California Regional Water Quality Control Board

Los Angeles Region

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October 14, 2010

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. 7001 2510 0000 4661 0595

Mr. David W. Reed
Vice President of Los Angeles Refinery
Tesoro Refining and Marketing Company
2101 E. Pacific Coast Highway
Wilmington, CA 90744

Dear Mr. Reed:

TRANSMITTAL OF THE WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT (NPDES) (ORDER NO. R4-2010-0179) FOR TESORO REFINING AND MARKETING COMPANY, LOS ANGELES REFINERY (NPDES NO. CA0003778, CI NO. 5427)

Our letter dated September 9, 2010, transmitted the revised tentative Order for renewal of your permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES) Program.

Pursuant to Division 7 of the California Water Code, this Regional Water Board at a public hearing held on October 7, 2010, reviewed the revised tentative requirements, considered all factors in the case, and adopted the proposed NPDES permit.

The adopted Order (Order R4-2010-0179) serves as an NPDES permit, and expires on September 10, 2015. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this Order (November 8, 2010). Your first monitoring report for the period of November 2010 through December 2010 is due by February 1, 2011. Monitoring reports should be sent to the Regional Water Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Water Board per these requirements, please include a reference to Compliance File CI-5427 and NPDES No. CA0003778, which will assure that the reports, are directed to the appropriate file and staff. Please do not combine your discharge monitoring reports with other reports, such as progress reports. Submit each type of report as a separate document.

We are sending the paper copy of the permit to the Discharger only. For those on the mailing list or other interested parties who would like access to a copy of the order, please go to the Regional Water Board's website at: http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/by_permits_tools.shtml.

If you have any questions, please contact Rosario Aston at (213) 576-6653.

Sincerely,

Cassandra D. Owens, Chief
Industrial Permitting Unit

Enclosures: Order No. R4-2010-0179 - Waste Discharge Requirements
Attachment E - Monitoring and Reporting Program (MRP No. 5427)
Attachment F - Fact Sheet

cc: See mailing list

MAILING LIST

Environmental Protection Agency (USEPA), Region 9, Permits Branch (WTR-5)
Mr. Roger Vann, Environmental Protection Agency, Region 9
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
NPDES Wastewater Unit, State Water Resources Control Board, Division of Water Quality
Mr. William Paznokas, Department of Fish and Game, Region 5
Mr. Gary Yamamoto, California Department of Public Health
California Coastal Commission, South Coast District
Water Replenishment District of Southern California
Los Angeles County, Department of Public Works, Environmental Programs Division
Los Angeles County, Department of Public Health
City of Long Beach
City off Wilmington
Dr. Mark Gold, Heal the Bay
Mr. David Beckman, Natural Resources Defense Council
Mr. Tom Ford, Santa Monica Baykeeper
Mr. Daniel Cooper, Lawyers for Clean Water
Mr. Jae Kim, TetraTech
Mr. Robert Stockdale, Tesoro Refining and Marketing Company, Los Angeles Refinery

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2010-0179
NPDES NO. CA0003778

WASTE DISCHARGE REQUIREMENTS FOR TESORO MINING AND MARKETING COMPANY LOS ANGELES REFINERY

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	Los Angeles Refinery
Facility Address	2101 E. Pacific Coast Highway
	Wilmington, California 90744
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the Tesoro Refining and Marketing Company, Los Angeles Refinery, 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	Segregated Storm Water (Non-Commingled Storm Water)[1]	33° 47' 35" N	118° 13' 48" W	Dominguez Channel Estuary
003	Commingled Storm Water[2]	33° 47' 08" N	118° 14' 06" W	Dominguez Channel Estuary

[1] Segregated Storm Water or Non-Commingled Storm Water is storm water that does not come in contact with the refinery wastewater.

[2] Commingled Storm Water is storm water that is mixed with the refinery wastewater [(treated boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, contaminated storm water, and miscellaneous wastewaters (consisting of cleanup wastewater, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater)]. Commingled storm water is discharged only when storm water storage capacity has been exceeded during severe storm event.

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**October 7, 2010**
This Order shall become effective on:	**November 8, 2010**
This Order shall expire on:	**September 10, 2015**
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. R4-2005-0059 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 October 7, 2010.

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	Los Angeles Refinery
Facility Address	2101 E. Pacific Coast Highway
	Wilmington, California 90744
	Los Angeles County
Facility Contact, Title, and Phone	Robert Stockdale, Environmental Engineer, (310) 522-6281
Mailing Address	2101 E. Pacific Coast Highway, Wilmington, California 90744
Type of Facility	Petroleum Refinery
Facility Design Flow	4.32 million gallons per day (mgd) at Discharge Point No. 001 4.0 mgd emergency discharge at Discharge Point No. 003

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) is currently discharging pursuant to Order No. R4-2005-0059 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0003778 to the Dominguez Channel Estuary. The Discharger submitted a Report of Waste Discharge (ROWD), dated February 12, 2010**,** and applied for an NPDES permit renewal to discharge up to 4.32 million gallons per day (mgd) of non-commingled storm water (storm water that does not come in contact with the refinery wastewater) and 4.0 mgd of commingled storm water from its Los Angeles Refinery, hereinafter Facility. Commingled storm water is storm water that is mixed with the refinery wastewater [treated boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, contaminated storm water, and other miscellaneous wastewaters (consisting of cleanup wastewater, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater)]. Commingled storm water is discharged only when storm water storage capacity has been exceeded during severe storm event.

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. The Discharger operates a petroleum refinery facility located at 2101 East Pacific Coast Highway in Wilmington, California. The Facility processes approximately 100,000 barrels per day (bbls/day) of crude oil, primarily from California production sources. The crude oil is converted into a full range of petroleum products, including various grades of automotive gasoline and aviation gasoline, jet fuels, diesel fuels, and bunker fuels. Recovered byproducts include liquefied petroleum gas (LPG), coke, and sulfur. The Facility's processes include desalting, atmospheric distillation, vacuum distillation, fluid catalytic cracking, hydrocracking, delayed coking, hydrotreating, alkylation, catalytic reforming, hydrogen generation, isomerization, benzene saturation, and sulfur recovery. All wastewater from the Facility are treated except segregated storm water (non-commingled storm water), prior to discharge. The Facility generates three types of wastewater that go into the following three separate collection systems.

1. High chemical oxygen demand (HCOD) treatment system - for process wastewater;

2. Low chemical oxygen demand (LCOD) treatment system – for non-process wastewater and commingled storm water; and

3. Segregated storm water system – for the north area tank farm storm water.

The HCOD wastewater is combined with LCOD wastewater and then discharged to sanitary sewer under an industrial user permit issued by the Los Angeles County Sanitary District (LACSD).

During a storm event, storm water runoff from the north tank farm areas can be segregated with refinery generated wastewater (i.e., LCOD or HCOD). The initial storm water runoff from the north farm areas is processed through the LCOD treatment system and discharged to the sanitary sewer. Subsequently, the segregated storm water (non-commingled storm water) is routed to Pond No. 9. The non-commingled storm water in Pond No. 9 could be discharged untreated through Discharge Point No. 001 to the Dominguez Channel Estuary or routed back to the LCOD system for treatment and discharged to the sanitary sewer. The discharge through Discharge Point No. 001 occurs only in the event of an emergency to prevent flooding of the refinery or after sampling and testing the water to insure compliance with the NPDES permit limitations. In June 2008, Pond No. 9 was permanently removed from service and will be replaced, as per an agreement between the California Department of Toxic Substances Control (DTSC), Shell, and Tesoro. Until the replacement tank is built and ready for service to receive storm water, all storm water is contained, treated and discharged to the sanitary sewer. Currently, all treated wastewater and storm water is routed to the sanitary sewer.

In the event of an extreme emergency (flooding of the Facility is imminent): (1) after taking all reasonable operational steps to contain excess wastewater, and (2) if risks to human life, and safety of employees and the community from flooding of the plant outweigh the risks to the environment from discharging to the Dominguez Channel, the commingled storm water is discharge through Discharge Point No. 003 to the Dominguez Channel Estuary. Discharge Point No. 003 is controlled and the valve is chain-locked closed to prevent unauthorized discharge. The last discharge from Discharge Point No. 003 occurred in January 1995 when a storm event produced 6.5 inches of rain in 24-hours.

The Facility discharges non-commingled storm water through Discharge Point No. 001 and commingled storm water through Discharge Point No. 003, then to the Dominguez Channel Estuary, a water of the United States, within the Dominguez Channel/Los Angeles/Long Beach Harbor watershed management area (WMA). The Facility has not discharged non-commingled storm water or commingled storm water during the term of the existing Order.

Attachment B provides a map of the area around the Facility. Attachment C provides a 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 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 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 J 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 Effluent Limitation Guidelines and Standards for the Petroleum Refining Point Source Category as defined in Part 419.20 and 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 diverse issues as defined by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To

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

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 non-point 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, respectively, 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).

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 2006 303(d) list and have been scheduled for TMDL development. The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. The 2006 State Water Board's California 303(d) List classifies 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 (C1-C4), coliform bacteria, DDT (tissue and sediment), dieldrin (tissue), lead (tissue), PCBs (polychlorinated biphenyls), phenanthrene, pyrene, and zinc (sediment). To date, no TMDLs have been completed for this segment of water. Therefore, no conditions in this Order are based on TMDLs. This Order may be reopened, if needed, to incorporate TMDL requirement.

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, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to Dominguez Channel Estuary are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 003	Dominguez Channel Estuary	Existing: Water contact recreation (REC1)[1], non-contact water recreation (REC2), commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat (MAR), wildlife habitat (WILD), preservation of rare, threatened, or endangered species (RARE), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN). Potential: Navigation (NAV)

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

Requirements of this Order implement the Basin Plan.

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

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

While the Facility discharges into the Dominguez Channel, within the Estuary, the wastewater is comprised largely of non-commingled storm water and commingled storm water during very severe storm event in order protect human life. Further, the Facility has not discharged during the last five years. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

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.

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 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 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. The 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.

Data for ammonia from the Facility is not available to determine if effluent limitations would be necessary to protect water quality. Thus, no effluent limitation for ammonia is included in this Order; however, monitoring for ammonia has been established for both effluent and receiving waters. The Regional Water Board reserves the right to reopen the permit if effluent or receiving water data indicate that an effluent limitation for ammonia is appropriate.

J. 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.

K. 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.

L. 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. 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. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Water Quality Control Plan Los Angeles Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations and/or discharge specifications.

M. 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 C.F.R. § 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.

N. 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 pH, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), oil and grease, phenolic compounds, total chromium, hexavalent chromium, and total petroleum hydrocarbons. Restrictions on these constituents are discussed in IV.B of this Order. 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.

O. 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.

P. 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.

The previous permit (Order No. 2005-0059) included an effluent limitation of 110 µg/L for anthracene. Regional Water Board staff discovered that this limitation, 110 µg/L was a typographical error. According to the CTR, the applicable numeric criterion for anthracene is 110,000 µg/L. Since the CTR criterion for anthracene is 1000 times more than the effluent limitation in the previous permit, and there were no available data to determine the reasonable potential for this pollutant, the effluent limitation for anthracene has been removed in this Order. The removal of the effluent limitation for anthracene is consistent with the exceptions in part 122.44(l)(2)(i)(B)(2). As discussed in detail in section IV.D.1 of the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirement of the CWA and federal regulations.

This Order requires the Discharger to continue to monitor for anthracene, to provide data to evaluate reasonable potential in the future.

Q. 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.

R. Monitoring and Reporting. 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 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.

S. 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.

T. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.C, IV.D, and V.B. 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.

U. 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.

V. 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 supercedes Order No. R4-2005-0059 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 thereto, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged through Discharge Point No. 001 shall not exceed 4.32 MGD, shall be limited to non-commingled storm water from the Facility, and shall occur only because of storm events. The discharge of wastes from accidental spills, or other sources is prohibited.

B. Waters discharged through Discharge Point No. 003 shall not exceed 4.00 MGD, shall be limited to emergency discharges during storm events as necessary to prevent flooding in the Facility. Wastes discharged through Discharge Point No. 003 shall be limited to storm water commingled with process water from the low-chemical oxygen demand (COD) treatment system. The discharge of wastes from accidental spills, or other sources is prohibited.

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

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

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

F. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the federal CWA and regulations adopted thereto. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

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

H. 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 MRP (Attachment E):

Table 6. Effluent Limitations – Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u	--	--	6.5	8.5
Temperature	°F	--	--	--	86
BOD (5-day @ 20 Deg. C)	lbs/1,000 gallons per day of storm water runoff	0.21	0.40	--	--
COD		1.5	3.0	--	--
TSS		0.14	0.24	--	--
Oil and Grease		0.067	0.13	--	--
Phenolic Compounds		0.0014	0.0029	--	--
Total Chromium		0.0018	0.0050	--	--
Hexavalent Chromium		0.00023	0.00052	--	--
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day[1]	1.08	2.13	--	--
Cadmium, Total Recoverable	µg/L	8	15	--	--
	lbs/day[1]	0.29	0.54	--	--
Copper, Total Recoverable	µg/L	3	6	--	--
	lbs/day[1]	0.11	0.22	--	--
Lead, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.25	0.51	--	--
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--
	lbs/day[1]	0.002	0.004	--	--
Nickel, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.25	0.51	--	--
Selenium, Total Recoverable	µg/L	58	117	--	--
	lbs/day[1]	2.09	4.22	--	--
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day[1]	0.04	0.08	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day[1]	0.23	0.47	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Zinc, Total Recoverable	µg/L	47	95	--	--
	lbs/day[1]	1.69	3.42	--	--
Cyanide	µg/L	0.5	1	--	--
	lbs/day[1]	0.02	0.04	--	--
Benzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(a)pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Chrysene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Dibenzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Indeno (1,2,3-cd) pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Pyrene	µg/L	11,000	22,068	--	
	lbs/day[1]	396	795	--	
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day[1]	504	1,012	--	--
Total Petroleum Hydrocarbons	µg/L	--	100	--	--
	lbs/day[1]	--	3.6	--	--

[1] The mass emissions rate (lbs/day) is based on a maximum flow rate of 4.32 mgd and is calculated as follows:

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

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

b. 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 tests shall be at least 90%, and

ii. No single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP.

c. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage

test.). The Discharger shall conduct chronic toxicity monitoring as specified in section V of the MRP.

