phthalate | ug/L | 0.6 | | | | | | | 2900000 | 2900000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 81 | Di-n-Butyl Phthalate | ug/L | 0.6 | | | | | | | 12000 | 12000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 82 | 2,4-Dinitrotoluene | ug/L | 0.6 | | | | | | | 9.10 | 9.10 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 83 | 2,6-Dinitrotoluene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 84 | Di-n-Octyl Phthalate | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 85 | 1,2-Diphenylhydrazine | ug/L | 0.6 | | | | | | | 0.54 | 0.540 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 86 | Fluoranthene | ug/L | 0.6 | | | | | | | 370 | 370 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 87 | Fluorene | ug/L | 0.6 | | | | | | | 14000 | 14000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 88 | Hexachlorobenzene | ug/L | 0.6 | | | | | | | 0.00077 | 0.00077 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 89 | Hexachlorobutadiene | ug/L | 0.6 | | | | | | | 50 | 50.00 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 90 | Hexachlorocyclopentadiene | ug/L | 0.6 | | | | | | | 17000 | 17000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 91 | Hexachloroethane | ug/L | 0.6 | | | | | | | 8.9 | 8.9 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 92 | Indeno(1,2,3-cd)Pyrene | ug/L | 0.6 | | | | | | | 0.049 | 0.0490 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 93 | Isophorone | ug/L | 0.6 | | | | | | | 600 | 600.0 | | | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 94 | Naphthalene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 95 | Nitrobenzene | ug/L | 0.6 | | | | | | | 1900 | 1900 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 96 | N-Nitrosodimethylamine | ug/L | 0.6 | | | | | | | 8.10 | 8.10000 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 97 | N-Nitrosodi-n-Propylamine | ug/L | 0.6 | | | | | | | 1.40 | 1.400 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 98 | N-Nitrosodiphenylamine | ug/L | 0.6 | | | | | | | 16 | 16.0 | | | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 99 | Phenanthrene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 100 | Pyrene | ug/L | 0.6 | | | | | | | 11000 | 11000 | | | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 101 | 1,2,4-Trichlorobenzene | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 102 | Aldrin | ug/L | 0.6 | | | | 1.30 | | | 0.00014 | 0.00014 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 103 | alpha-BHC | ug/L | 0.6 | | | | | | | 0.013 | 0.0130 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 104 | beta-BHC | ug/L | 0.6 | | | | | | | 0.046 | 0.046 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 105 | gamma-BHC | ug/L | 0.6 | | | | 0.16 | | | 0.063 | 0.063 | | | N | | | | | No Criteria | No Criteria | Uc | No Criteria |
| 106 | delta-BHC | ug/L | 0.6 | No Criteria | | | | | | | No Criteria | No Criteria | No Criteria | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 107 | Chlordane | ug/L | 0.6 | | | | 0.09 | 0.004 | | 0.00059 | 0.00059 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 108 | 4,4'-DDT | ug/L | 0.6 | | | | 0.13 | 0.001 | | 0.00059 | 0.00059 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 109 | 4,4'-DDE (linked to DDT) | ug/L | 0.6 | | | | | | | 0.00059 | 0.00059 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 110 | 4,4'-DDD | ug/L | 0.6 | | | | | | | 0.00084 | 0.00084 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 111 | Dieldrin | ug/L | 0.6 | | | | 0.71 | 0.0019 | | 0.00014 | 0.00014 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 112 | alpha-Endosulfan | ug/L | 0.6 | | | | 0.034 | 0.0087 | | 240 | 0.0087 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 113 | beta-Endolsulfan | ug/L | 0.6 | | | | 0.034 | 0.0087 | | 240 | 0.0087 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 114 | Endosulfan Sulfate | ug/L | 0.6 | | | | | | | 240 | 240 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 115 | Endrin | ug/L | 0.6 | | | | 0.037 | 0.0023 | | 0.81 | 0.0023 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 116 | Endrin Aldehyde | ug/L | 0.6 | | | | | | | 0.81 | 0.81 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 117 | Heptachlor | ug/L | 0.6 | | | | 0.053 | 0.0036 | | 0.00021 | 0.00021 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 118 | Heptachlor Epoxide | ug/L | 0.6 | | | | 0.053 | 0.0036 | | 0.00011 | 0.00011 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 119-125 | PCBs sum (2) | ug/L | 0.6 | | | | | 0.03 | | 0.00017 | 0.00017 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |
| 126 | Toxaphene | ug/L | 0.6 | | | | 0.21 | 0.0002 | | 0.00075 | 0.0002 | | | N | | | | | No detected value of B, Step 7 | | Ud | No effluent data & no B |

