

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2011-0100
NPDES NO. CA0056863

WASTE DISCHARGE REQUIREMENTS FOR KINDER MORGAN LIQUIDS TERMINALS, LLC, CARSON TERMINAL

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

Table 1. Discharger Information

Discharger	Kinder Morgan Liquids Terminals, LLC
Name of Facility	Carson Terminal
Facility Address	2000 East Sepulveda Boulevard
	Carson, CA 90810
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Kinder Morgan Liquids Terminals, LLC, 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	Storm water from tank farm areas	33° 48' 22" N	118° 13' 46" W	Dominguez Channel Estuary

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 2, 2011
This Order shall become effective on:	July 2, 2011
This Order shall expire on:	May 10, 2016
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	November 12, 2015

IT IS HEREBY ORDERED, that Order No. R4-2006-0032 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

March 10, 2011; Revised: May 19, 2011; Adopted: June 2, 2011

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 June 2, 2011.



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	Kinder Morgan Liquids Terminals, LLC.
Name of Facility	Carson Terminal
Facility Address	2000 East Sepulveda Boulevard
	Carson, CA 90810
	Los Angeles County
Facility Contact, Title, and Phone	Karina Hankins, Senior EHS Specialist, 714-560-4887
Mailing Address	1100 Town and Country Road, Orange, CA 92868
Type of Facility	Bulk Petroleum Storage and Distribution Facility
Facility Design Flow	2.5 million gallons per day (mgd) permitted flow

II. FINDINGS

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

A. Background. Kinder Morgan Liquids Terminals, LLC (hereinafter Discharger) is currently discharging pursuant to Order No. R4-2006-0032 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0056863. The Discharger submitted a Report of Waste Discharge on October 14, 2010, and applied for an NPDES permit renewal to discharge up to 2.5 million gallons per day (MGD) of storm water from the Carson Terminal, hereinafter Facility. The application was deemed complete on December 22, 2010.

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

B. Facility Description. The Discharger owns and operates a bulk liquid storage terminal known as the Carson Terminal. The Facility receives, stores, and distributes petroleum products via pipeline and tanker trucks from area refineries. The Facility consists of 59 above ground storage tanks ranging in capacity from 5,000 to 178,000 barrels, truck loading racks, a railcar unloading rack, piping and manifold systems, ancillary operations, office buildings, parking lots, and roadways. The site occupies approximately 100 acres, of which 64.6 acres are impervious surface.

Storm water runoff from most of the Facility flows by gravity to the retention pond. However, storm water from the southwest area of the Facility drains to a slough from which storm water is pumped to the facility's storm water drainage system routed to the retention pond. The retention pond is equipped with underflow pipes to prevent discharge of floating material. In addition, a boom is placed across the center of the pond to skim floating oil prior to discharge. Any skimmed oil from the pond is ultimately transported as hazardous waste to a treatment, storage, and disposal facility. From the retention pond, storm water enters a drainage ditch located adjacent to the retention pond, and thence is discharged via Discharge Point No. 001.

Process wastewaters generated at the Facility including draw from storage tanks and wash waters from loading racks, and storm water from operational areas such as truck loading racks, are collected and conveyed separately to the terminal's oil water collection system. This water is then routed to the Facility's wastewater treatment system (a transportable treatment unit operated by a third party) and then to the sanitary sewer for discharge under the Facility's Industrial Wastewater Permit issued by the County Sanitation Districts of Los Angeles County.

The Facility generates hydrotest water, which flows through Discharge Point No. 001 and is regulated under the General NPDES Permit No. CAG674001 (Waste Discharge Requirements for Discharges of Low Threat Hydrostatic Test Water to Surface Waters). The hydrotest water does not pass through the retention pond and is not discharged

during periods of storm water discharge. This Order does not include discharge of hydrotest water.

The Facility intermittently discharges up to 2.5 MGD of storm water runoff from the tank farm areas to a drainage ditch along side the pond system, which flows off-site approximately 125 yards through Discharge Point No. 001 (see table on cover page) to the Dominguez Channel, within the Estuary, a water of the United States. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

The Discharger plans to construct seven new above ground storage tanks in the southwest area of the Facility, beginning in 2011. The newly constructed tanks will replace a portion of the existing storm water slough. Some storm water that would normally enter the slough will be redirected to the retention pond. To account for this redirected flow, the Discharger plans to expand the capacity of the retention pond.

- 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 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).
- 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 section 122.44, title 40 of the Code of Federal Regulations¹, 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, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

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

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

Section 122.44(d)(1)(i) 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 section 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 achieve this goal, the Watershed Management Approach integrates the Regional Water Board's many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and nonpoint sources. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis to establish water quality based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. The TMDLs will establish waste load allocations (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. 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 California State Water Resources Control Board's (State Water Board) 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, 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 these constituents specific to the Dominguez Channel Estuary. Therefore, no conditions or limitations are based on TMDLs.

I. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Dominguez Channel Estuary, are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel Estuary	<p><u>Existing:</u> Water Contact Recreation (REC1), 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).</p> <p><u>Potential:</u> Navigation (NAV)</p>

Requirements of this Order implement the Basin Plan.

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

The State Water Board adopted a Basin Plan amendment for Ammonia. 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 14, 2004 and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA “Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989.” The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, “Water Quality Objectives.”

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of

0.233 mg/L. These objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations.

- 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. The SIP further stipulates that unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Since the May 18, 2010 date has expired, the SIP no longer authorizes compliance schedules for CTR criteria.

The Regional Water Board issued Time Schedule Order (TSO) No. R4-2006-0033 on March 9, 2006 to address the Discharger's noncompliance with copper and zinc limitations established in Order R4-2006-0032. The TSO established interim effluent limitations for copper and zinc based on performance data and required the Discharger to "investigate and implement any required upgrades" to ensure that the effluent would meet final limitations by June 6, 2008. During the term of the TSO, the Discharger has implemented a set of activities to repair and improve the operation of the retention pond and some erosion control activities in several tank farm areas, as well as structural Best Management Practices (BMPs) including preventive covering, secondary containment, retention measures and flow diversion in order to bring the effluent into full compliance with final permit limitations. However, since the expiration of the TSO, the Discharger has been unable to consistently meet the final limitations for copper and zinc. On

January 25, 2011, the Discharger requested that the Regional Water Board issue a new TSO with interim effluent limitations for turbidity, copper, zinc and lead. The Discharger will conduct additional assessment and feasibility studies that will result in the implementation of revised BMPs and/or installation of treatment processes at the Facility. A new TSO has been issued with the Order.

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 CFR. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

N. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations (WQBELs) for individual pollutants. The technology-based effluent limitations consist of restrictions on total suspended solids (TSS), oil and grease, biochemical oxygen demand (BOD), total phenols, settleable solids, total petroleum hydrocarbons (TPH), turbidity, benzene, ethylbenzene, toluene, and xylene. Restrictions on these constituents are discussed in IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

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

O. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 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 section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- 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.** 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 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 section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. 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 subsection VI.C 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. R4-2006-0032 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A.** Wastes discharged shall be limited to a maximum of 2.5 MGD of storm water from Discharge Point No. 001 as described in the findings. The discharge of wastes from accidental spills or other sources is prohibited.
- B.** Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Dominguez Channel Estuary, or other waters of the State, are prohibited.
- C.** Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.
- D.** Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- E.** The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
- F.** The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.
- G.** Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001

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

Table 6. Effluent Limitations for Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard Units	--	--	6.5 - 8.5	
Temperature	°F	--	--	--	86
Biochemical Oxygen Demand (BOD) (5-day @ 20 deg. C)	mg/L	--	30	--	--
	lbs/day ¹	--	630	--	--
Total Suspended Solids (TSS)	mg/L	--	75	--	--
	lbs/day ¹	--	1,600	--	--
Oil and Grease	mg/L	--	15	--	--
	lbs/day ¹	--	310	--	--
Phenols, Total	µg/L	--	1,000	--	--
	lbs/day ¹	--	21	--	--
Settleable Solids	ml/L	--	0.3	--	--
Total Petroleum Hydrocarbons (TPH) as Gasoline (C ₄ – C ₁₂)	µg/L	--	100	--	--
	lbs/day ¹	--	2.1	--	--
Turbidity	NTU	--	75	--	--
Copper, Total Recoverable	µg/L	--	5.8	--	--
	lbs/day ¹	--	0.12	--	--
Lead, Total Recoverable	µg/L	--	16	--	--
	lbs/day ¹	--	0.33	--	--
Nickel, Total Recoverable	µg/L	--	14	--	--
	lbs/day ¹	--	0.29	--	--
Zinc, Total Recoverable	µg/L	--	95	--	--
	lbs/day ¹	--	2.0	--	--
Benzene	µg/L	--	1.0	--	--
	lbs/day ¹	--	0.021	--	--
Ethylbenzene	µg/L	--	10	--	--
	lbs/day ¹	--	0.21	--	--
Toluene	µg/L	--	10	--	--
	lbs/day ¹	--	0.21	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Xylenes, Total	µg/L	--	10	--	--
	lbs/day ¹	--	0.21	--	--

¹ The mass emissions rate is based on a maximum flow of 2.5 MGD and is calculated as follows:
 Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

b. The acute toxicity of the effluent shall be such that:

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

Compliance with the toxicity objectives will be determined by the method described in section V of the MRP (Attachment E).

2. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

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

- 1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.2 units.
- 2. Surface water temperature to rise greater than 5° F above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 80° F as a result of waste discharged.
- 3. In marine waters designated for water contact recreation (REC-1), the waste discharged shall not cause the following standards to be exceeded in the receiving water:

a. Geometric Mean Limits

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

- iii. Enterococcus density shall not exceed 35/100 ml.
- b. Single Sample Limits**
- i. Total coliform density shall not exceed 10,000/100 ml.
 - ii. Fecal coliform density shall not exceed 400/100 ml.
 - iii. Enterococcus density shall not exceed 104/100 ml.
 - iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
4. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
 5. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994 Basin Plan, to be consistent with USEPA's "*Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989.*" Adopted on March 4, 2004, Resolution No. 2004-022 was approved by State Water Board, 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 affect beneficial uses of the receiving water.
19. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

B. Groundwater Limitations

Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

- b.** The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management 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 reasonable potential analysis.

- 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. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan

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

- i. A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;
- ii. A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;
- iii. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (section V of the MRP, Attachment E) provides references for the guidance manuals that should be used for performing TIEs).

3. Best Management Practices and Pollution Prevention

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

- a. An updated **Storm Water Pollution Prevention Plan (SWPPP)** that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall address the following specific areas of concern: petroleum storage tanks, equipment washing, vehicle traffic, and chemical storage. The SWPPP shall be developed in accordance with the requirements in Attachment G.
- b. An updated **Best Management Practices Plan (BMPP)** that includes site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the United States. The updated BMPs shall be consistent with the general guidance contained in the USEPA Guidance *Manual for Developing Best Management Practices* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.

The plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points (e.g., petroleum storage tanks); describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material.

- c. An updated **Spill Prevention Control and Countermeasure (SPCC) Plan** that shall be site-specific and shall cover all areas of the Facility including the tank farm. The SPCC shall describe the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

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

3. Construction, Operation and Maintenance Specifications

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

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

5. Other Special Provisions – Not Applicable

6. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (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 Limitation (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.

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.

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.

TCDD Equivalents

In this Order, TCDD Equivalents means the sum of the concentrations of chlorinated Dibenzo-*p*-dioxins and chlorinated dibenzofurans multiplied by their Toxicity Equivalency Factor (TEF) and their Bioaccumulation Equivalency Factor (BEF). When calculating TCDD equivalents, the concentration of a congener should be set to zero if the detected concentration is below its minimum level.

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

where:

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

Minimum levels, TEFs and BEFs for dioxin congeners are listed in the table below.

Dioxin or Furan Congener	Minimum Level (pg/L)	Toxicity Equivalency Factor (TEF)	Bioaccumulative Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

TEFs

TEFs are estimates of compound-specific toxicity relative to the toxicity of an index chemical (typically, TCDD). TEFs are the result of expert scientific judgment using all of the available data and taking into account uncertainties in the available data.

Toxicity Reduction Evaluation (TRE)

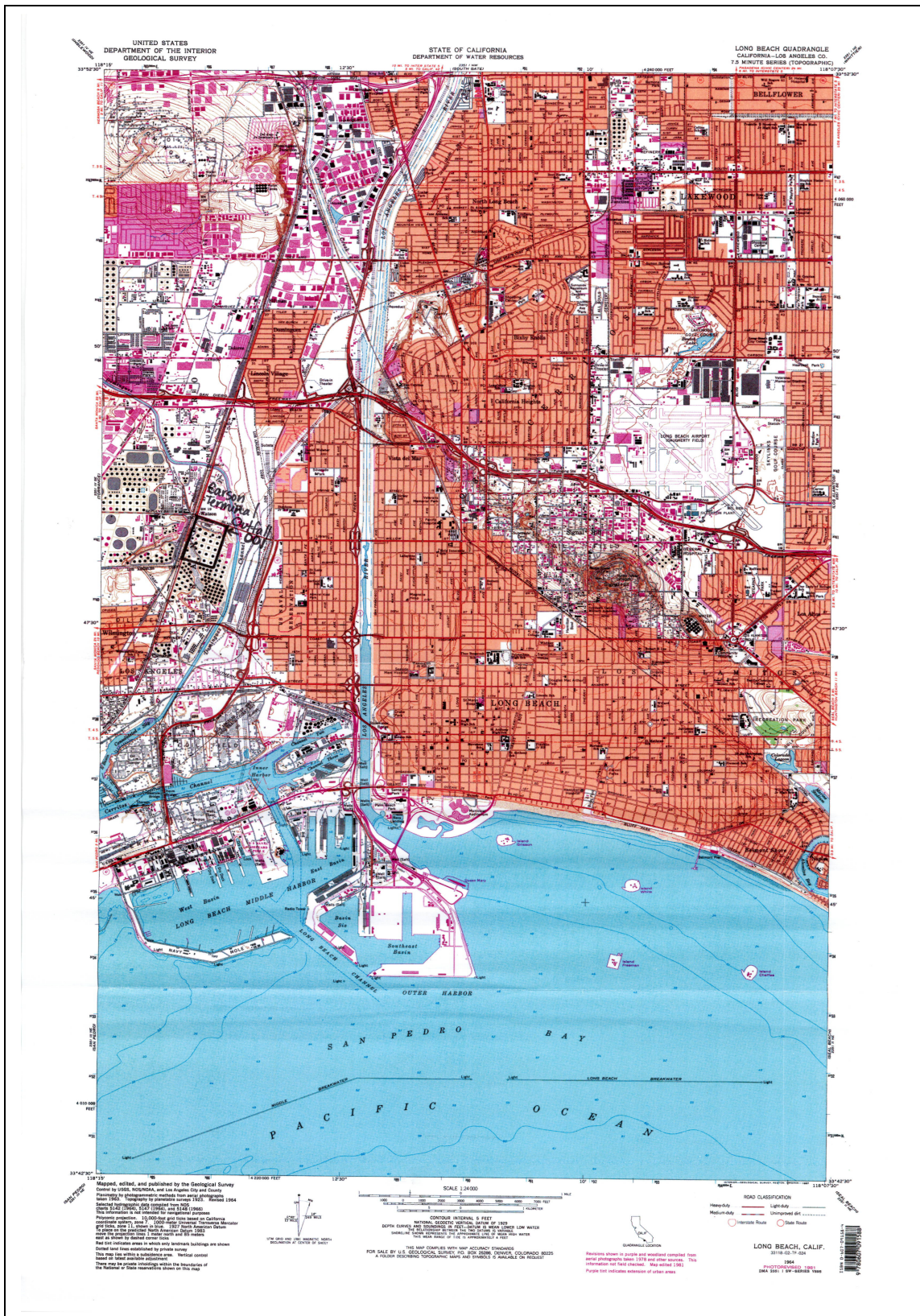
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection 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	<i>Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties</i>
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
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	Kinder Morgan Liquids Terminals, LLC
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Public Health Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Carson Terminal
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