2. Interim Effluent Limitations

Not Applicable

B. Effluent Limitations – Discharge Point No. 003

1. Final Effluent Limitations – Discharge Point No. 003

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 003 with compliance measured at Monitoring Location EFF-003, as described in the attached MRP (Attachment E):

Table 7. Effluent Limitations – Discharge Point No. 003

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u	--	--	6.5	8.5
Temperature	°F	--	--	--	86
BOD (5-day @ 20 Deg. C)	lbs/1,000 gallons per day of storm water runoff	0.21	0.40	--	--
COD		1.5	3.0	--	--
TSS		0.14	0.24	--	--
Oil and Grease		0.067	0.13	--	--
Phenolic Compounds		0.0014	0.0029	--	--
Total Chromium		0.0018	0.0050	--	--
Hexavalent Chromium		0.00023	0.00052	--	--
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day[1]	1	2	--	--
Cadmium, Total Recoverable	µg/L	8	15	--	--
	lbs/day[1]	0.27	0.50	--	--
Copper, Total Recoverable	µg/L	3	6	--	--
	lbs/day[1]	0.10	0.20	--	--
Lead, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.23	0.47	--	--
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--
	lbs/day[1]	0.002	0.003	--	--
Nickel, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.23	0.47	--	--
Selenium, Total Recoverable	µg/L	58	117	--	--
	lbs/day[1]	1.94	3.90	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day[1]	0.037	0.073	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day[1]	0.21	0.43	--	--
Zinc, Total Recoverable	µg/L	47	95	--	--
	lbs/day[1]	1.57	3.17	--	--
Cyanide	µg/L	0.5	1	--	--
	lbs/day[1]	0.017	0.03	--	--
Benzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Benzo(a)pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Chrysene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Dibenzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Indeno (1,2,3-cd) pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Pyrene	µg/L	11,000	22,068	--	--
	lbs/day[1]	367	736	--	--
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day[1]	467	937	--	--
Total Petroleum Hydrocarbons	µg/L	--	100	--	--
	lbs/day[1]	--	3.3	--	--

[1] The mass emissions rate is based on a maximum flow of 4.0 mgd and is calculated as follows:

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

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

b. 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 tests shall be at least 90%, and

ii. No single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP.

c. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.). The Discharger shall conduct chronic toxicity monitoring as specified in section V of the MRP.

2. Interim Effluent Limitations

Not Applicable

C. Land Discharge Specifications

Not Applicable

D. 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^oF above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 86^0 F as a result of waste discharged.

3. Water Contact Standards

a. State/Regional Water Board Water Contact Standards:

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

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.

Single Sample Maximum (SSM) Limits

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

4. The mean annual dissolved oxygen concentration of all waters 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.

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, Office of Administrative Law (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 effect 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 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, 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, AMEL, 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. (Wat. 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 RPA.

c. This Order may be reopened and modified, to incorporate 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 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. **Toxicity Reduction Requirement**

If the discharge exceeds the acute toxicity limitation or chronic toxicity trigger that may cause or contribute to acute or chronic toxicity in the receiving water, a Toxicity Reduction Evaluation (TRE) shall be required as defined in Attachment A. The Regional Water Board shall require the Discharger to conduct a TRE if repeated tests reveal toxicity in the effluent or in the receiving water as a result of waste discharge under this Order. The Discharger shall take all reasonable steps to control toxicity once the source of toxicity is identified. Failure to conduct the required toxicity tests or a TRE shall result in the establishment of effluent limitations for chronic toxicity under this Order and/or appropriate enforcement action. Whole effluent toxicity testing requirements are described in section V of the MRP, Attachment E.

3. Best Management Practices and Pollution Prevention

a. **Storm Water Pollution Prevention Plan (SWPPP).** The Discharger shall submit, **within 90 days** of the effective date of this Order 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. **Best Management Practices Plan (BMPP).** The Discharger shall submit, **within 90 days** of the effective date of this Order, updated Best Management Practices Plan (BMPPs) that entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State through Discharge Point Nos. 001 and 003. The BMPs shall be consistent with the general guidance contained in the USEPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004).

c. **Spill Contingency Plan.** This Regional Water Board requires the Discharger to file with the Regional Water Board, **within 90 days** after the effective date of this Order, an updated Spill Contingency Plan (SCP) that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The SCP shall be reviewed at a minimum once per year and updated as needed. Any changes or revisions shall be summarized in the annual summary report.

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.

VII. COMPLIANCE DETERMINATION

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

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (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 ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Effluent Limitations Expressed as a Median.

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

1. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

2. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2} + X_{(n/2)+1}]$, 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 "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (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 "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

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 Minimum Level (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 "Not-Detected (ND)" or "Detected, but Not Quantified (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 (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

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

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

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

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

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

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.

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 (σ)
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;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

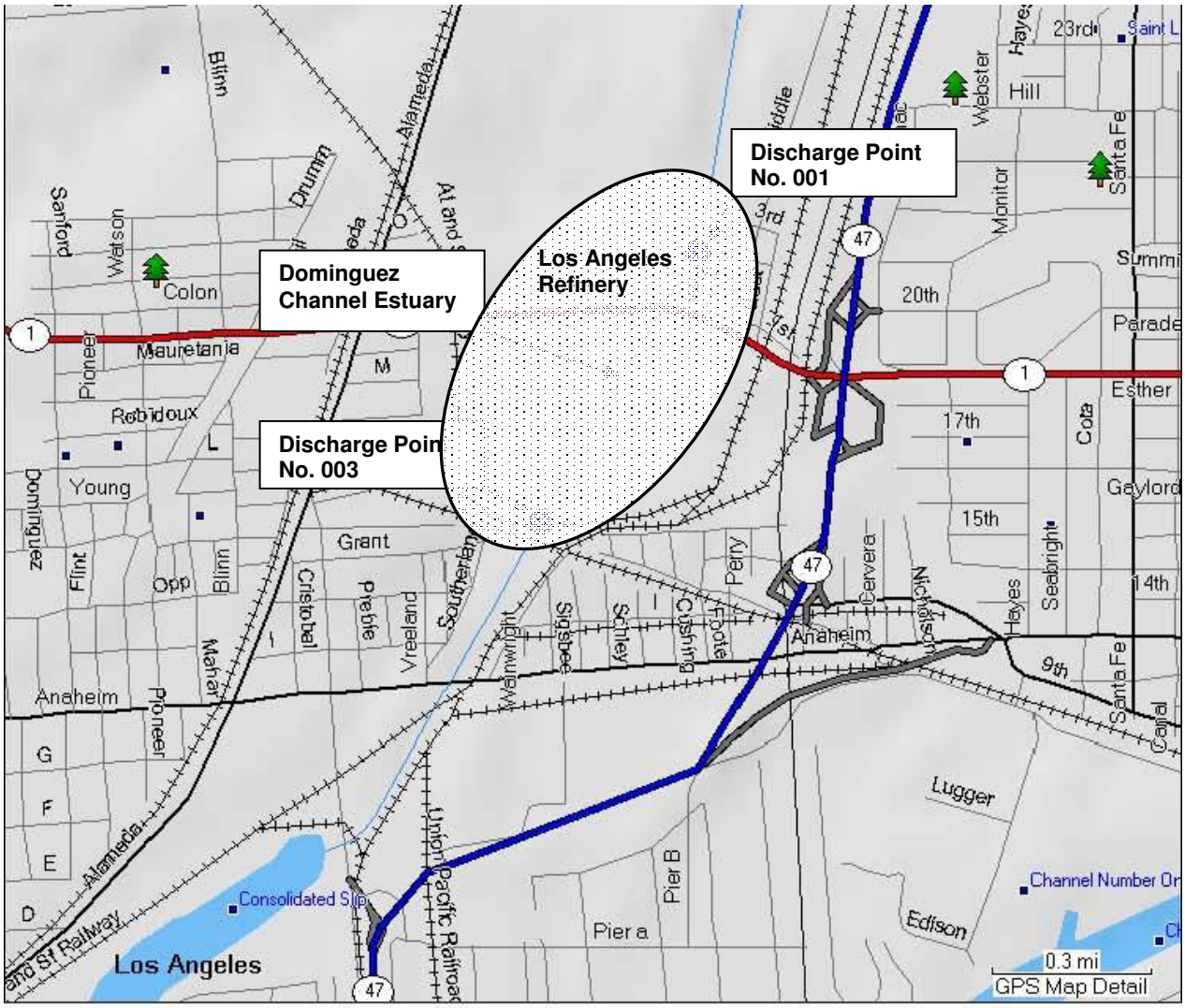
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first 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 Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Los Angeles Refinery
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

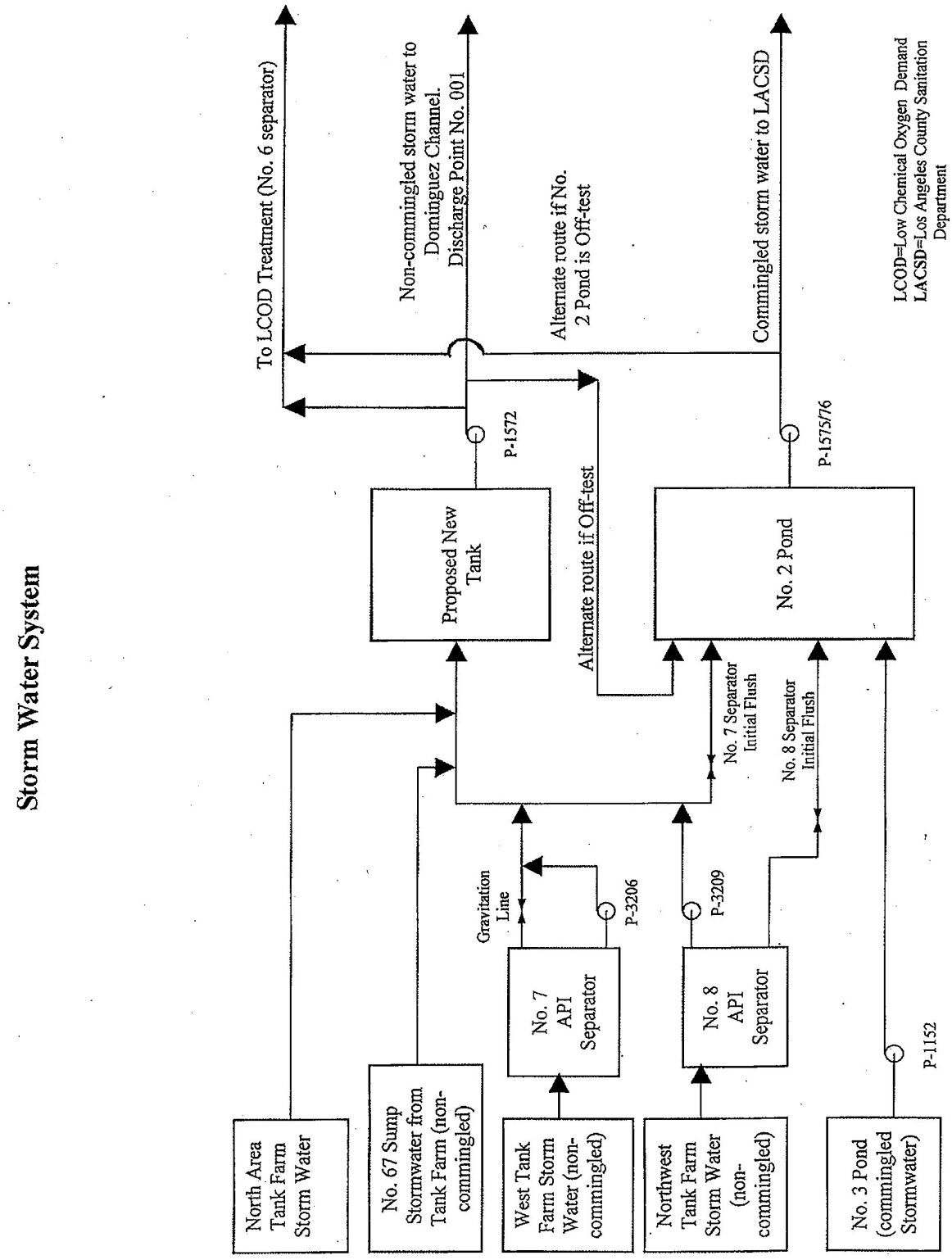
ATTACHMENT B – MAP



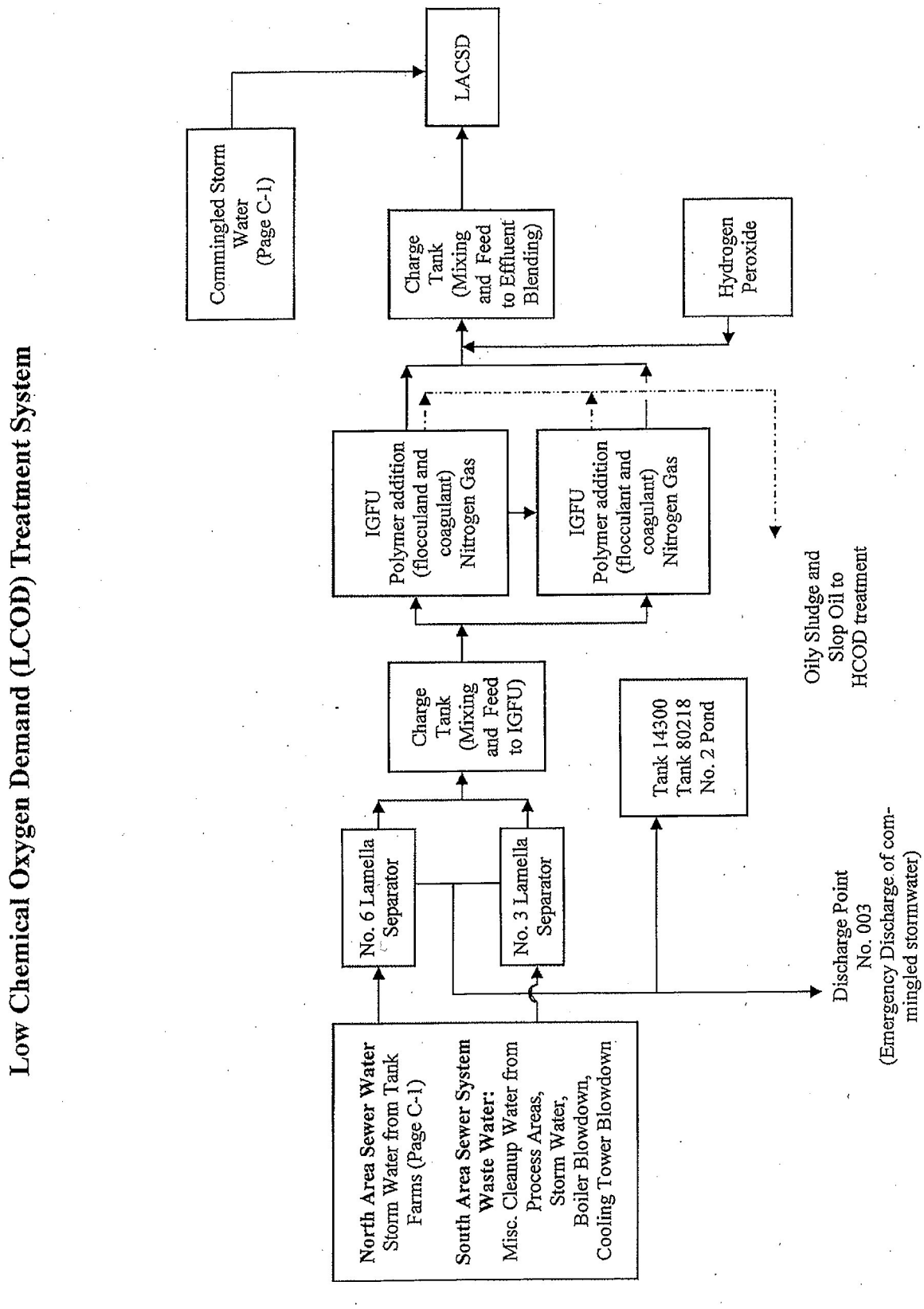
DRAWING REFERENCE:	SITE LOCATION MAP
Garmin MapSource Topo U.S. 2008	Tesoro Refining and Marketing Company Los Angeles Refinery Los Angeles County