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving water data

| CTR# | Parameters | HUMAN HEALTH CALCULATIONS | | | AQUATIC LIFE CALCULATIONS | | | | | | | | | LIMITS | | Recommendation | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Organisms only | | | Saltwater / Freshwater / Basin Plan | | | | | | | | | | | | |
| | | AMEL hh = ECA = C hh O only | MDEL/AMEL multiplier | MDEL hh | ECA acute multiplier (p.7) | LTA acute | ECA chronic multiplier | LTA chronic | Lowest LTA | AMEL multiplier 95% | AMEL aq life | MDEL multiplier 99% | MDEL aq life | Lowest AMEL | Lowest MDEL | | |
| | | | | | | | | | | | | | | | | No Limit | |
| 1 | Antimony | | 2.01 | | 0.32 | 22.15 | 0.53 | 18.99 | 18.99 | 1.55 | 29.48 | 3.11 | 59.1361 | 29.48 | 59.14 | | |
| 2 | Arsenic | | | | | | | | | | | | | | | No Limit | |
| 3 | Beryllium | | 2.01 | | 0.32 | 13.57 | 0.53 | 4.93 | 4.93 | 1.55 | 7.66 | 3.11 | 15.369 | 7.66 | 15.37 | | |
| 4 | Cadmium | | | | | | | | | | | | | | | No Limit | |
| 5a | Chromium (III) | | | | | | | | | | | | | | | No Limit | |
| 5b | Chromium (VI) | | 2.01 | | 0.32 | 1.86 | 0.53 | 1.97 | 1.86 | 1.55 | 2.88 | 3.11 | 5.78313 | 2.88 | 5.78 | | |
| 6 | Copper | | 2.01 | | 0.32 | 70.90 | 0.53 | 4.49 | 4.49 | 1.55 | 6.97 | 3.11 | 13.9912 | 6.97 | 13.99 | | |
| 7 | Lead | | 2.01 | | | | | | | 1.55 | | 3.11 | | 0.05 | 0.10 | | |
| 8 | Mercury | 0.051 | 2.01 | 0.10232 | | | | | | 1.55 | 6.78 | 3.11 | 13.6059 | 6.78 | 13.61 | | |
| 9 | Nickel | 4600 | 2.01 | 9228.47012 | 0.32 | 24.00 | 0.53 | 4.4 | 4.4 | 1.55 | 58.25 | 3.11 | 116.863 | 58.25 | 116.86 | | |
| 10 | Selenium | | 2.01 | | 0.32 | 93.30 | 0.53 | 37.52 | 37.52 | 1.55 | 1.11 | 3.11 | 2.23529 | 1.11 | 2.24 | | |
| 11 | Silver | | 2.01 | | 0.32 | 0.72 | 0.53 | | 0.72 | 1.55 | | 3.11 | | | | No Limit | |
| 12 | Thallium | | | | | | | | | | | | | | | | |
| 13 | Zinc | | 2.01 | | 0.32 | 30.55 | 0.53 | 45.16 | 30.55 | 1.55 | 47.42 | 3.11 | 95.1374 | 47.42 | 95.14 | | |
| 14 | Cyanide | 220000 | 2.01 | 441361.61457 | 0.32 | 0.32 | 0.53 | 0.53 | 0.32 | 1.55 | 0.50 | 3.11 | 1 | 0.50 | 1.00 | | |
| 15 | Asbestos | | | | | | | | | | | | | | | No Limit | |
| 16 | 2,3,7,8 TCDD | | | | | | | | | | | | | | | No Limit | |
| | TCDD Equivalents | | | | | | | | | | | | | | | No Limit | |
| 17 | Acrolein | | | | | | | | | | | | | | | No Limit | |
| 18 | Acrylonitrile | | | | | | | | | | | | | | | No Limit | |
| 19 | Benzene | 71 | 2.01 | 142.43943 | | | | | | 1.55 | | 3.11 | | 71.00 | 142.44 | | |
| 20 | Bromoform | | | | | | | | | | | | | | | No Limit | |
| 21 | Carbon Tetrachloride | 4.4 | 2.01 | 8.82723 | | | | | | 1.55 | | 3.11 | | 4.40 | 8.83 | | |
| 22 | Chlorobenzene | | | | | | | | | | | | | | | No Limit | |
| 23 | Chlorodibromomethane | | | | | | | | | | | | | | | No Limit | |
| 24 | Chloroethane | | | | | | | | | | | | | | | No Limit | |
| 25 | 2-Chloroethylvinyl ether | | | | | | | | | | | | | | | No Limit | |
| 26 | Chloroform | | | | | | | | | | | | | | | No Limit | |
| 27 | Dichlorobromomethane | | | | | | | | | | | | | | | No Limit | |
| 28 | 1,1-Dichloroethane | | | | | | | | | 1.55 | | 3.11 | | 99.00 | 198.61 | | |
| 29 | 1,2-Dichloroethane | 99 | 2.01 | 198.61273 | | | | | | 1.55 | | 3.11 | | 3.20 | 6.42 | | |
| 30 | 1,1-Dichloroethylene | 3.2 | 2.01 | 6.41981 | | | | | | | | | | | | No Limit | |