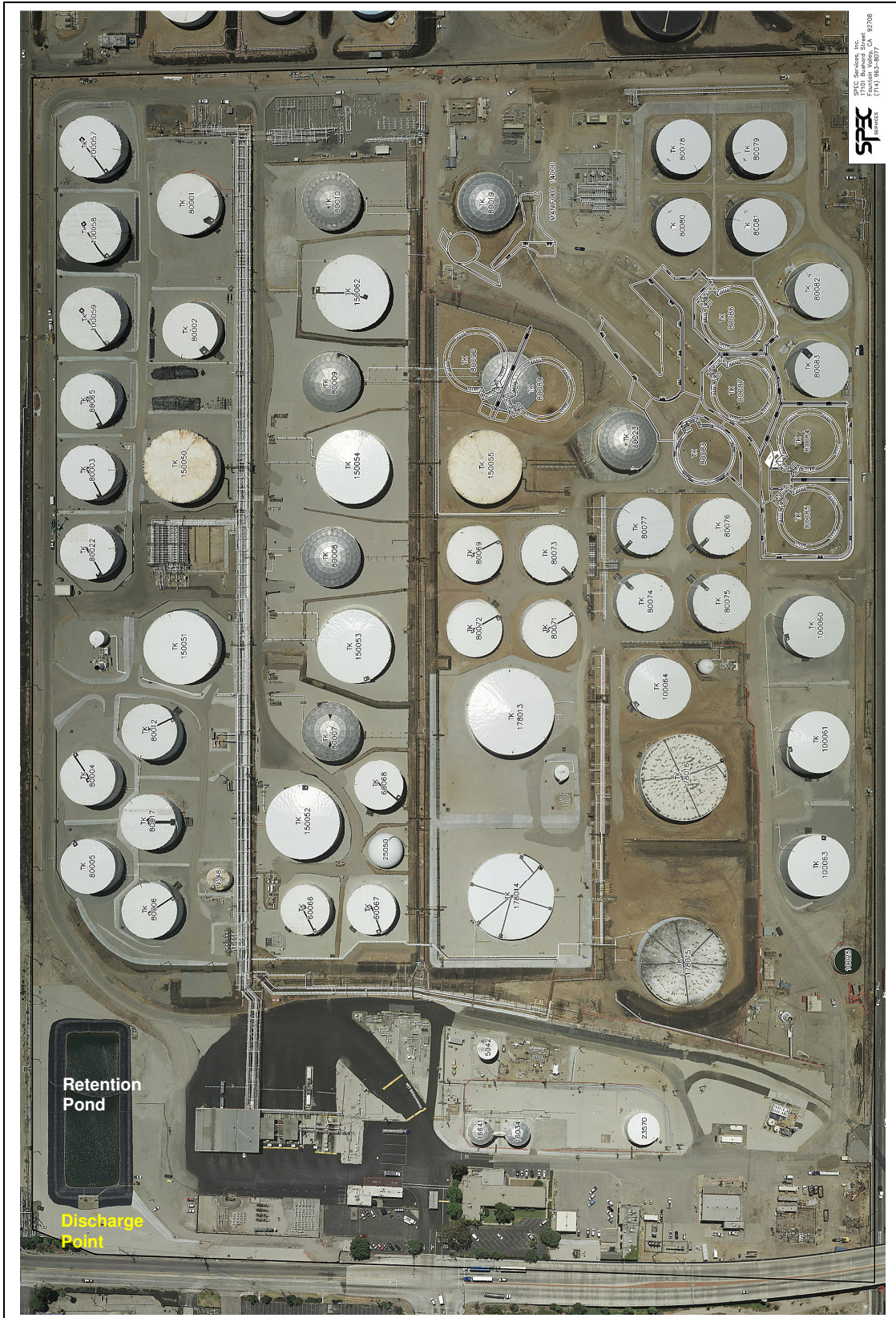
NTR	National Toxics Rule
OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	<i>Water Quality Control Plan for Ocean Waters of California</i>
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SPCC	Spill Prevention Control and Countermeasure
SIP	State Implementation Policy (<i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i>)
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	<i>Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California</i>
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