ATTACHMENT C – FLOW SCHEMATIC

Discharge Point No. 001



Discharge Point No. 003



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 [Part 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

i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [Part 122.41(m)(1)(i)].

ii. "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)];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [Part 122.41(m)(4)(i)(B)]; and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [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)].

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)].

1. 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)].

2. 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 [Parts 122.41(l)(3) and 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 [Parts 122.41(j)(4) and 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 [Par 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)] and as specified in VI.C of this Order.

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 [Section 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 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)].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [Part 122.41(l)(1)(iii)].

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 section 122.44(f) [part 122.42(a)(2)(iv)].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 5427)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 5247

The Code of Federal Regulations (CFR) part 122.48 requires that all 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 Nos. 001 and 003 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 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. The annual monitoring report required in Section X.D shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. 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 California 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	Effluent monitoring for Discharge Point No. 001 shall be conducted at the point of discharge to Dominguez Channel Estuary (33° 47' 35" N and 118° 13 '48"W)
003	EFF-003	Effluent monitoring for Discharge Point No. 003 shall be conducted at the point of discharge to Dominguez Channel Estuary (33° 47' 08" N and 118° 14' 06"W)
--	RSW-001	The monitoring station shall be within 50 feet upstream of the uppermost of the two storm drain discharge points in the Dominguez Channel Estuary.

III. INFLUENT MONITORING REQUIREMENTS

Not Applicable

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations EFF-001 and EFF-003

1. The Discharger shall monitor Discharge Points No. 001 and 003 at Monitoring Locations EFF-001 and EFF-003, respectively, as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring for Discharge Point Nos. 001 and 003

Pollutant	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallons	Metered	1/Day	--
pH	standard units	Grab	1/Discharge Event[1, 2]	[3]
Temperature	°F	Grab	1/Discharge Event[1, 2]	[3]
Total Residual Chlorine	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Oil and Grease	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Settleable Solids	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Total Suspended Solids (TSS)	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	Grab	1/Discharge Event[1, 2]	[3]

Pollutant	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chemical Oxygen Demand (COD)	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Ammonia Nitrogen, Unionized (as N)	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Sulfides	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Phenolic Compounds[4]	mg/L	Grab	1/Discharge Event[1, 2]	[3]
Total Coliform	MPN/ 100 ml	Grab	1/Discharge Event[1, 2]	[3]
Fecal Coliform	MPN/ 100 ml	Grab	1/Discharge Event[1, 2]	[3]
Enterococcus	MPN/ 100 ml	Grab	1/Discharge Event[1, 2]	[3]
Total Chromium[5]	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Chromium (VI), Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Arsenic, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Barium, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Cadmium, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Lead, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Mercury, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Nickel, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Selenium, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Silver, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Thallium, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Zinc, Total Recoverable	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Cyanide	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Anthracene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Benzo(a)anthracene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Benzo(b)fluoranthene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Benzo(k)pyrene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Benzo(a)pyrene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Chrysene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Dibenzo(a)anthracene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Indeno(1,2,3-cd)pyrene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Fluorene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Pyrene	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Tertiary butyl alcohol (TBA)	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Di-isopropyl ether (DIPE)	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Tertiary amyl methyl ether (TAME)	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Ethyl tertiary butyl ether (ETBE)	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Total Petroleum Hydrocarbons (TPH)	µg/L	Grab	1/Discharge Event[1, 2]	[3, 6]
Methyl tertiary butyl ether (MTBE)	µg/L	Grab	1/Discharge Event[1, 2]	[3]
Acute Toxicity	% Survival	Grab	1/Discharge Event[1, 2]	[7]
Chronic Toxicity	TUc	Grab	1/Discharge Event[1, 2]	[7]
TCDD Equivalents[8]	µg/L	Grab	1/Year[2]	[3]

Pollutant	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Remaining Priority Pollutants[9]	µg/L	Grab	1/Year[2]	[3]
Radioactivity (Gross Alpha and Gross Beta)[10]	pCi/L	Grab	1/Year[2]	[3]

[1] During periods of extended discharge, no more than one sample per week needs to be taken. For acute toxicity, no more than one sample per quarter is required. 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.

[2] If there is no discharge to surface waters, the Discharger shall state in the corresponding monitoring report under statement of perjury that no effluent was discharged to surface water.

[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (Attachment H of this permit package), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

[4] Phenolic compounds include chlorinated and non-chlorinated compounds.

[5] Sum of hexavalent chromium and other chromium valences.

[6] TPH is measured by U.S. EPA Methods 8015 (Modified)**.**

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

[8] To determine compliance with effluent limitations or to conduct Reasonable Potential Analysis (RPA), this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF). BEFs are as listed in Table below:

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

where:

C_X = concentration of,dioxin or furan congener x
TEF_X = TEF for congener x
BEF_X = BEF for congener x

Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Congeners	Toxicity Equivalent Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8
1,2,3,7,8 penta CDF	0.05	0.2
2,3,4,7,8-penta CDF	0.5	1.6
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.01	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

[9] Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I. Annual samples shall be collected during the first hour of discharge from the first storm event of the wet season (October 1 – May 30).

[10] Analyze these radiochemicals by USEPA testing Method: Method 900.0 for gross alpha and gross beta.

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 on grab samples of 100% effluent, generally 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 silverslide, *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, Third Edition, October 2002* (EPA/821/R-02-014).

   c. Alternate Reporting. In lieu of conducting 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.

      Effluent samples shall be collected before discharge to the receiving water.

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 over a 6-week period, if possible. 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 3 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than the stipulated requirements, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). 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.

e. Toxicity Identification Evaluation (TIE).

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 Toxicity Identification Evaluation (TIE) and implement Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. Once the sources are identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

B. Chronic Toxicity.

1. Definition of Chronic Toxicity

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where TU_c = 100/NOEC. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

This Order includes a chronic toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

2. Chronic Toxicity Effluent Monitoring Program

   a. Test Species and Methods

      i. The Discharger shall conduct critical life stage chronic toxicity tests on effluent samples (24-hour composite) 100% effluent or receiving water samples. For freshwater discharge, the Discharger shall conduct the chronic toxicity test in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821-R-02-013) or a more recent edition. For brackish effluent, the Discharger shall conduct the chronic toxicity test in accordance with USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms*, First Edition, Auguts 1995 (EPA/600/R-95/136) or *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, Third Edition, October 2002* (EPA/821/R-02-014), or a more recent edition.

      ii. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and a plant for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.

      iii. Re-screening is required every 24 months. The Discharger shall re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive than the re-screening does not need to include more that one suite of tests. If a different species is the most sensitive or if there is ambiguity then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

      iv. In brackish waters, the presence of chronic toxicity may be estimated as specified using West Coast marine organisms according to USEPA's *Short-Term Methods for Estimating Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms*, August 1995 (EPA/600/R-95/136), or a more recent edition.

      v. After the screening period, monitoring shall be conducted <u>annually</u> using the most sensitive species.

      vi. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

   b. Chronic Toxicity Accelerated Monitoring

      If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TU_c, the Discharger shall conduct six additional tests over a six-week period, if possible. The Discharger shall ensure that they receive results of a failing

chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of the receipt of the result.

i. If any three out of the initial test and the six additional tests results exceed 1.0 TU_c, the Discharger shall immediately implement the Initial Investigation TRE workplan.

ii. If implementation of the initial investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the normal sampling frequency required in Table E-2 of this MRP.

iii. If all of the six additional tests required above do not exceed 1 TU_c, then the Discharger may return to the normal sampling frequency.

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

C. 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/or 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.

D. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (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 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). See MRP Section V.E.3. for guidance manuals.

E. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

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; and

   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 selection and use of in-plant process chemicals;

   c. If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (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 (or six consecutive chronic toxicity test results are less than or equal to 1.0 TU_c 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 in Section V.A.2.d and V.B.2.b. of this program, 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 Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

F. 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.

G. 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 and as TU_c for chronic 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, then those results also shall be submitted with the SMR for the period in which the Investigation occurred.

If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Sections V.A.2.d. and V.B.2.b., 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 or chronic toxicity limit or trigger and (4) 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. NOEC value(s) in percent effluent;

h. IC_{15}, IC_{25}, IC_{40} and IC_{50} values in percent effluent;

i. TU_c values $\left(TU_c = \frac{100}{NOEC} \right)$;

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

k. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s);

l. IC_{25} value for reference toxicant test(s);

m. Any applicable charts; and

n. 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 at RSW-001 as follows:

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

Pollutant	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
pH[3]	standard units	Grab	1/Year	[2]
Hardness (as $CaCO_3$) [3]	mg/L	Grab	1/Year	[2]
Salinity[3]	ppt	Grab	1/Year	[2]
Priority Pollutants[4]	µg/L	Grab	1/Year	[2]
Temperature[3]	°F	Grab	1/Year	[2]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Year	[2]
TCDD Equivalents[5]	µg/L	Grab	1/Year	[2]

1 Receiving water monitoring is required only during years in which a discharge has occurred.

2 Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (Attachment H of this permit package), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

3. Receiving water pH, hardness, temperature, and salinity must be analyzed at the same time the samples are collected for priority pollutants analysis.

4. 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. Annual samples shall be collected during the first hour of discharge from the first storm event of the wet season (October 1 – May 30). If no discharge occurs, no monitoring is required.

5 To determine compliance with effluent limitations or to conduct Reasonable Potential Analysis (RPA), this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF). BEFs are as listed in Table below:

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

where:

C_X = concentration of,dioxin or furan congener x
TEF_X = TEF for congener x
BEF_X = BEF for congener x

Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Congeners	Toxicity Equivalent Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8

Congeners	Toxicity Equivalent Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
1,2,3,7,8 penta CDF	0.05	0.2
2,3,4,7,8-penta CDF	0.5	1.6
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.01	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

B. Visual Monitoring of Upstream and Downstream Receiving Water Sampling Points

1. A visual observation station shall be established in the vicinity of the discharge point of Discharge Point Nos. 001 and 003 to the receiving water (Dominguez Channel Estuary).

2. General observations of the receiving water shall be made at each discharge point when discharges occur. 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. Description of odor, if any, of the receiving water

g. Presence and activity of California Least Tern and California Brown Pelican.

IX. OTHER MONITORING REQUIREMENTS

A. Storm Water Monitoring

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

2. **Visual Observation.** The Discharger shall make visual observations of all storm water discharge locations 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.

B. SWPPP, BMPP, and Spill Contingency Plan Status and Effectiveness Report

1. As required under Special Provision VI.C.3 of this Order, the Discharger shall submit an updated SWPPP, BMPP, and Spill Contingency Plan to the Executive Officer of the Regional Water Board **within 90 days** of the effective date of this permit.

2. Annually the Discharger shall report the status of the implementation and the effectiveness of the SWPPP, BMPP, and Spill Contingency Plan required under Special Provision VI.C.3 of this Order. The SWPPP, BMPP, and Spill Contingency Plan shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater and storm water discharged from the facility are addressed in the SWPPP, BMPP, and Spill Contingency Plan. All changes or revisions to the SWPPP, BMPP, and Spill Contingency Plan will be summarized in the annual report required under Attachment E, Monitoring and Reporting, Section X.D.

C. Chemical Use Report

1. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each.

2. The Discharger shall report annually summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.

3. The Discharger shall monitor the chemicals used in the Facility. Prior to any change in the use of chemical at the Facility the Discharger must inform the Regional Water Board. As specified in Special Provision VI.A.2.q, no changes in the type or amount of chemicals added to the process water shall be made without the written approval of the Regional Water Board's Executive Officer. The Discharger must submit a

complete report of the change to the Regional Water Board before the proposed date of change.

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 and annual 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/Day	November 8, 2010	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	May 1 August 1 November 1 February 1
1/Month	November 8, 2010	1st day of calendar month through last day of calendar month	May 1 August 1 November 1 February 1
1/Quarter	November 8, 2010	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1/Discharge Event	November 8, 2010	1st day of calendar month through last day of calendar month	May 1 August 1 November 1 February 1
1/Year	November 8, 2010	January 1 through December 31	February 1

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.

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

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ 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 "Not Detected," or ND.

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

5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional 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).