| 31 | 1,2-Dichloropropane | | | | | | | | | | | | | | | No Limit | |
| 32 | 1,3-Dichloropropylene | | | | | | | | | 1.55 | | 3.11 | | 29,000.00 | 58,179.49 | | |
| 33 | Ethylbenzene | 29000 | 2.01 | 58179.48556 | | | | | | | | | | | | No Limit | |
| 34 | Methyl Bromide | | | | | | | | | | | | | | | No Limit | |
| 35 | Methyl Chloride | | | | | | | | | 1.55 | | 3.11 | | 1,600.00 | 3,209.90 | | |
| 36 | Methylene Chloride | 1600 | 2.01 | 3209.90265 | | | | | | | | | | | | No Limit | |
| 37 | 1,1,2,2-Tetrachloroethane | | | | | | | | | 1.55 | | 3.11 | | 8.85 | 17.75 | | |
| 38 | Tetrachloroethylene | 8.85 | 2.01 | 17.75477 | | | | | | 1.55 | | 3.11 | | 200,000.00 | 401,237.83 | | |
| 39 | Toluene | 200000 | 2.01 | 401237.83143 | | | | | | | | | | | | No Limit | |
| 40 | 1,2-Trans-Dichloroethylene | | | | | | | | | | | | | | | No Limit | |
| 41 | 1,1,1-Trichloroethane | | | | | | | | | | | | | | | No Limit | |
| 42 | 1,1,2-Trichloroethane | | | | | | | | | 1.55 | | 3.11 | | 81.00 | 162.50 | | |
| 43 | Trichloroethylene | 81 | 2.01 | 162.50132 | | | | | | 1.55 | | 3.11 | | 525.00 | 1,053.25 | | |
| 44 | Vinyl Chloride | 525 | 2.01 | 1053.24931 | | | | | | | | | | | | No Limit | |
| 45 | 2-Chlorophenol | | | | | | | | | | | | | | | No Limit | |
| 46 | 2,4-Dichlorophenol | | | | | | | | | | | | | | | No Limit | |
| 47 | 2,4-Dimethylphenol | | | | | | | | | | | | | | | No Limit | |
| 48 | 4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol) | | | | | | | | | | | | | | | No Limit | |
| 49 | 2,4-Dinitrophenol | | | | | | | | | | | | | | | No Limit | |
| 50 | 2-Nitrophenol | | | | | | | | | | | | | | | No Limit | |
| 51 | 4-Nitrophenol | | | | | | | | | | | | | | | No Limit | |
| 52 | 3-Methyl-4-Chlorophenol (aka P-chloro-m-resol) | | | | | | | | | | | | | | | No Limit | |
| 53 | Pentachlorophenol | | | | | | | | | | | | | | | No Limit | |
| 54 | Phenol | | | | | | | | | | | | | | | No Limit | |
| 55 | 2,4,6-Trichlorophenol | | | | | | | | | | | | | | | No Limit | |
| 56 | Acenaphthene | | | | | | | | | | | | | | | No Limit | |
| 57 | Acenaphthylene | | | | | | | | | | | | | | | No Limit | |
| 58 | Anthracene | | | | | | | | | | | | | | | No Limit | |
| 59 | Benzidine | | | | | | | | | | | | | | | No Limit | |
| 60 | Benzo(a)Anthracene | | | | | | | | | | | | | | | No Limit | |
| 61 | Benzo(a)Pyrene | | | | | | | | | | | | | | | No Limit | |
| 62 | Benzo(b)Fluoranthene | | | | | | | | | | | | | | | No Limit | |
| 63 | Benzo(ghi)Perylene | | | | | | | | | | | | | | | No Limit | |
| 64 | Benzo(k)Fluoranthene | | | | | | | | | | | | | | | No Limit | |
| 65 | Bis(2-Chloroethoxy)Methane | | | | | | | | | | | | | | | No Limit | |
| 66 | Bis(2-Chloroethyl)Ether | | | | | | | | | | | | | | | No Limit | |
| 67 | Bis(2-Chloroisopropyl)Ether | | | | | | | | | | | | | | | No Limit | |
| 68 | Bis(2-Ethylhexyl)Phthalate | | | | | | | | | | | | | | | No Limit | |
| 69 | 4-Bromophenyl Phenyl Ether | | | | | | | | | | | | | | | No Limit | |
| 70 | Butylbenzyl Phthalate | | | | | | | | | | | | | | | No Limit | |
| 71 | 2-Chloronaphthalene | | | | | | | | | | | | | | | No Limit | |
| 72 | 4-Chlorophenyl Phenyl Ether | | | | | | | | | | | | | | | No Limit | |
| 73 | Chrysene | | | | | | | | | | | | | | | | |