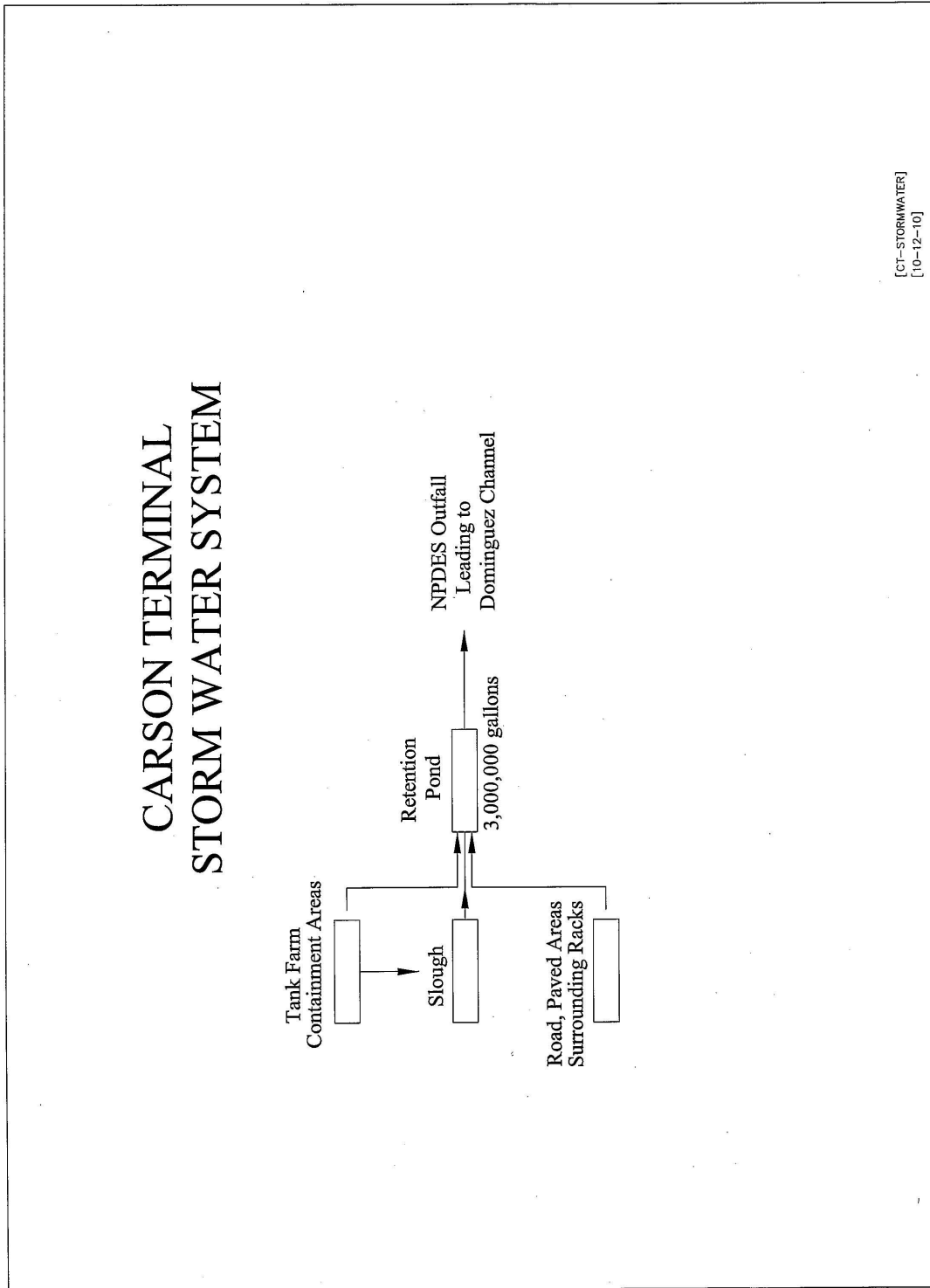


Attachment B –Map (Adopted: June 2, 2011)

Attachment B – Aerial Plant Map



ATTACHMENT C – FLOW SCHEMATIC



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 [section 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 [section 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 [section 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 [section 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 [section 122.41(e)].