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

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

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

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

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

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the 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)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

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 (Section V.D of the MRP)

b. Updated SWPPP (Section VI.C.3 of the Order)

c. Updated BMPP (Section VI.C.3 of the Order)

d. Spill Contingency Plan (Section VI.C.3 of the Order)

2. As discussed in Section VIII.E of the MRP, Attachment E, the Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

ATTACHMENT F – FACT SHEET

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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	4B192121001
Discharger	Tesoro Refining and Marketing Company
Name of Facility	Los Angeles Refinery
Facility Address	2101 E. Pacific Coast Highway
	Wilmington, California 90744
	Los Angeles County
Facility Contact, Title and Phone	Robert Stockdale, 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, VA 90744
Billing Address	Same as Mailing Address
Type of Facility	Petroleum Refinery (SIC 2911)
Major or Minor Facility	Major
Threat to Water Quality	Category 1
Complexity	Category A
Pretreatment Program	N
Reclamation Requirements	Not Applicable
Facility Permitted Flow	4.32 million gallons per day (mgd) from Discharge Point No. 001 4.0 mgd from Discharge Point No. 003
Facility Design Flow	4.32 mgd (Discharge Point No. 001) 4.0 mgd from Discharge Point No. 003
Watershed	Dominguez Channel Estuary Watershed, Los Angeles/Long Beach Harbor Watershed Management Area
Receiving Water	Dominguez Channel Estuary
Receiving Water Type	Inland Surface Water

A. Tesoro Refining and Marketing Company (hereinafter Discharger) is the owner and operator of the Los Angeles Refinery (hereinafter Facility), a petroleum refinery. 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.

Tesoro Refining and Marketing Company has purchased the Los Angeles Refinery from Equilon Enterprises LLC (dba) Shell Oil Products, US. The sale was completed on May 10, 2007.

B. The Facility discharges wastewater to the Dominguez Channel Estuary, a water of the United States, and is currently regulated by Order No. R4-2005-0059, which was adopted on September 1, 2005, and expires on August 10, 2010. The wastewater consists of segregated storm water (non-commingled storm water) and commingled storm water. Non-commingled storm water is storm water that does not come in contact with the refinery wastewater. Commingled storm water is storm water that is mixed with the refinery wastewater [treated boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, contaminated storm water, and miscellaneous wastewaters (consisting of cleanup wastewater, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater)]. Commingled storm water is discharged only when the storm water storage capacity is exceeded.

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 February 16, 2010.

II. FACILITY DESCRIPTION

The Discharger operates a petroleum refinery located at 2101 East Pacific Coast Highway Wilmington, California. The Facility produces approximately 100,000 barrels per day (bbls/day) of crude oil, primarily from California production sources. Crude oil is delivered to the Facility via pipeline and marine vessels. The crude oil is converted into a full range of petroleum products, including various grades of automotive gasoline and aviation gasoline, jet fuels, diesel fuels, and bunker fuels. Recovered byproducts include liquefied petroleum gas (LPG), coke, and sulfur. Facility processes include desalting, atmospheric distillation, vacuum distillation, fluid catalytic cracking, hydrocracking, delayed coking, hydrotreating, alkylation, catalytic reforming, hydrogen generation, isomerization, benzene saturation, and sulfur recovery. The sulfur recovery plant is located offsite. The Facility is categorized as a cracking refinery, as defined in Title 40 Code of Federal Regulations Part 419.20 (40 CFR 419.20).

Water consumption at the Facility totals approximately 7 million gallons per day (mgd). Approximately 90 percent of this water is groundwater pumped from three wells in the Silverado Aquifer, which is segregated by aquitards from the Gasper/Gauge Aquifer. Two wells are located at the Facility and one well is located at the sulfur recovery plant. The groundwater pumping capacity is 4,500 gallons per minute (gpm) or 6.48 mgd. Approximately 10 percent of the source water is municipal water obtained from the City of Los Angeles Department of Water and Power.

Currently, all treated wastewater and storm water is routed to the Los Angeles County Sanitary District (LACSD) under an industrial user permit. The conditions of the industrial user permit restrict the Facility's discharges to the LACSD under peak wet weather conditions. As a result, the Facility must store excess commingled storm water that does not meet NPDES limits. The combined storage capacity for segregated and commingled storm water can store a 24-hour storm that equals 5.5 inches or 31 million gallons.

A. Description of Wastewater and Biosolids Treatment or Controls

The refinery is designed to treat all wastewater, except segregated storm water, prior to discharge to the sanitary sewer or to surface water. The Facility generates three types of wastewater that go into the following three separate collection systems.

1. High chemical oxygen demand (HCOD) treatment system - for process wastewater;

2. Low chemical oxygen demand (LCOD) treatment system – for non-process wastewater and commingled storm water; and

3. Segregated storm water system – for north area tank farm storm water.

The HCOD wastewater consists of enclosed process units systems and crude clearing waters. These wastes are sent to a pre-treatment system. The process wastewater is treated through the HCOD system that consists of corrugated plate interceptors, induced gas floatation units, acid water strippers, a dissolved air floatation unit, and flow equalization tanks. Subsequently, the treated wastewater is combined with the LCOD wastes and discharged to the sanitary sewer.

The LCOD wastewater consists of boiler blowdown, cooling tower blowdown, sulfur recovery plant wastewater, contaminated storm water, and miscellaneous wastewaters (consisting of cleanup wastewater, petroleum coke-belt wash waters, excess coke drum cutting and quench waters, hydrostatic test waters, fire system test water, and water softener regeneration wastewater). The LCOD wastewater treatment system consists of lamella units, flow equalization tanks, induce gas floatation units storage tanks, and number of collection sumps and ponds. As mentioned above, the LCOD and HCOD wastewaters are combined prior to discharge to the sanitary sewer.

During a storm event, storm water runoff from the north tank farm areas can be segregated from the refinery generated wastewater (i.e., LCOD or HCOD). The initial storm water runoff from the north farm areas is processed through the LCOD treatment system and discharged to the sanitary sewer. Subsequently, the segregated storm water (non-commingled storm water) is routed to Pond No. 9. The non-commingled storm water in Pond No. 9 could be discharged untreated through Discharge Point No. 001 to the Dominguez Channel Estuary or routed back to the LCOD system for treatment and discharged to the sanitary sewer. The discharge through Discharge Point No. 001 occurs only in the event of an emergency to prevent flooding of the refinery or after sampling and testing the water to insure compliance with the NPDES permit limitations. In June 2008, Pond No. 9 was permanently removed from service. Pond No. 9 will be replaced, as per an agreement between the California Department of Toxic Substances Control (DTSC),

Shell, and Tesoro. Until the replacement tank is built and ready for service to receive non-commingled storm water, all storm water is contained, treated, and discharged to the sanitary sewer. Currently, all treated wastewater and storm water is routed to the sanitary sewer.

In the event that flooding of the Facility is imminent: (1) after taking all reasonable operational steps to contain excess wastewater, and (2) if risks to human life, and safety of employees and the community from flooding of the plant outweigh the risks to the environment from discharging to the Dominguez Channel, the commingled storm water is discharge through Discharge Point No. 003 to the Dominguez Channel Estuary. Discharge Point No. 003 is controlled and the valve is chain-locked closed to prevent unauthorized discharge. The last discharge from Discharge Point No. 003 occurred in January 1995 when a storm event produced 6.5 inches in 24-hours.

The Facility has not discharged non-commingled storm water and commingled storm water during the term of the existing Order.

B. Discharge Points and Receiving Waters

Up to 4.32 million gallons per day (mgd) of non-commingled storm water may be discharged from Discharge Point No. 001 to the Dominguez Channel Estuary, a water of the United States. The location of Discharge Point No. 001 is latitude: 33º 47' 35" N, and longitude: 118º 13' 48" W.

Up to 4.0 mgd of commingled storm water is permitted when storm water storage capacity has been exceeded, from Discharge Point 003 to the Dominguez Channel Estuary, a water of the United States. The location of Discharge Point No. 003 is latitude: 33º 47' 8' N, and longitude: 118º 14' 6" W.

Because there was no discharge through Discharge Point 003 since January 1995, the commingled storm water flow rate of 4.0 mgd was estimated based on the average dry weather flow to the lamella separators plus the estimated storm water runoff based on historic rainfall data from the two wettest seasons during the last 10 years (1-1.5 inches over 24 hours), measured against the pump capacity of process waters in the lamella separators. The pump capacity minus the combined process flow and storm water runoff is an estimate of the maximum flow that would occur at discharge Point No. 003.

The discharge through Discharge Point 002 was discontinued since July 31, 2001. The Discharger re-routed the treated wastewater and storm water to the sanitary sewer to comply with cease and desist order (CDO) issued by the Regional Water Board on September 16, 1999.

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

Monitoring from Monitoring Locations EFF-001 or EFF-003 was not conducted, as there were no discharges from Discharge Point Nos. 001 and 003 during the term of the previous Order. Effluent limitations contained in R4-2005-0059 for discharges from Discharge Point Nos. 001 and 003 are as follows.

Table F-2. Historic Effluent Limitations Discharge Point Nos. 001 and 003

Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Instantaneous Maximum
pH	s.u	Between 6.5 and 8.5		
Temperature	°F	86		
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	lbs/1,000 gallons per day of storm water runoff	0.21	0.40	--
Chemical Oxygen Demand (COD)		1.5	3.0	--
Total Suspended Solids (TSS)		0.14	0.24	--
Oil and Grease		0.067	0.13	--
Phenolic Compounds[1]		0.0014	0.0029	--
Total Chromium[2]		0.0018	0.0050	--
Hexavalent Chromium		0.00023	0.00052	--
Arsenic, Total Recoverable	µg/L	36	--	69
Cadmium, Total Recoverable	µg/L	9.3	--	42
Copper, Total Recoverable	µg/L	2.4	--	2.4
Lead, Total Recoverable	µg/L	8.1	--	210
Mercury, Total Recoverable	µg/L	0.025	--	1.8
Nickel, Total Recoverable	µg/L	8.2	--	74
Selenium, Total Recoverable	µg/L	71	--	290
Silver, Total Recoverable	µg/L	--	--	2.3
Thallium, Total Recoverable	µg/L	6.3	--	--
Zinc, Total Recoverable	µg/L	81	--	90
Cyanide	µg/L	1	--	1
Anthracene	µg/L	--	110	--
1,2-Benzanthracene[3]	µg/L	--	0.049	--
3,4-Benzofluoranthene[4]	µg/L	--	0.049	--

Parameter	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Instantaneous Maximum
Benzo(k)fluoranthene	µg/L	--	0.049	--
Benzo(a)pyrene	µg/L	--	0.049	--
Chrysene	µg/L	--	0.049	--
Dibenzo(a)anthracene	µg/L	--	0.049	--
Indeno (1,2,3-cd) pyrene	µg/L	--	0.049	--
Pyrene	Mg/L	--	11	--
Fluorene	Mg/L	--	14	--
Total Petroleum Hydrocarbons	µg/L	--	100	--
Acute Toxicity	% survival	[5]		

[1] Phenolic compounds include chlorinated and non-chlorinated compounds.
[2] Sum of hexavalent chromium and other chromium valences.
[3] 1,2-Benzanthracene is hereinafter refered to as Benzo(a)anthracene.
[4] 3,4-Benzofluoranthene is hereinafter refered to as Benzo(b)fluoranthene.
[5] 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 producing less than 70% survival.

D. Compliance Summary

The Facility has not discharged during the term of the existing permit and consequently, no permit limit exceedances have been identified.

E. Planned Changes

The Pond No. 9 has been permanently removed from service and the Discharger plans to replace Pond No. 9 with a 3.3 million gallon storage tank for receipt, storage, and potential discharge of non-commingled storm water.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed 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 a 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).

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 (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. Beneficial uses applicable to the Dominguez Channel Estuary are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 003	Dominguez Channel Estuary	Existing: Water contact recreation (REC1)[1], non-contact water recreation (REC2), commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat (MAR), wildlife habitat (WILD), preservation of rare, threatened, or endangered species (RARE), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN). Potential: Navigation (NAV)

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

Requirements of this Order implement the Basin Plan.

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

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

While the Facility discharges into the Dominguez Channel, within the Estuary, the wastewater is comprised largely of non-commingled storm water and commingled storm water during large storm events. Further, the Facility has not discharged during the last five years. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water in the event discharge to the Dominguez Channel Estuary is required.

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. Discharges from the Facility are not considered thermal wastes or elevated temperature wastes. Requirements of this Order implement the Thermal Plan and a white paper developed by the Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A maximum effluent temperature limitation of 86°F 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 Tables 3-1 through 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 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 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 objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a 1-hour average concentration of unionized ammonia of 0.233 mg/L. The objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The 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 amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The objectives 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.

Data for ammonia from the Facility is not available to determine if effluent limitations would be necessary to protect water quality. Thus, no effluent limitation for ammonia is included in this Order; however, monitoring for ammonia has been established for both effluent and receiving waters. The Regional Water Board reserves the right to reopen the permit if effluent or receiving water data indicate that an effluent limitation for ammonia is appropriate.

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 C.F.R. § 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 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. Watershed Management Approach

The Regional Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed management may include 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 Board's "many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and non-point 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, respectively, 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).

E. 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 TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

On June 28, 2007, USEPA gave final approval to California's 2006 section 303(d) List of Water Quality Limited Segments. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2006 303(d) list and have been scheduled for TMDL development. The 2006 State Water Board's California 303(d) List classifies the Dominguez Channel Estuary (unlined portion below Vermont Ave.) as impaired due to ammonia, benthic community effects, benzo(a)pyrene (PAHs), benzo(a)anthracene,

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

chlordane (tissue), chrysene (C1-C4), coliform bacteria, DDT (tissue and sediment), dieldrin (tissue), lead (tissue), PCBs (polychlorinated biphenyls), phenanthrene, pyrene , and zinc (sediment). To date, no TMDLs have been approved for the Dominguez Channel Estuary and therefore, no conditions in the Order are based on TMDLs.

F. 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 (CFR): 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 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 are regulated in the Basin Plan or CTR and were detected in the effluent, as well as pollutants listed in the 303(d) List for the Dominguez Channel Estuary and pollutants that commonly occur at similar Facilities. The Facility produces primarily gasoline and diesel fuels. As reported in the permit renewal application, storm water generated in the tank farm and the process areas may be discharged through Discharge Point Nos. 001 and 003 to the Dominguez Channel Estuary. The storm water may come in contact with the raw materials and the products, which consist of several organic and inorganic compounds. Therefore, the pollutants of concern for this type of discharge include: anthracene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenzo(a)anthracene; indeno(1,2,3-cd)pyrene; fluorene; pyrene; arsenic; cadmium; copper; lead; mercury; nickel; selenium; silver; thallium; zinc, cyanide, and total petroleum hydrocarbons. The storm water may also come in contact with roads, buildings, and service areas.