| CTR# | Parameters | HUMAN HEALTH CALCULATIONS | | | AQUATIC LIFE CALCULATIONS | | | | | | | | | LIMITS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Organisms only | | | Saltwater / Freshwater / Basin Plan | | | | | | | | | | | | |
| | | AMEL hh = ECA = C hh O only | MDEL/AMEL multiplier | MDEL hh | ECA acute multiplier (p.7) | LTA acute | ECA chronic multiplier | LTA chronic | Lowest LTA | AMEL multiplier 95% | AMEL aq life | MDEL multiplier 99% | MDEL aq life | Lowest AMEL | Lowest MDEL | Recommendation | Comment |
| 74 | *Dibenzo(a,h)Anthracene* | | | | | | | | | | | | | | | No Limit | |
| 75 | 1,2-Dichlorobenzene | 17000 | 2.01 | 34105.21567 | | | | | | 1.55 | | 3.11 | | 17,000.00 | 34,105.22 | | |
| 76 | 1,3-Dichlorobenzene | | | | | | | | | | | | | | | No Limit | |
| 77 | 1,4-Dichlorobenzene | 2600 | 2.01 | 5216.09181 | | | | | | 1.55 | | 3.11 | | 2,600.00 | 5,216.09 | | |
| 78 | 3,3 Dichlorobenzidine | | | | | | | | | | | | | | | No Limit | |
| 79 | Diethyl Phthalate | | | | | | | | | | | | | | | No Limit | |
| 80 | Dimethyl Phthalate | | | | | | | | | | | | | | | No Limit | |
| 81 | Di-n-Butyl Phthalate | | | | | | | | | | | | | | | No Limit | |
| 82 | 2,4-Dinitrotoluene | | | | | | | | | | | | | | | No Limit | |
| 83 | 2,6-Dinitrotoluene | | | | | | | | | | | | | | | No Limit | |
| 84 | Di-n-Octyl Phthalate | | | | | | | | | | | | | | | No Limit | |
| 85 | 1,2-Diphenylhydrazine | | | | | | | | | | | | | | | No Limit | |
| 86 | *Fluoranthene* | | | | | | | | | | | | | | | No Limit | |
| 87 | Fluorene | | | | | | | | | | | | | | | No Limit | |
| 88 | Hexachlorobenzene | | | | | | | | | | | | | | | No Limit | |
| 89 | Hexachlorobutadiene | | | | | | | | | | | | | | | No Limit | |
| 90 | Hexachlorocyclopentadiene | | | | | | | | | | | | | | | No Limit | |
| 91 | Hexachloroethane | | | | | | | | | | | | | | | No Limit | |
| 92 | Indeno(1,2,3-cd)Pyrene | | | | | | | | | | | | | | | No Limit | |
| 93 | Isophorone | | | | | | | | | | | | | | | No Limit | |
| 94 | Naphthalene | | | | | | | | | | | | | | | No Limit | |
| 95 | Nitrobenzene | | | | | | | | | | | | | | | No Limit | |
| 96 | N-Nitrosodimethylamine | | | | | | | | | | | | | | | No Limit | |
| 97 | N-Nitrosodi-n-Propylamine | | | | | | | | | | | | | | | No Limit | |
| 98 | *N-Nitrosodiphenylamine* | | | | | | | | | | | | | | | No Limit | |
| 99 | Phenanthrene | | | | | | | | | | | | | | | No Limit | |
| 100 | Pyrene | | | | | | | | | | | | | | | No Limit | |
| 101 | 1,2,4-Trichlorobenzene | | | | | | | | | | | | | | | No Limit | |
| 102 | Aldrin | | | | | | | | | | | | | | | No Limit | |
| 103 | alpha-BHC | | | | | | | | | | | | | | | No Limit | |
| 104 | beta-BHC | | | | | | | | | | | | | | | No Limit | |
| 105 | gamma-BHC | | | | | | | | | | | | | | | No Limit | |
| 106 | delta-BHC | | | | | | | | | | | | | | | No Limit | |
| 107 | Chlordane | | | | | | | | | | | | | | | No Limit | |
| 108 | 4,4'-DDT | | | | | | | | | | | | | | | No Limit | |
| 109 | 4,4'-DDE (linked to DDT) | | | | | | | | | | | | | | | No Limit | |
| 110 | 4,4'-DDD | | | | | | | | | | | | | | | No Limit | |
| 111 | Dieldrin | | | | | | | | | | | | | | | No Limit | |
| 112 | alpha-Endosulfan | | | | | | | | | | | | | | | No Limit | |
| 113 | beta-Endolsulfan | | | | | | | | | | | | | | | No Limit | |
| 114 | Endosulfan Sulfate | | | | | | | | | | | | | | | No Limit | |
| 115 | Endrin | | | | | | | | | | | | | | | No Limit | |
| 116 | Endrin Aldehyde | | | | | | | | | | | | | | | No Limit | |
| 117 | Heptachlor | | | | | | | | | | | | | | | No Limit | |
| 118 | Heptachlor Epoxide | | | | | | | | | | | | | | | No Limit | |
| 119-125 | PCBs sum (2) | | | | | | | | | | | | | | | No Limit | |
| 126 | Toxaphene | | | | | | | | | | | | | | | No Limit | |