E. Property Rights

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

F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [section 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 [section 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 [section 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 [section 122.41(i)(4)].

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [section 122.41(m)(1)(i)].
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [section 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 [section 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 [section 122.41(m)(4)(i)]:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [section 122.41(m)(4)(i)(A)];
 - c. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [section 122.41(m)(4)(i)(B)]; and
 - d. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [section 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 [section 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 [section 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) [section 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 [section 122.41(n)(1)].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [section 122.41(n)(2)].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [section 122.41(n)(3)]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [section 122.41(n)(3)(i)];
 - b. The permitted facility was, at the time, being properly operated [section 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) [section 122.41(n)(3)(iii)]; and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [section 122.41(n)(3)(iv)].
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [section 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 [section 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 [section 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 [section 122.41(l)(3) and section 122.61].

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [section 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 [section 122.41(j)(4) and section 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 [section 122.41(j)(2)].
- B.** Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements [section 122.41(j)(3)(i)];
 - 2. The individual(s) who performed the sampling or measurements [section 122.41(j)(3)(ii)];
 - 3. The date(s) analyses were performed [section 122.41(j)(3)(iii)];
 - 4. The individual(s) who performed the analyses [section 122.41(j)(3)(iv)];
 - 5. The analytical techniques or methods used [section 122.41(j)(3)(v)]; and
 - 6. The results of such analyses [section 122.41(j)(3)(vi)].
- C. Claims of confidentiality for the following information will be denied [section 122.7(b)]:**
 - 1. The name and address of any permit applicant or Discharger [section 122.7(b)(1)]; and
 - 2. Permit applications and attachments, permits and effluent data [section 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 [section 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 [section 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. [section 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 [section 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.) [section 122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board [section 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 [section 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.” [section 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 [section 122.22(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [section 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 [section 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 [section 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 [section 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [section 122.41(l)(6)(ii)]:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(A)].
 - b. Any upset that exceeds any effluent limitation in this Order [section 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 [section 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 [section 122.41(l)(1)]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) [section 122.41(l)(1)(i)]; or.
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order [section 122.41(l)(1)(ii)].
3. 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 section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [section 122.41(l)(1)(ii)].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [section 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 [section 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 [section 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 [section 122.41(a)(2)] [Water Code sections 13385 and 13387].

- C. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [*section 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 [*section 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 [*section 122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*section 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" [*section 122.42(a)(1)*]:
 - a. 100 micrograms per liter ($\mu\text{g/L}$) [*section 122.42(a)(1)(i)*];
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(1)(ii)*];
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(1)(iii)*]; or
 - d. The level established by the Regional Water Board in accordance with section 122.44(f) [*section 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" [section 122.42(a)(2)]:
 - a.** 500 micrograms per liter ($\mu\text{g/L}$) [section 122.42(a)(2)(i)];
 - b.** 1 milligram per liter (mg/L) for antimony [section 122.42(a)(2)(ii)];
 - c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [section 122.42(a)(2)(iii)]; or
 - d.** The level established by the Regional Water Board in accordance with section 122.44(f) [section 122.42(a)(2)(iv)].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 5244)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 5244

The Code of Federal Regulations section 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.** Effluent sampling stations shall be established for the point of discharge (Discharge Point No. 001, latitude 33°48'22" N, longitude 118°13'46" W) 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 sections 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. The estimated chemical concentration of the sample shall also be reported; 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 section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
- J. All analyses shall be accompanied by the chain of custody, including but not limited to date and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- 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. 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 laboratory contracted with the Discharger will participate in the NPDES discharge monitoring report QA performance study. The contracted laboratory 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 reporting period, the following shall be reported in the monitoring report:
 - 1. Types of wastes and quantity of each type;

2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
3. Location of the final point(s) of disposal for each type of waste.

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

- 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.

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	A location where a representative sample of effluent can be obtained from Discharge Point No. 001, prior to discharging into the Dominguez Channel.
	RSW-001	A location where a representative sample of the receiving water can be obtained upstream of the public storm drain outfall to the Dominguez Channel, or a location approved by the Regional Water Board*.