Solids and oil and grease are typical pollutants found in storm water discharges from industrial facilities. Based on the type of operation, the Facility is categorized as a cracking refinery as defined in 40 CFR part 419.20, which sets effluent limitations for pH, BOD, COD, TSS, oil and grease, phenolic compounds, total chromium, and hexavalent chromium for contaminated storm water runoff; therefore, they are considered pollutants of concern. The previous permit established effluent limitations for storm water discharge for all of the above pollutants of concern.

The multitude of potential pollutants found at the Facility present a potential for aggregate toxic effects to occur. Acute and chronic toxicity are considered pollutants of concern for evaluation of narrative Basin Plan Objectives.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. However,

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 new mass based limits at Discharge Point Nos. 001 and 003.

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 they are consistent with the requirements set for other discharges regulated by NPDES permit to the Dominguez Channel Estuary.

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 effluent limitations, guidelines and standards (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 best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in part 125.3.

2. Applicable Technology-Based Effluent Limitations

The Los Angeles Refinery is categorized as a cracking refinery as defined in 40 CFR part 419.20 (Effluent Limitation Guidelines and Standards for the Petroleum Refining Point Source Category). Effluent limitation guidelines (ELGs) for contaminated runoff (storm water commingled with process water) have been established for this category, representing BPT, BCT, and BAT. The BPT, BAT, and BCT effluent limitations in 40 CFR parts 419.22, 419.23, and 419.24 are the same or less stringent than the effluent limitations set forth in the existing Order and have been carried over from Order No. R4-2005-0059. The average monthly effluent limitation (AMEL) for BOD and the AMEL and the maximum daily effluent limitation (MDEL) for TSS in Order No. R4-2005-0059 are BPJ technology-based effluent limits, and are more stringent than the applicable ELGs. These more stringent limitations are carried over in this Order. The effluent limitation for total petroleum hydrocarbons is a BPJ technology-based limitation, commonly applied to permits for similar facilities within the Region, and is carried over from Order No. R4-2005-0059.

The previous Order required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) and address storm water runoff to the Dominguez Channel Estuary. This Order will require the Discharger to update and continue to implement, consistent with the existing Order requirements, a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into surface waters. Storm water discharges occur at the Facility and Best Management Practices (BMPs) are identified as one method to reduce contamination of the storm water.

The storm water runoff at the Facility has the potential to come in contact with pollutants associated with industrial activity; therefore, pursuant to 40 CFR part 122.44(k), the SWPPP shall also contain BMPs for discharges through Discharge Point Nos. 001 and 003. The Discharger shall address specific areas that are considered sources of pollutants, including, but not limited to, the tank farm and refinery process areas, and boiler blowdown and cooling tower blowdown wastewaters discharged through Discharge Point No. 003. The BMPs shall include measures to minimize the amount of pollutants entering the discharge.

Table F-4. Summary of Technology-based Effluent Limitations - 001 and 003

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	s.u.	Between 6.0 and 9.0 [1]	
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) [2]	lbs/1,000 gallons per day of storm water runoff	0.21	0.40
Chemical Oxygen Demand (COD)		1.5	3.0
Total Suspended Solids (TSS)		0.14	0.24
Oil and Grease		0.067	0.13
Phenolic Compounds		0.0014	0.0029
Total Chromium		0.0018	0.0050
Hexavalent Chromium		0.00023	0.00052
Total Petroleum Hydrocarbons	mg/L	--	100

[1] The effluent limitations for pH in this Order is based on the Basin Plan (between 6.5 to 8.5) that is more stringent than that in the ELGs.

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, 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).

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.

Priority pollutant water quality criteria in the CTR are applicable to the Dominguez Channel Estuary. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with part 131.38(c)(3), *"(1) freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; (2) saltwater criteria apply at salinities of 10 parts per thousand (ppt) and above at locations where this occurs 95% or more of the time; and (3) at salinities between 1 and 10 parts per thousand the more stringent of the two apply unless EPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment."* Salinity was measured at locations upstream and downstream of the Facility as part of the Surface Water Ambient Monitoring Program (SWAMP). The downstream salinity was measured at 18 ppt and the upstream salinity was measured at 22 ppt, indicating that saltwater criteria would apply at the location of the discharges from the Facility.

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. 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 storm water discharges during the previous permit term, thus, there was insufficient data available to conduct a complete RPA. However, based on the type of discharge (Trigger 3 of the SIP) from the Facility, this Order prescribed WQBELs for toxics that contained effluent limitations in Order No. R4-2005-0059, except for anthracene. Order No. 2005-0059 included an effluent limitation of 110 µg/L for anthracene. Regional Water Board staff discovered that this limitation, 110 µg/L was a typographical error. According to the CTR, the applicable criterion for anthracene is 110,000 µg/L. Since the CTR criterion for anthracene is 1000 times more than the effluent limitation in the previous permit, and there were no available data to determine the reasonable potential for this pollutant, the effluent limitation for anthracene has been removed in this Order. The removal of the effluent limitation for anthracene is consistent with the exceptions in part 122.44(l)(2)(i)(B)(2). This Order requires the Discharger to continue to monitor for these pollutants, to provide data to evaluate reasonable potential in the future.

These WQBELs are also deemed necessary to comply with antibacksliding provisions.

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 wasteload allocation (WLA) established as part of a total maximum daily load (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. R4-2005-0059) included both AMELs and instantaneous maximum for metals (i.e., arsenic, cadmium,

copper, lead, mercury, nickel, selenium, zinc), and cyanide. It also included only an instantaneous maximum for silver. For thallium, it included only an AMEL. Order No. R4-2005-0059 included only MDELs for benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, pyrene, and fluorine.

This Order included AMELs and MDELs for metals and other pollutants mentioned above. The AMELs and MDELs. were calculated based on Section 1.4 of the SIP using the steady-state model.

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 tentative Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. WQBELs Calculation Example

Using silver at Discharge Point No. 003 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 using the process described below.

Concentration-Based Effluent Limitations

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

Calculation of aquatic life AMEL and MDEL:

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

$ECA = C + D(C-B)$ 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. In this Order a hardness value of 350 mg/L (as $CaCO_3$) was used for development of hardness-dependant criteria, and a pH of 7.6 was used for pH-dependant criteria.
D = The dilution credit, and
B = The ambient background concentration

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

ECA = C

For silver, the applicable water quality criterion is a chronic objective of 2.2 µg/L:

ECA_{acute}= 2.2 µg/L
$ECA_{chronic}$= No Chronic Criteria

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 silver, the following data was 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):

No. of Samples	CV	ECA Multiplier$_{acute\ 99}$	ECA Multiplier$_{chronic\ 99}$
4	0.6	0.32	0.53

LTA_{acute} = 2.2 µg/L x 0.32 = 0.72 µg/L

$LTA_{chronic}$ = No ECAchronic, therefore; no LTA chronic can be calculated

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

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

For silver, the most limiting LTA was the LTA_{acute}

LTA = 0.72 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as an AMEL and an 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 coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

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

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

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

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

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

$AMEL_{aquatic\ life} = 0.72 \times 1.55 = 1.1\ \mu g/L$

$MDEL_{aquatic\ life} = 0.72 \times 3.11 = 2.2\ \mu g/L$

Calculation of human health AMEL and MDEL:

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

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

However, for silver, $ECA_{human\ health}$ = Not Available. The CTR does not contain a numeric silver criterion protective of human health; therefore, no AMEL was developed for silver based on human health criteria.

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 benzo(a)anthracene at Discharge Point No. 003, 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	2.01

$$MDEL_{human\ health} = 0.049\ \mu g/L \times 2.01 = 0.098\ \mu g/L$$

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

For silver:

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
1.1	2.2	Not Applicable	Not Applicable

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For silver, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. For thallium, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, pyrene, and fluorine, there are no aquatic life criteria; therefore, the AMEL or MDEL based on the human health criteria are established as the WQBELs. These limits will be protective of aquatic life.

e. Expression of WQBELs

NPDES regulations at 40 CFR 122.45(d) require that all effluent limitations be expressed, unless impracticable, as both maximum daily and average monthly effluent limits (MDEL and AMEL). Order No. R4-2005-0059 contained effluent limitations for arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, zinc, and cyanide that were expressed as instantaneous maximums for Discharge Point Nos. 001 and 003. NPDES regulations in 40 CFR 122.45(d) require that all effluent limits, unless impracticable, be expressed in terms of monthly average and daily maximum. Therefore, the AMELs and MDELs were included for metals, and benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, pyrene, and fluorine for Discharge Point Nos. 001 and 003.

5. WQBELS based on Basin Plan Objectives

The Basin Plan states that the discharge shall not cause the following in the Dominguez Channel Estuary.

- "*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."*

- *"the mean annual dissolved oxygen concentration of all waters 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".*

To meet the water quality objectives in the Basin Plan and to protect the beneficial uses of the receiving water, the above requirements are included as effluent or receiving water limitations in the Order.

Other constituents addressed in the Basin Plan were evaluated as follows:

a. **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 tentative order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The survey yielded results that indicated that the 86°F temperature was protective of aquatic life.

b. **Bacteria**. The Basin Plan Objective for bacteria In marine water designated for water contact recreation (REC-1), are as follows:

1. Geometric Mean Limits:

   i. Total coliform density shall not exceed 1,000/100 ml.

   ii. Fecal coliform density shall not exceed 200/100 ml.

   iii. Enterococcus density shall not exceed 35/100 ml.

2. Single Sample Maximum (SSM) Limits

   i. Total coliform density shall not exceed 10,000/100 ml.

   ii. Fecal coliform density shall not exceed 400/100 ml.

   iii. Enterococcus density shall not exceed 104/100 ml.

iv. Total coliform density shall not exceed 1,000/100 ml, when the fecal coliform/total coliform ratio exceeds 0.1.

The Facility does not engage in activities that are known to generate large amounts of bacteria; therefore no effluent limitations for bacteria are included in this Order, however, bacteria are a common pollutant in storm water runoff. In addition, the Dominguez Channel is identified as being impaired due to coliform bacteria. Because of the water quality concerns associated with bacteria within this receiving water, new monitoring requirements for total coliform, fecal coliform, and enterococcus bacteria are included in this Order.

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.

a. Acute Toxicity Limitation:

This Order includes acute toxicity limitations and requires acute toxicity monitoring. In accordance with the Basin Plan, 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. Acute toxicity provisions in the Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate acute toxicity monitoring, take actions to identify the source of toxicity, and to reduce acute toxicity if the applicable objectives are exceeded.

b. Chronic Toxicity Trigger and Requirements:

This Order includes a new chronic toxicity trigger and associated monitoring requirements. 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 of the nature of operations and the multitude of potential pollutants found at the Facility there is a potential for aggregate toxic effects to occur. Chronic toxicity is considered pollutant of concern. Therefore, the Discharger is required to conduct chronic toxicity testing. This Order also includes a chronic testing trigger hereby defined as an exceedance of 1.0 toxic units chronic (TU_c) in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TU_c, the

Discharger will be required to immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program, Item IV.B.2.b. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a toxicity identification evaluation (TIE).

7. Numeric Criterion for TCDD Equivalents:

The CTR establishes a numeric water quality objective for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of 1.4×10^{-8} 'AWL for the protection of human health, when aquatic organisms are consumed. When CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. For California waters, USEPA stated specifically, "if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limitations for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme" [65 Fed. Reg. 31682, 31695 (2000)]. This procedure, developed by the World Health Organization (WHO) in 1988, uses a set of toxicity equivalency factors (TEFs) to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-TCDD. When the CTR was promulgated, USEPA also stated that the Agency will continue to assess the risks posed by dioxin to public health and the water quality criteria for dioxin that it had promulgated. To determine if the discharge of dioxin or dioxin-like compounds from the Facility has reasonable potential to cause or contribute to a violation of the Basin Plan's narrative water quality objective regarding bioaccumulation, Regional Water Board staff has therefore used TEFs to express the measured concentrations of 16 dioxin congeners in effluent and background samples as 2,3,7,8-TCDD. These "equivalent" concentrations are then compared to the numeric criterion, established by the CTR for 2,3,7,8-TCDD of 1.4×10^{-8} 'AWL.

Dioxin-TEQ values reflect the combined effect of numerous dioxin and furan compounds (congeners). The effluent limits implement the *Los Angles Region (Region 4) Water Quality Control Plan's* (Basin Plan's) bioaccumulation objective:

> *Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.*

According to 40 CFR 122.44(d), where reasonable potential exists for a discharge to cause or contribute to violations of water quality 'objectives, water quality-based effluent limits must be established. If the potentially violated objective is narrative, the narrative objective must be translated into an effluent limitation. The dioxin-TEQ effluent limitations in the permit are numeric translations of the Basin Plan narrative bioaccumulation objective.

The translations are based on relevant scientific information used to weight the congener concentrations with respect to their relative toxicities compared to the toxicity of a particular dioxin congener: 2,3,7,8-tetrachlorinated dibenzo-p-dioxin

(2,3,7,8-TCDD). The World Health Organization developed toxicity equivalency factors (TEFs) to convert congener concentrations into equivalent concentrations of 2,3,7,8-TCDD, which when added together are expressed as dioxin-TEQ. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy) specifies that the World Health Organization's 1998 TEFs are to be used to calculate dioxin-TEQ. To complete the translation of the Basin Plan's narrative bioaccumulation objective into a numeric effluent limit, dioxin-TEQ limits are derived from the California Toxic Rule (40 CFR 131) numeric water quality objective for 2,3,7,8-TCDD (numeric objectives do not exist for the other congeners).

In February 2008, the San Francisco Estuary Institute convened an expert panel to provide an unbiased review and analysis of available information regarding San Francisco Bay dioxins and furans. Representatives of the Regional Water Board, the U.S. Environmental Protection Agency, the Bay Area Clean Water Agencies, and others with expertise in the field participated. The panel's recommendations included the following:

- Apply both TEFs and BEFs to dioxin and furan concentrations when calculating dioxin-TEQ; and
- Do not use dioxin and furan congener concentrations reported below MLs when computing dioxin-TEQ.