Notes:
*Ud = Undetermined due to lack of data*
Uc = Undetermined due to lack of CTR \
C = Water Quality Criteria
B = Background receiving water data

# ATTACHMENT K – ELG CALCULATIONS

Attachment K
ELG Calculations

| Pollutant or pollutant property | BPT effluent limitations for contaminated runoff | | BAT effluent limitations for contaminated runoff | | BCT effluent limitations for contaminated runoff | |
|---|---|---|---|---|---|---|
| | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed |
| Units | English units (pounds per 1,000 gallons of flow) | | English units (pounds per 1,000 gallons of flow) | | English units (pounds per 1,000 gallons of flow) | |
| $BOD_5$ | 0.4 | 0.22 | -- | -- | 0.4 | 0.22 |
| TSS | 0.28 | 0.18 | -- | -- | 0.28 | 0.18 |
| COD[1] | 3 | 1.5 | 3 | 1.5 | -- | -- |
| Oil and grease | 0.13 | 0.067 | -- | -- | 0.13 | 0.067 |
| Phenolic compounds (4AAP) | 0.0029 | 0.0014 | 0.0029 | 0.0014 | -- | -- |
| Total chromium | 0.006 | 0.0035 | 0.005 | 0.0018 | -- | -- |
| Hexavalent chromium | 0.00052 | 0.00023 | 0.00052 | 0.00023 | -- | -- |

Attachment K
ELG Calculations

| Pollutant or pollutant property | Most Stringent BPT, BAT, BCT | | Effluent Limits-Mass (1) | | Effluent Limits-Concentration (2), (3) | |
|---|---|---|---|---|---|---|
| | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed |
| Units | English units (pounds per 1,000 gallons of flow) | | lbs/day | | mg/L | |
| $BOD_5$ | 0.4 | 0.22 | 260 | 143 | 48 | 26 |
| TSS | 0.28 | 0.18 | 182 | 117 | 34 | 22 |
| COD[1] | 3 | 1.5 | 1,950 | 975 | 360 | 180 |
| Oil and grease | 0.13 | 0.067 | 85 | 44 | 16 | 8.0 |
| Phenolic compounds (4AAP) | 0.0029 | 0.0014 | 1.9 | 0.91 | 0.35 | 0.17 |
| Total chromium | 0.005 | 0.0018 | 3.3 | 1.2 | 0.600 (600 ug/L) | 0.216 (216 ug/L) |
| Hexavalent chromium | 0.00052 | 0.00023 | 0.34 | 0.15 | 0.060 (60 ug/L) | 0.030 (30 ug/L) |

(1) lbs/day = Most Stringent ELG (lbs/1,000 gallons of flow) x 650 (Discharge Flow in thousands of gallons)

(2) mg/L = Most Stringent ELG (lbs/1,000 gallons of flow) / 0.00834 (conversion)

(3) ug/L = mg/L x 1,000