* If the receiving water sampling cannot be safely conducted in the proximity of the public storm drain outfall, the Discharger may propose an appropriate receiving water sampling location and obtain approval from the Regional Water Board within 90 days of the effective date of this Order.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor the discharge of storm water at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type ⁷	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallon/day	Meter	1/Discharge Event	--
pH	pH Units	Grab	1/Discharge Event ¹	²
Temperature	°F	Grab	1/Discharge Event ¹	²

Parameter	Units	Sample Type ⁷	Minimum Sampling Frequency	Required Analytical Test Method
Biochemical Oxygen Demand (BOD) (5-day @ 20 deg. C)	mg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Total Suspended Solids (TSS)	mg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Oil and Grease	mg/L	Grab	1/Discharge Event ¹	2
Phenols	mg/L	Grab	1/Discharge Event ¹	2
Settleable Solids	ml/L	Grab	1/Discharge Event ¹	2
Turbidity	NTU	Grab/24-hr composite	1/Discharge Event ¹	2
Total Petroleum Hydrocarbons (TPH) as Gasoline (C ₄ -C ₁₂)	µg/L	Grab	1/Discharge Event ¹	EPA method 503 or 8015b
TPH as Diesel (C ₁₃ -C ₂₂)	µg/L	Grab	1/Discharge Event ¹	EPA method 503.1, 8015b, or 8270
TPH as Waste Oil (C ₂₃ +)	µg/L	Grab	1/Discharge Event ¹	EPA method 524.1, 8015b, or 8270
Copper, Total Recoverable	µg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Lead, Total Recoverable	µg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Nickel, Total Recoverable	µg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Zinc, Total Recoverable	µg/L	Grab/24-hr composite	1/Discharge Event ¹	2
Benzene	µg/L	Grab	1/Quarter	2
Ethylbenzene	µg/L	Grab	1/Quarter	2
Toluene	µg/L	Grab	1/Quarter	2
Xylenes, Total	µg/L	Grab	1/Quarter	2
Ammonia Nitrogen, Total (as N)	mg/L	Grab/24-hr composite	1/Quarter	2
Total Coliform	MPN/100 ml	Grab	1/Quarter	2
Fecal Coliform	MPN/100 ml	Grab	1/Quarter	2
Enterococcus	MPN/100 ml	Grab	1/Quarter	2
Methyl Tertiary-Butyl Ether (MTBE)	µg/L	Grab	1/Year ³ (First Discharge of the Year)	2
Tertiary butyl alcohol (TBA)	µg/L	Grab	1/Year ³ (First Discharge of the Year)	2
TCDD Equivalents ⁴	µg/L	Grab/24-hr composite	1/Year ³ (First Discharge of the Year)	2
Remaining Priority Pollutants ⁵ (excluding asbestos)	µg/L	Grab/24-hr composite	1/Year ³ (First Discharge of the Year)	2
Acute Toxicity	% Survival	Grab/24-hr composite	1/Year ³ (First Discharge of the Year)	6

^{1.} During periods of extended discharge, no more than one sample per week (or a 7-day period) needs to be taken. Sampling shall be performed during the first hour of discharge. If, for safety reasons, a sample cannot be obtained during the first hour of discharge, a sample shall be obtained at the first safe opportunity, and the reason for the delay shall be included in the report. If there is no discharge to surface waters, then no monitoring is required. In the corresponding monitoring report, the Discharger will indicate under statement of perjury that no effluent was discharged to surface water during the reporting period.

2. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP (Attachment H of this permit package) or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.
3. Monitoring is only required during years in which a discharge occurs. Annual samples shall be collected during the first discharge of the year.
4. TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (MLs), toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in the table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to **zero**. USEPA method 1613 may be used to analyze dioxin and furan congeners.

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

where:

C_x = concentration of, dioxin or furan congener x

TEF_x = TEF for congener x

BEF_x = BEF for congener x

Minimum Levels, Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8 - tetra CDD	10	1.0	1.0
1,2,3,7,8 - penta CDD	50	1.0	0.9
1,2,3,4,7,8 - hexa CDD	50	0.1	0.3
1,2,3,6,7,8 - hexa CDD	50	0.1	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01	0.05
Octa CDD	100	0.0001	0.01
2,3,7,8 - tetra CDF	10	0.1	0.8
1,2,3,7,8 - penta CDF	50	0.05	0.2
2,3,4,7,8 - penta CDF	50	0.5	1.6
1,2,3,4,7,8 - hexa CDF	50	0.1	0.08
1,2,3,6,7,8 - hexa CDF	50	0.1	0.2
1,2,3,7,8,9 - hexa CDF	50	0.1	0.6
2,3,4,6,7,8 - hexa CDF	50	0.1	0.7
1,2,3,4,6,7,8 - hepta CDFs	50	0.01	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01	0.4
Octa CDF	100	0.0001	0.02

5. Priority Pollutants as defined by the CTR defined in Finding II.K of the Limitations and Discharge Requirements of this Order, and included as Attachment I. All metals shall be reported as total recoverable.
6. Refer to section V., Whole Effluent Toxicity Testing Requirements.
7. For 24-hour composite samples, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted samples shall be obtained during the discharge period and composited. For discharge durations of less than eight hours, individual "grab samples" may be substituted. A grab sample is an individual sample collected in less than 15 minutes. Grab samples must be collected for volatile organics and chromium VI on the priority pollutants list.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