Bioaccumulation Equivalency Factors

The different dioxin and furan congeners exhibit different levels of toxicity, they also exhibit different levels of bioaccumulation potential. To account for the different levels of bioaccumulation' potential, each congener may be assigned a bioaccumulation equivalency factor (BEF) relative to 2,3,7,8-TCDD. This is comparable to the TEFs that account for relative differences in toxicities. The BEFs shown in Table F-7 correspond to the differences in biological uptake from the water column for the various dioxin congeners. They come from the Great Lakes Water Quality Initiative.

In 1995, the U.S. Environmental Protection Agency adopted the approach of using both TEFs and BEFs to calculate dioxin-TEQ for the Great Lakes System (40 CFR 132, Appendix F). In the absence of site-specific BEFs, the U.S. Environmental Protection Agency supports the use of national BEFs, stating, "...EPA believes that national bioaccumulation factors are broadly applicable to sites throughout the United States and can be applied to achieve an acceptable degree of accuracy when estimating bioaccumulation potential at most sites." In its Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine Bioaccumulation Factors (EPA-820-B-95-005), the U.S. Environmental Protection Agency states, "Limited comparison to BEFs calculated from data obtained for other ecosystems confirms these bioacculnulation potential differences for [dioxins and furans] for fish in ecosystems outside the Great Lakes." Recently, the U.S. Environmental Protection Agency and the Regional Water Board incorporated the national BEFs into the dioxin-TEQ calculations required for the NPDES permit for the

City and County of San Francisco's Oceanside Water Pollution Control Plant (Order Number R2-2009-062).

The San Francisco Estuary Institute's expert panel concluded that, if suitable data are unavailable to derive site-specific BEFs for the San Francisco Bay Region, use of the BEFs derived for the' Great Lakes System is preferable to omitting BEFs altogether. The panel concluded that, because BEFs for the congeners most commonly detected in wastewater can be as low as 0.01, calculating dioxin-TEQ without BEFs (the current practice) may mischaracterize the significance of dioxin and furan discharges by as much as two orders of magnitude. Therefore, for the purpose of determining compliance with effluent limits, this Order requires the Dischargers to calculate and report dioxinTEQ using the following formula, where the TEFs and BEFs are as listed in Table F-5:

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

where: C_x = concentration of dioxin or furan congener x
TEF_x = TEF for congener x
BEF_x = BEF for congener x

Table F-5. Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	1.0	1.0
1,2,3,7,8-PeCDD	1.0	0.9
1,2,3,4,7,8-HxCDD	0.1	0.3
1,2,3,6,7,8-HxCDD	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.05
O C D D	0.0001	0.01
2,3,7,8-TCDF	0.1	0.8
1,2,3,7,8-PeCDF	0.05	0.2
2,3,4,7,8-PeCDF	0.5	1.6
1,2,3,4,7,8-HxCDF	0.1	0.08
1,2,3,6,7,8-HxCDF	0.1	0.2
1,2,3,7,8,9-HxCDF	0.1	0.6
2,3,4,6,7,8-HxCDF	0.1	0.7
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.4
OCDF	0.0001	0.02

Minimum Levels

For purposes of laboratory analysis, reporting, and compliance, the minimum level (ML) is the concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. Below the ML, detected concentrations can sometimes be estimated, but not with sufficient analytical confidence for regulatory compliance purposes. Currently, the Dischargers analyze dioxin and furan congeners in wastewater using the latest version of U.S. Environmental Protection Agency Method 1613 (Tetra- through OctaChlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, USEPA 1994). Many permits set forth the dioxin and furan MLs for reporting and compliance purposes as equal to one half the default MLs specified in Method 1613. This Order revises the dioxin and furan MLs to be consistent among all permits and with Method 1613.

This Order also requires the Dischargers to exclude estimated congener concentrations below MLs when calculating dioxin-TEQ for the purpose of determining compliance with effluent limits. When a dioxin or furan congener is detected below its ML, its concentration could be as high as the ML or as low as zero. Dioxin and furan concentrations measured in effluent using high-volume screening techniques have often been orders of magnitude lower than Method 1613's default MLs. Therefore, the San Francisco Estuary Institute's expert panel concluded that assuming congeners detected below MLs are present at concentrations equal to the MLs (or one half the MLs) probably mischaracterizes the significance of dioxin and furan discharges by orders of magnitude. Moreover, when calculating dioxin-TEQ, the errors associated with adding multiple estimated values compound, resulting in values too uncertain for regulatory compliance purposes. Excluding values below MLs when adding multiple data points is consistent with how the U.S. Environmental Protection Agency directs dischargers to calculate averages when some data are below practical quantitation limits (comparable to MLs). When adding values to determine averages, data points below the practical quantitation limit are to be treated as zeros ("Instructions for Completing EPA Form 3320-1" [Rev. 01/06]).

Although this Order revises the dioxin and furan MLs, the Dischargers must continue to report all measured and estimated congener concentrations with appropriate data qualifiers.

8. Final WQBELs

Table F-6. Summary of Water Quality-based Effluent Limitations – Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum
Temperature	°F	--	--	--	86
pH	s.u.	--	--	6.5	8.5
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day[1]	1.08	2.13	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum
Cadmium, Total Recoverable	µg/L	8	15	--	--
	lbs/day[1]	0.29	0.54	--	--
Copper, Total Recoverable	µg/L	3	6	--	--
	lbs/day[1]	0.11	0.22	--	--
Lead, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.25	0.51	--	--
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--
	lbs/day[1]	0.002	0.004	--	--
Nickel, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.25	0.51	--	--
Selenium, Total Recoverable	µg/L	58	117	--	--
	lbs/day[1]	2.09	4.22	--	--
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day[1]	0.04	0.08	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day[1]	0.23	0.47	--	--
Zinc, Total Recoverable	µg/L	47	95	--	--
	lbs/day[1]	1.69	3.42	--	--
Cyanide	µg/L	0.5	1	--	--
	lbs/day[1]	0.02	0.04	--	--
Benzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Benzo(a)pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Chrysene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Dibenzo(a,h)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Indeno (1,2,3-cd)pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.004	--	--
Pyrene	µg/L	11,000	22,068	--	--
	lbs/day[1]	396	795	--	--
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day[1]	504	1,012	--	--
Acute Toxicity	% survival	--	[3]	---	--
Chronic Toxicity	TU_c	--	[4]	--	--

[1] The mass emissions rate (lbs/day) is based on a maximum flow of 4.32 mgd and is calculated as follows:

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

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

[2] The WQBELs (AMELs and MDELs) are based on the Section 1.4 of the SIP.

[3] 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 producing less than 70% survival.

[4] Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.). If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.B of the MRP, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B.2.b. of the MRP, Attachment E).

Table F-7. Summary of Water Quality-based Effluent Limitations – Discharge Point No. 003

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum
Temperature	°F	--	--	--	86
pH	s.u.	--	--	6.5	8.5
Arsenic, Total Recoverable	µg/L	30	59	--	--
	lbs/day[1]	1	2	--	--
Cadmium, Total Recoverable	µg/L	8	15	--	--
	lbs/day[1]	0.27	0.50	--	--
Copper, Total Recoverable	µg/L	3	6	--	--
	lbs/day[1]	0.10	0.20	--	--
Lead, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.23	0.47	--	--
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--
	lbs/day[1]	0.002	0.003	--	--
Nickel, Total Recoverable	µg/L	7	14	--	--
	lbs/day[1]	0.23	0.47	--	--
Selenium, Total Recoverable	µg/L	58	117	--	--
	lbs/day[1]	1.94	3.90	--	--
Silver, Total Recoverable	µg/L	1.1	2.2	--	--
	lbs/day[1]	0.037	0.073	--	--
Thallium, Total Recoverable	µg/L	6.3	13	--	--
	lbs/day[1]	0.21	0.43	--	--
Zinc, Total Recoverable	µg/L	47	95	--	--
	lbs/day[1]	1.57	3.17	--	--
Cyanide	µg/L	0.5	1	--	--
	lbs/day[1]	0.017	0.03	--	--
Benzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Benzo(a)pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Chrysene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Dibenzo(a)anthracene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Indeno (1,2,3-cd) pyrene	µg/L	0.049	0.098	--	--
	lbs/day[1]	0.002	0.003	--	--
Pyrene	µg/L	11,000	22,068	--	--
	lbs/day[1]	367	736	--	--
Fluorene	µg/L	14,000	28,087	--	--
	lbs/day[1]	467	937	--	--
Acute Toxicity	% survival	--	[3]	--	--
Chronic Toxicity	TU_c	--	[4]	--	--

[1] The mass emissions rate is based on a maximum flow of 4.0 mgd and is calculated as follows:

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

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

[2] The WQBELs (AMELs and MDELs) are based on Section 1.4 of the SIP.

[3] 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 producing less than 70% survival.

[5] Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.). If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.B of the MRP, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B.2.b. of the MRP, Attachment E).

D. Final Effluent Limitations

Section 402(o) of the CWA and 40 CFR section 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. Effluent limitations for the following constituents are carried over from Order No. R4-2005-0059:

- pH
- temperature
- acute toxicity
- BOD
- COD

- TSS
- oil and grease
- phenolic compounds
- total chromium
- hexavalent chromium
- arsenic
- cadmium
- copper
- lead
- mercury
- nickel
- selenium
- silver
- thallium
- zinc
- cyanide
- benzo(a)anthracene (1,2-benzanthracene)
- benzo(b)anthracene (3,4-benzofluoranthene)
- benzo(k)fluoranthene
- benzo(a)pyrene
- chrysene
- dibenzo(a)anthracene
- indeno(1,2,3-cd)pyrene
- pyrene
- fluorene
- total petroleum hydrocarbons

Removal of these numeric limitations would constitute backsliding under CWA section 402(o). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility and that backsliding is not appropriate. Receiving water limitations for ammonia have been modified in this Order to reflect amendments to the Basin Plan.

1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order (No. R4-2005-0059) with the exception of the effluent limitation for anthracene. The effluent limitation for this pollutant has been removed from this Order. This relaxation of effluent limitation is consistent with the anti-backsliding requirements of the CWA and federal regulations. According to 40 CFR 122.44(l)(2), effluent limitations may be less stringent than in the previous order when the Administrator determines that technical mistakes were made in issuing the permit.

The previous permit (Order No. 2005-0059) included an effluent limitation of 110 µg/L for anthracene. Regional Water Board staff discovered that this limitation, 110 µg/L was a typographical error. According to the CTR, the applicable numeric criterion for

anthracene is 110,000 µg/L. Since the CTR criterion for anthracene is 1000 times more than the effluent limitation in the previous permit, and there were no available data to determine the reasonable potential for this pollutant, the effluent limitation for anthracene has been removed in this Order. The removal of the effluent limitation for anthracene is consistent with the exceptions in part 122.44(l)(2)(i)(B)(2).

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.

This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final limitations in this Order hold the Discharger to performance levels that will not cause or contribute to water quality impairment or water quality degradation. Therefore, this Order is consistent with the antidegradation provision of Part 131.12 and State Board Resolution No. 68-16.

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 pH, BOD, COD, TSS, oil and grease, phenolic compounds, total chromium, and hexavalent chromium. Restrictions on these pollutants are discussed in IV.B. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

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

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

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	s.u	--	--	6.5	8.5	E[1], BP[2]
Temperature	°F	--	--	--	86	TP[3]
BOD (5-day @ 20 Deg. C)	lbs/1,000 gallons per day of storm water runoff	0.21	0.40	--	--	E[1], BPJ[4], BPT[5,6]
COD		1.5	3.0	--	--	E[1], BPT[3]
TSS		0.14	0.24	--	--	E[1]
Oil and Grease		0.067	0.13	--	--	E[1], BPT[3]
Phenolic Compounds		0.0014	0.0029	--	--	E[1], BPT[3]
Total Chromium		0.0018	0.0050	--	--	E[1], BAT[7]
Hexavalent Chromium		0.00023	0.00052	--	--	E[1], BPT[3]
Arsenic, Total Recoverable	µg/L	30	59	--	--	CTR, SIP[9]
	lbs/day[8]	1.08	2.13	--	--	
Cadmium, Total Recoverable	µg/L	8	15	--	--	CTR, SIP[9]
	lbs/day[8]	0.29	0.54	--	--	
Copper, Total Recoverable	µg/L	3	6	--	--	CTR, SIP[9]
	lbs/day[8]	0.11	0.22	--	--	
Lead, Total Recoverable	µg/L	7	14	--	--	CTR, SIP[9]
	lbs/day[8]	0.25	0.51	--	--	
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Nickel, Total Recoverable	µg/L	7	14	--	--	CTR, SIP[9]
	lbs/day[8]	0.25	0.51	--	--	
Selenium, Total Recoverable	µg/L	58	117	--	--	CTR, SIP[9]
	lbs/day[8]	2.09	4.22	--	--	
Silver, Total Recoverable	µg/L	1.1	2.2	--	--	CTR, SIP[9]
	lbs/day[8]	0.04	0.08	--	--	
Thallium, Total Recoverable	µg/L	6.3	13	--	--	CTR, SIP[9]
	lbs/day[8]	0.23	0.47	--	--	
Zinc, Total Recoverable	µg/L	47	95	--	--	CTR, SIP[9]
	lbs/day[8]	1.69	3.42	--	--	
Cyanide	µg/L	0.5	1	--	--	CTR, SIP[9]
	lbs/day[8]	0.02	0.04	--	--	
Benzo(a)anthra-cene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Benzo(b)fluoran-thene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Benzo(k)fluoran-thene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Benzo(a)pyrene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Chrysene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Dibenzo(a)anthra-cene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Indeno (1,2,3-cd) pyrene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.004	--	--	
Pyrene	µg/L	11,000	22,068	--	--	CTR, SIP[9]
	lbs/day[8]	396	795	--	--	
Fluorene	µg/L	14,000	28,087	--	--	CTR, SIP[9]
	lbs/day[8]	504	1,012	--	--	
Total Petroleum Hydrocarbons	µg/L	--	100	--	--	E[1], BPJ[4]
	lbs/day[8]	--	3.60	--	--	
Acute Toxicity	TUa	--	[10]	---	--	E[1]
Chronic Toxicity	TU_c	--	[11]	--	--	SIP[11]

1 E = Limitation carried over from Order No. R4-2005-0059

2 BP = Based on the Los Angeles Regional Water Quality Control Board (RB4) Basin Plan

3 TP = Based on the California Thermal Plan.

4 BPJ = Based on best professional judgment (BPJ) in accordance with 40 CFR Section 125.3

5 5-day Biochemical Oxygen Demand at 20° C; only MDEL (not AMEL) of BOD is based on BPT guidelines.

6 BPT = Based on best practicable control technology currently available (BPT) in accordance with 40 CFR Section 419.22

7 BAT = Based on best available technology economically achievable (BAT) in accordance with 40 CFR Section 419.23

8 The mass emissions rate is based on a maximum flow of 4.32 mgd for Discharge Point No. 001 and is calculated as follows:

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

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

9 CTR, SIP – California Toxic Rule, State Implementation Policy (Section 1.4)

10 There shall be no acute toxicity in the discharge. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%) and no single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in Attachment E (defined in Section V.A of the MRP).

11 SIP- State Implementation policy. Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where TU_c = 100/NOEC. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.). If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.B of the MRP, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B.2.b. of the MRP, Attachment E).

Table F-9. Summary of Final Effluent Limitations – Discharge Point No. 003

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	s.u	--	--	6.5	8.5	E[1], BP[2]
Temperature	°F	--	--	--	86	TP[3]
BOD (5-day @ 20 Deg. C)	lbs/1,000 gallons per day of storm water runoff	0.21	0.40	--	--	E[1], BPJ[4], BPT[5,6]
COD		1.5	3.0	--	--	E[1], BPT[3]
TSS		0.14	0.24	--	--	E[1]
Oil and Grease		0.067	0.13	--	--	E[1], BPT[3]
Phenolic Compounds		0.0014	0.0029	--	--	E[1], BPT[3]
Total Chromium		0.0018	0.0050	--	--	E[1], BAT[7]
Hexavalent Chromium		0.00023	0.00052	--	--	E[1], BPT[3]
Arsenic, Total Recoverable	µg/L	30	59	--	--	CTR, SIP[9]
	lbs/day[8]	1	2	--	--	
Cadmium, Total Recoverable	µg/L	8	15	--	--	CTR, SIP[9]
	lbs/day[8]	0.27	0.50	--	--	
Copper, Total Recoverable	µg/L	3	6	--	--	CTR, SIP[9]
	lbs/day[8]	0.10	0.20	--	--	
Lead, Total Recoverable	µg/L	7	14	--	--	CTR, SIP[9]
	lbs/day[8]	0.23	0.47	--	--	
Mercury, Total Recoverable	µg/L	0.05	0.102	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Nickel, Total Recoverable	µg/L	7	14	--	--	CTR, SIP[9]
	lbs/day[8]	0.23	0.47	--	--	
Selenium, Total Recoverable	µg/L	58	117	--	--	CTR, SIP[9]
	lbs/day[8]	1.94	3.90	--	--	
Silver, Total Recoverable	µg/L	1.1	2.2	--	--	CTR, SIP[9]
	lbs/day[8]	0.037	0.073392	--	--	
Thallium, Total Recoverable	µg/L	6.3	13	--	--	CTR, SIP[9]
	lbs/day[8]	0.21	0.43	--	--	
Zinc, Total Recoverable	µg/L	47	95	--	--	CTR, SIP[9]
	lbs/day[8]	1.57	3.17	--	--	
Cyanide	µg/L	0.5	1	--	--	CTR, SIP[9]
	lbs/day[8]	0.017	0.03	--	--	
Benzo(a)anthracene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Benzo(b)fluoranthene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Benzo(k)fluoranthene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Benzo(a)pyrene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Chrysene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Dibenzo(a)anthracene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Indeno (1,2,3-cd) Pyrene	µg/L	0.049	0.098	--	--	CTR, SIP[9]
	lbs/day[8]	0.002	0.003	--	--	
Pyrene	µg/L	11,000	22,068	--	--	CTR, SIP[9]
	lbs/day[8]	367	736	--	--	
Fluorene	µg/L	14,000	28,087	--	--	CTR, SIP[9]
	lbs/day[8]	467	937	--	--	
Total Petroleum Hydrocarbons	µg/L	--	100	--	--	E[1], BPJ[5]
	lbs/day[8]	--	3.3	--	--	
Acute Toxicity	TUa	--	[10]	--	--	E[1]
Chronic Toxicity	TU_c	--	[11]	--	--	SIP[11]

1 E = Limitation carried over from Order No. R4-2005-0059

2 BP = Based on the Los Angeles Regional Water Quality Control Board (RB4) Basin Plan

3 TP = Based on the California Thermal Plan.

4 BPJ = Based on best professional judgment (BPJ) in accordance with 40 CFR Section 125.3

5 5-day Biochemical Oxygen Demand at 20° C; only MDEL (not AMEL) of BOD is based on BPT guidelines.

6 BPT = Based on best practicable control technology currently available (BPT) in accordance with 40 CFR Section 419.22

7 BAT = Based on best available technology economically achievable (BAT) in accordance with 40 CFR Section 419.23

8 The mass emissions rate is based on a maximum flow of 4.0 mgd for Discharge Point No. 003 and is calculated as follows:

Mass 9lbs/day) = Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor)

The actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

9 CTR, SIP - California Toxic Rule, State Implementation Policy (Section 1.4).

10 There shall be no acute toxicity in the discharge. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%) and no single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in Attachment E (defined in Section V.A. of the MRP).

11 SIP- State Implementation Policy. Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.). If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.B of the MRP, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B.2.b. of the MRP, Attachment E).

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 (lbs/day) = mass limitation for a pollutant (lbs/day)
Effluent limitation = concentration limit for a pollutant (mg/L)
Flow rate = discharge flow rate (mgd)

Flow rates of 4.32 mgd and 4.0 mgd were used to calculate the mass-based effluent limitations for Discharge Point Nos. 001 and 003, respectively.

The actual mass shall be calculated based on the actual measured flow of the discharge.

E. Interim Effluent Limitations

Not Applicable

F. Land Discharge Specifications

Not Applicable

G. Reclamation Specifications

Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (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. This Order contains receiving water limitations for temperature, pH, dissolved oxygen, and ammonia that are carried over from R4-2005-0059.

As discussed in IV.C.5.b, the Dominguez Channel Estuary is identified on the 303(d) list as impaired for coliform bacteria. Because bacteria is a common pollutant in storm water runoff this Order includes new receiving water limitations for fecal coliform bacteria based on the Basin Plan objectives discussed in IV.C.5 of the Fact Sheet.

Order No. R4-2005-0059 contained a receiving water limitation for ammonia based on the Basin Plan amendment to the saltwater ammonia objectives (R4-2002-022). As discussed in III.C.3, Resolution No. R4-2004-022 amended the Basin Plan to include new

4-day average and 1-hour average objectives equal to 0.035 mg/L (un-ionized ammonia as N) and 0.233 mg/L (un-ionized ammonia as N). Resolution No. 2004-022 was approved by the Office of Administrative Law on September 15, 2004, and by USEPA on May 19, 2005. This Order updates the ammonia receiving water limit in R4-2005-0059 to reflect the Basin Plan amendment.

B. Groundwater

Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 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 (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 those pollutants expected to be present in the Monitoring Locations EFF-001 and EFF-003 at Discharge Point Nos. 001, and 003, respectively, will be required as shown in the proposed MRP. To determine compliance with effluent and receiving water limitations, the proposed monitoring plan carries forward monitoring requirements from previous Order No. R4-2005-0059, with some modifications.

Order No. R4-2005-0059 requires the Discharger to monitor flow at Discharge Point Nos. 001 and 003 at a frequency of once per discharge event, with a maximum frequency of once per month. This Order requires flow to be measured on a daily basis when discharges occur at Discharge Point Nos. 001 and 003. The increased frequency is necessary to establish better characterization of the amount of storm water and commingled storm water discharged to the receiving water. In addition, daily flow values are necessary for compliance determination with mass-based limits.

As discussed in Section IV.C.5, the Dominguez Channel Estuary is identified on the 2006 303(d) list as impaired due to coliform bacteria. In order to determine whether the storm water discharged from the Facility is a source of coliform bacteria, this Order includes new requirements to monitor for bacteria at a frequency of once per discharge with a maximum frequency of once per week.

The 2006 303(d) list also identifies the Dominguez Channel Estuary as impaired due to phenanthrene. Phenanthrene is a pollutant commonly found in petroleum refineries and is therefore a pollutant of concern. This Order includes a new monitoring requirement for

phenanthrene at a frequency of once per discharge with a maximum frequency of once per month.

According to the SIP, the Discharger is required to monitor the effluent for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct effluent monitoring of the CTR priority pollutants. The effluent monitoring requirements and frequencies of the priority pollutants in the proposed permit are carried over from the previous permit with respect to actual discharges through Discharge Point Nos. 001 and 003.

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 a new requirement to conduct chronic toxicity monitoring. This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated and in accordance with Section 4.0 of the SIP. Conditions include required monitoring and evaluation of the effluent for acute and chronic toxicity and numerical values for chronic toxicity evaluation to be used as 'triggers' for initiating accelerated monitoring and toxicity reduction evaluation(s).

D. Receiving Water Monitoring

1. Surface Water

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A.

2. Groundwater

Not Applicable

E. Other Monitoring Requirements

1. Rainfall and Visual Monitoring

Because the discharge is comprised primarily of storm water runoff that occurs only during heavy rainfall events, section VIII.B.1 requires the Discharger to measure and record the rainfall each day of the month. Similarly, section VIII.B.2 requires the Discharger to conduct visual observations of all discharges through Discharge Point No. 001 and Discharge Point No. 003 in the vicinity of the discharge to observe the

presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor.

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 part 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. **Chronic Toxicity Trigger.** This provision is based on section 4 of the SIP, Toxicity Control Provisions.

b. **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, consistent with the existing Order requirements, a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into

the storm drain. This provision is retained from Order No. R4-2005-0059, based on part 122.44(k) of 40 CFR.

b. **Best Management Practices (BMPs).** The previous Order required the Discharger to develop and implement BMPs for incorporation into the SWPPP. This Order will require the Discharger to update and continue to implement BMPs, consistent with the existing Order requirements. The BMP shall entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPs shall be consistent with the general guidance contained in the U.S. EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed or updated to determine the potential for hazardous or toxic waste/material discharge to surface waters. BMPs shall be included in the SWPPP.

c. **Spill Contingency Plan (SCP).** The previous Order required the Discharger to develop and implement a Spill Contingency Plan (SCP). Since spill or overflow may occur in the facility, this Order requires the Discharger to update and continue to implement a SCP for the Facility. The Discharger shall review and update, if necessary, the SCP 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 part 122.41(e) and the previous Order.

5. Other Special Provisions

Not Applicable

6. Compliance Schedules

Not Applicable

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Tesoro Refining and Marketing Company. 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 August 31, 2010.

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: October 7, 2010
Time: 9:00 A.M.
Location: City of Simi Valley City Council Chambers
2929 Tapo Canyon Road
Simi Valley, 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 August 31, 2010. Comments or evidence received after that date will only be included in administrative record with express approval of the Chair during the hearing, only upon a showing of good cause, and only if it will not prejudice any other party or Regional Water Board staff. 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 business 15 days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next scheduled meeting on November 4, 2010. A continuance will not extend any time set forth herein.

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 Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs 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 (other boiler blowdown and boiler condensate permitted under the Order) 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 8 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. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The

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

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

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consist 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		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		

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

Table 2d – PESTICIDES – PCBs*	GC
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]
10	Selenium	7782492	[1]
11	Silver	7440224	[1]
12	Thallium	7440280	[1]
13	Zinc	7440666	[1]
14	Cyanide	57125	[1]
15	Asbestos	1332214	[1]
16	2,3,7,8-TCDD	1746016	[1]
17	Acrolein	107028	[1]
18	Acrylonitrile	107131	[1]
19	Benzene	71432	[1]
20	Bromoform	75252	[1]
21	Carbon Tetrachloride	56235	[1]
22	Chlorobenzene	108907	[1]
23	Chlorodibromomethane	124481	[1]
24	Chloroethane	75003	[1]
25	2-Chloroethylvinyl Ether	110758	[1]
26	Chloroform	67663	[1]
27	Dichlorobromomethane	75274	[1]
28	1,1-Dichloroethane	75343	[1]
29	1,2-Dichloroethane	107062	[1]
30	1,1-Dichloroethylene	75354	[1]
31	1,2-Dichloropropane	78875	[1]
32	1,3-Dichloropropylene	542756	[1]
33	Ethylbenzene	100414	[1]
34	Methyl Bromide	74839	[1]
35	Methyl Chloride	74873	[1]
36	Methylene Chloride	75092	[1]
37	1,1,2,2-Tetrachloroethane	79345	[1]
38	Tetrachloroethylene	127184	[1]
39	Toluene	108883	[1]
40	1,2-Trans-Dichloroethylene	156605	[1]
41	1,1,1-Trichloroethane	71556	[1]
42	1,12-Trichloroethane	79005	[1]
43	Trichloroethylene	79016	[1]

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
44	Vinyl Chloride	75014	[1]
45	2-Chlorophenol	95578	[1]
46	2,4-Dichlorophenol	120832	[1]
47	2,4-Dimethylphenol	105679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	100027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	108952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	108601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	101553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	106467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]
86	Fluoranthene	206440	[1]
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]
96	N-Nitrosodimethylamine	62759	[1]
97	N-Nitrosodi-n-Propylamine	621647	[1]
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
100	Pyrene	129000	[1]
101	1,2,4-Trichlorobenzene	120821	[1]
102	Aldrin	309002	[1]
103	alpha-BHC	319846	[1]
104	beta-BHC	319857	[1]
105	gamma-BHC	58899	[1]
106	delta-BHC	319868	[1]
107	Chlordane	57749	[1]
108	4,4'-DDT	50293	[1]
109	4,4'-DDE	72559	[1]
110	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1031078	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1024573	[1]
119	PCB-1016	12674112	[1]
120	PCB-1221	11104282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11097691	[1]
125	PCB-1260	11096825	[1]
126	Toxaphene	8001352	[1]

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

ATTACHMENT J– CALCULATIONS OF AMELS AND MDELS

Fact Sheet Attachment J
Calculation of AMELs and MDELs (Per Sections 1.3 and 1.4 of SIP)

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)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only												
1	Antimony	ug/L								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	Exisitng Permit	yes	yes
3	Beryllium	ug/L		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	Exisitng Permit	yes	yes
5a	Chromium (III)			No Criteria						Narrative	No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
5b	Chromium (VI)	ug/L					1107.75	50.35		Narrative	50.35			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
6	Copper	ug/L	0.6				5.78	3.73			3.73			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
7	Lead	ug/L	0.6				220.82	8.52		Narrative	8.52			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
8	Mercury	ug/L	0.6				Reserved	Reserved		0.051	0.051			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
9	Nickel	ug/L	0.6				74.75	8.28		4600.00	8.28			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
10	Selenium	ug/L	0.6				290.58	71.14		Narrative	71.14			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
11	Silver	ug/L	0.6				2.24				2.24			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
12	Thallium	ug/L	0.6							6.30	6.30			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
13	Zinc	ug/L	0.6				95.14	85.62			85.62			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
14	Cyanide	ug/L	0.6				1.00	1.00		220000.00	1.00			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
15	Asbestos	Fibers/L	####	No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
16	2,3,7,8 TCDD	ug/L								0.000000014	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								780	780			N					No detected value of B, Step 7		Ud	No effluent data & no B
18	Acrylonitrile	ug/L								0.66	0.660			N					No detected value of B, Step 7		Ud	No effluent data & no B
19	Benzene	ug/L								71	71.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
20	Bromoform	ug/L								360	360.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
21	Carbon Tetrachloride	ug/L								4.4	4.40			N					No detected value of B, Step 7		Ud	No effluent data & no B
22	Chlorobenzene	ug/L								21000	21000			N					No detected value of B, Step 7		Ud	No effluent data & no B
23	Chlorodibromomethane	ug/L								34	34.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
27	Dichlorobromomethane	ug/L								46	46.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
29	1,2-Dichloroethane	ug/L								99	99.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
30	1,1-Dichloroethylene	ug/L								3.2	3.200			N					No detected value of B, Step 7		Ud	No effluent data & no B
31	1,2-Dichloropropane	ug/L								39	39.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
32	1,3-Dichloropropylene	ug/L								1700	1700			N					No detected value of B, Step 7		Ud	No effluent data & no B
33	Ethylbenzene	ug/L								29000	29000			N					No detected value of B, Step 7		Ud	No effluent data & no B
34	Methyl Bromide	ug/L								4000	4000			N					No detected value of B, Step 7		Ud	No effluent data & no B
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
36	Methylene Chloride	ug/L								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								11	11.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
38	Tetrachloroethylene	ug/L								8.85	8.9			N					No detected value of B, Step 7		Ud	No effluent data & no B
39	Toluene	ug/L								200000	200000			N					No detected value of B, Step 7		Ud	No effluent data & no B
40	1,2-Trans-Dichloroethylene	ug/L								140000	140000			N					No detected value of B, Step 7		Ud	No effluent data & no B
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
42	1,1,2-Trichloroethane	ug/L								42	42.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
43	Trichloroethylene	ug/L								81	81.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
44	Vinyl Chloride	ug/L								525	525			N					No detected value of B, Step 7		Ud	No effluent data & no B
45	2-Chlorophenol	ug/L								400	400			N					No detected value of B, Step 7		Ud	No effluent data & no B
46	2,4-Dichlorophenol	ug/L								790	790			N					No detected value of B, Step 7		Ud	No effluent data & no B
47	2,4-Dimethylphenol	ug/L								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								765	765.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
49	2,4-Dinitrophenol	ug/L								14000	14000			N					No detected value of B, Step 7		Ud	No effluent data & no B
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
51	4-Nitrophenol	ug/L		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		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
53	Pentachlorophenol	ug/L					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								4600000	4600000			N					No detected value of B, Step 7		Ud	No effluent data & no B
55	2,4,6-Trichlorophenol	ug/L								6.5	6.5			N					No detected value of B, Step 7		Ud	No effluent data & no B
56	Acenaphthene	ug/L								2700	2700			N					No detected value of B, Step 7		Ud	No effluent data & no B
57	Acenaphthylene	ug/L		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	Exisitng Permit	yes	yes
59	Benzidine	ug/L								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	Exisitng Permit	yes	yes
61	Benzo(a)Pyrene	ug/L	0.6							0.049	0.0490			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
62	Benzo(b)Fluoranthene	ug/L	0.6							0.049	0.0490			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
63	Benzo(ghi)Perylene	ug/L		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	Exisitng Permit	yes	yes
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
66	Bis(2-Chloroethyl)Ether	ug/L								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								170000	170000			N					No detected value of B, Step 7		Ud	No effluent data & no B
68	Bis(2-Ethylhexyl)Phthalate	ug/L								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		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
70	Butylbenzyl Phthalate	ug/L								5200	5200			N					No detected value of B, Step 7		Ud	No effluent data & no B
71	2-Chloronaphthalene	ug/L								4300	4300			N					No detected value of B, Step 7		Ud	No effluent data & no B
72	4-Chlorophenyl Phenyl Ether	ug/L		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	Exisitng Permit	yes	yes
74	Dibenzo(a,h)Anthracene	ug/L	0.6							0.049	0.0490			N					No detected value of B, Step 7	Exisitng Permit	yes	yes

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	REASONABLE POTENTIAL ANALYSIS (RPA)									
					Freshwater		Saltwater		Human Health for consumption of:						Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only		MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?							
75	1,2-Dichlorobenzene	ug/L								17000	17000			N					No detected value of B, Step 7		Ud	No effluent data & no B
76	1,3-Dichlorobenzene	ug/L								2600	2600			N					No detected value of B, Step 7		Ud	No effluent data & no B
77	1,4-Dichlorobenzene	ug/L								2600	2600			N					No detected value of B, Step 7		Ud	No effluent data & no B
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			N					No detected value of B, Step 7		Ud	No effluent data & no B
79	Diethyl Phthalate	ug/L								120000	120000			N					No detected value of B, Step 7		Ud	No effluent data & no B
80	Dimethyl Phthalate	ug/L								2900000	2900000			N					No detected value of B, Step 7		Ud	No effluent data & no B
81	Di-n-Butyl Phthalate	ug/L								12000	12000			N					No detected value of B, Step 7		Ud	No effluent data & no B
82	2,4-Dinitrotoluene	ug/L								9.10	9.10			N					No detected value of B, Step 7		Ud	No effluent data & no B
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
85	1,2-Diphenylhydrazine	ug/L								0.54	0.540			N					No detected value of B, Step 7		Ud	No effluent data & no B
86	Fluoranthene	ug/L								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	Exisitng Permit	yes	yes
88	Hexachlorobenzene	ug/L								0.00077	0.00077			N					No detected value of B, Step 7		Ud	No effluent data & no B
89	Hexachlorobutadiene	ug/L								50	50.00			N					No detected value of B, Step 7		Ud	No effluent data & no B
90	Hexachlorocyclopentadie	ug/L								17000	17000			N					No detected value of B, Step 7		Ud	No effluent data & no B
91	Hexachloroethane	ug/L								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	Exisitng Permit	yes	yes
93	Isophorone	ug/L								600	600.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
94	Naphthalene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
95	Nitrobenzene	ug/L								1900	1900			N					No detected value of B, Step 7		Ud	No effluent data & no B
96	N-Nitrosodimethylamine	ug/L								8.10	8.10000			N					No detected value of B, Step 7		Ud	No effluent data & no B
97	N-Nitrosodi-n-Propylamin	ug/L								1.40	1.400			N					No detected value of B, Step 7		Ud	No effluent data & no B
98	N-Nitrosodiphenylamine	ug/L								16	16.0			N					No detected value of B, Step 7		Ud	No effluent data & no B
99	Phenanthrene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
100	Pyrene	ug/L	0.6							11000	11000			N					No detected value of B, Step 7	Exisitng Permit	yes	yes
101	1,2,4-Trichlorobenzene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
102	Aldrin	ug/L					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								0.013	0.0130			N					No detected value of B, Step 7		Ud	No effluent data & no B
104	beta-BHC	ug/L								0.046	0.046			N					No detected value of B, Step 7		Ud	No effluent data & no B
105	gamma-BHC	ug/L					0.16			0.063	0.063			N					No detected value of B, Step 7		Ud	No effluent data & no B
106	delta-BHC	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria
107	Chlordane	ug/L					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					0.13	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								0.00059	0.00059			N					No detected value of B, Step 7		Ud	No effluent data & no B
110	4,4'-DDD	ug/L								0.00084	0.00084			N					No detected value of B, Step 7		Ud	No effluent data & no B
111	Dieldrin	ug/L					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					0.034	0.0087		240	0.0087			N					No detected value of B, Step 7		Ud	No effluent data & no B
113	beta-Endolsulfan	ug/L					0.034	0.0087		240	0.0087			N					No detected value of B, Step 7		Ud	No effluent data & no B
114	Endosulfan Sulfate	ug/L								240	240			N					No detected value of B, Step 7		Ud	No effluent data & no B
115	Endrin	ug/L					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								0.81	0.81			N					No detected value of B, Step 7		Ud	No effluent data & no B
117	Heptachlor	ug/L					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					0.053	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						0.03		0.00017	0.00017			N					No detected value of B, Step 7		Ud	No effluent data & no B
126	Toxaphene	ug/L					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 Organisms only: AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	AQUATIC LIFE CALCULATIONS Saltwater / Freshwater / Basin Plan: 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	LIMITS: Lowest AMEL	Lowest MDEL	Recommendation	Comment
1	Antimony															No Limit	
2	Arsenic		2.01		0.32	22.15	0.53	18.99	18.99	1.55	29.48	3.11	59.1361	29.47682	59.13608		
3	Beryllium															No Limit	
4	Cadmium		2.01		0.32	13.57	0.53	4.93	4.93	1.55	7.66	3.11	15.369	7.66081	15.36904		
5a	Chromium (III)															No Limit	
5b	Chromium (VI)																Limit is based on 40CFR419.20
6	Copper		2.01		0.32	1.86	0.53	1.97	1.86	1.55	2.88	3.11	5.78313	2.88	5.78		
7	Lead		2.01		0.32	70.90	0.53	4.49	4.49	1.55	6.97	3.11	13.9912	6.97	13.99		
8	Mercury	0.051	2.01	0.10232						1.55		3.11		0.05100	0.10232		
9	Nickel	4600	2.01	9228.47012	0.32	24.00	0.53	4.37	4.37	1.55	6.78	3.11	13.6059	6.78199	13.60595		
10	Selenium		2.01		0.32	93.30	0.53	37.52	37.52	1.55	58.25	3.11	116.863	58.25135	116.86323		
11	Silver		2.01		0.32	0.72	0.53		0.72	1.55	1.11	3.11	2.23529	1.11420	2.23529		
12	Thallium	6.3	2.01	12.63899						1.55		3.11		6.30000	12.63899		
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	0.49846	1.00000		
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															No Limit	
20	Bromoform															No Limit	
21	Carbon Tetrachloride															No Limit	
22	Chlorobenzene															No Limit	
23	Chlorodibromomethane															No Limit	
24	Chloroethane															No Limit	
25	2-Chloroethylvinyl ether															No Limit	
26	Chloroform															No Limit	
27	Dichlorobromomethane															No Limit	
28	1,1-Dichloroethane															No Limit	
29	1,2-Dichloroethane															No Limit	
30	1,1-Dichloroethylene															No Limit	
31	1,2-Dichloropropane															No Limit	
32	1,3-Dichloropropylene															No Limit	
33	Ethylbenzene															No Limit	
34	Methyl Bromide															No Limit	
35	Methyl Chloride															No Limit	
36	Methylene Chloride															No Limit	
37	1,1,2,2-Tetrachloroethane															No Limit	
38	Tetrachloroethylene															No Limit	
39	Toluene															No Limit	
40	1,2-Trans-Dichloroethyler															No Limit	
41	1,1,1-Trichloroethane															No Limit	
42	1,1,2-Trichloroethane															No Limit	
43	Trichloroethylene															No Limit	
44	Vinyl Chloride															No Limit	
45	2-Chlorophenol															No Limit	
46	2,4-Dichlorophenol															No Limit	
47	2,4-Dimethylphenol															No Limit	
48	4,6-dinitro-o-resol (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	110000	2.01	220680.80729						1.55		3.11		110000.00000	220680.80729		
59	Benzidine															No Limit	
60	Benzo(a)Anthracene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
61	Benzo(a)Pyrene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
62	Benzo(b)Fluoranthene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
63	Benzo(ghi)Perylene															No Limit	
64	Benzo(k)Fluoranthene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
65	Bis(2-Chloroethoxy)Methe															No Limit	
66	Bis(2-Chloroethyl)Ether															No Limit	
67	Bis(2-Chloroisopropyl)Eth															No Limit	
68	Bis(2-Ethylhexyl)Phthalate															No Limit	
69	4-Bromophenyl Phenyl Et															No Limit	
70	Butylbenzyl Phthalate															No Limit	
71	2-Chloronaphthalene															No Limit	
72	4-Chlorophenyl Phenyl Et															No Limit	
73	Chrysene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
74	Dibenzo(a,h)Anthracene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		

Fact Sheet Attachment J
Calculation of AMELs and MDELs (Per Sections 1.3 and 1.4 of SIP)

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		
75	1,2-Dichlorobenzene															No Limit	
76	1,3-Dichlorobenzene															No Limit	
77	1,4-Dichlorobenzene															No Limit	
78	3,3 Dichlorobenzidine															No Limit	
79	Diethyl Phthalate															No Limit	
80	Dimethyl Phthalate															No Limit	
81	Di-n-Butyl Phthalate															No Limit	
82	2,4-Dinitrotoluene															No Limit	
83	2,6-Dinitrotoluene															No Limit	
84	Di-n-Octyl Phthalate															No Limit	
85	1,2-Diphenylhydrazine															No Limit	
86	Fluoranthene															No Limit	
87	Fluorene	14000	2.01	28086.64820						1.55		3.11		14000.00000	28086.64820		
88	Hexachlorobenzene															No Limit	
89	Hexachlorobutadiene															No Limit	
90	Hexachlorocyclopentadie															No Limit	
91	Hexachloroethane															No Limit	
92	Indeno(1,2,3-cd)Pyrene	0.049	2.01	0.09830						1.55		3.11		0.04900	0.09830		
93	Isophorone															No Limit	
94	Naphthalene															No Limit	
95	Nitrobenzene															No Limit	
96	N-Nitrosodimethylamine															No Limit	
97	N-Nitrosodi-n-Propylamin															No Limit	
98	N-Nitrosodiphenylamine															No Limit	
99	Phenanthrene															No Limit	
100	Pyrene	11000	2.01	22068.08073						1.55		3.11		11000.00000	22068.08073		
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