1. Definition of Toxicity

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

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

2. Acute Toxicity Effluent Monitoring Program

- a. **Method.** The Discharger shall conduct acute toxicity tests (96-hour static renewal toxicity tests) on effluent grab samples, by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821/R-02/012) or a more recent edition to ensure compliance. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
- b. **Test Species.** The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0), shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for the discharge into the brackish water. However, if the salinity of the receiving water is between 1 to 32 parts per thousand (ppt), the Discharger may have the option of using the inland silverside, *Menidia beryllina* (Acute Toxicity Test Method 2006.0), instead of the topsmelt. The method for topsmelt (Larval Survival and Growth Test Method 1006.0) is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition, August 1995* (EPA/600/R-95/136).
- c. **Alternate Reporting.** For the acute toxicity testing with topsmelt, the Discharger may elect to report the results or endpoint from the first 96 hours of the chronic toxicity test as the results of the acute toxicity test, using USEPA's August 1995 method (EPA/600/R-95/136) to conduct the chronic toxicity test.
- d. **Acute Toxicity Accelerated Monitoring.** If either of the above requirements (sections 1.a and 1.b) is not met, the Discharger shall conduct six additional tests, approximately every 2 weeks, over a 12-week period (or over the next six storm events for storm water monitoring). The Discharger shall ensure that they

receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 5 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing.

e. Toxicity Identification Evaluation

- i. If the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement the Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.
- ii. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70% survival, the Discharger shall immediately begin a 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. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.
3. Control and dilution water should be receiving water (if non-toxic) or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the water the test species are grown in (culture water), a second control using culture water shall be used.

C. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation 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 manual EPA/600/2-88/070 (industrial) as guidance. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

1. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
2. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,
3. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See MRP Section V.E.3. for guidance manuals.

D. Steps in TRE and TIE Procedures

1. If results of the implementation of the facility's initial investigation TRE workplan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of completion of the initial investigation TRE. The detailed workplan shall include, but not be limited to:
 - a. Further actions to investigate and identify the cause of toxicity;
 - b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,
 - d. A schedule for these actions.
2. The following section summarizes the stepwise approach used in conducting the TRE:
 - a. Step 1 – Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;
 - b. Step 2 – Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;
 - c. Step 3 – 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. Step 4 – 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 is no longer toxicity (six consecutive chronic toxicity test results are less than or equal to 1.0 TUc or six consecutive acute toxicity test results are greater than 90% survival).

3. The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.
4. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.
6. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

E. Ammonia Removal

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

- b.** Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
 - c.** Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
 - d.** Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.
- 2.** When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

F. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival for acute toxicity test results 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, pursuant to section V.A.2.d., then those results also shall be submitted with the SMR for the period in which the investigation occurred.

- 1.** The full report shall be submitted on or before the end of the month in which the SMR is submitted.
- 2.** The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger; and (4) the printout of the ToxCalc or CETIS (Comprehensive Environmental Toxicity Information System) program results.
- 3.** Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test:
 - a.** Sample date(s);
 - b.** Test initiation date;
 - c.** Test species;
 - d.** End point values for each dilution (e.g., number of young, growth rate, percent survival);
 - e.** LC₅₀ 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 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 Estuary at monitoring location RSW-001 as follows:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia, (as N)	µg/L	Grab ¹	1/Year	²
pH	pH units	Grab ¹	1/Year	²
Temperature	°F	Grab ¹	1/Year	²
Salinity	ppt (parts per thousand)	Grab ¹	1/Year	²
Priority Pollutants ^{3,4} (excluding asbestos)	µg/L	Grab	1/Year	²

- ¹ Receiving water samples for pH, temperature, salinity and ammonia must be collected at the same time.
- ² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP (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. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.
- ³ Priority Pollutants as defined by the CTR defined in Finding II.K of the Limitations and Discharge Requirements of this Order, and included as Attachment I.
- ⁴ TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (MLs), toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in the table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to **zero**. USEPA method 1613 may be used to analyze dioxin and furan congeners.

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

where:

C_x = concentration of, dioxin or furan congener x

TEF_x = TEF for congener x

BEF_x = BEF for congener x

Minimum Levels, Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors

Congeners	Minimum Levels (pg/L)	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8 - tetra CDD	10	1.0	1.0
1,2,3,7,8 - penta CDD	50	1.0	0.9
1,2,3,4,7,8 - hexa CDD	50	0.1	0.3
1,2,3,6,7,8 - hexa CDD	50	0.1	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01	0.05
Octa CDD	100	0.0001	0.01
2,3,7,8 - tetra CDF	10	0.1	0.8
1,2,3,7,8 - penta CDF	50	0.05	0.2
2,3,4,7,8 - penta CDF	50	0.5	1.6
1,2,3,4,7,8 - hexa CDF	50	0.1	0.08
1,2,3,6,7,8 - hexa CDF	50	0.1	0.2
1,2,3,7,8,9 - hexa CDF	50	0.1	0.6
2,3,4,6,7,8 - hexa CDF	50	0.1	0.7
1,2,3,4,6,7,8 - hepta CDFs	50	0.01	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01	0.4
Octa CDF	100	0.0001	0.02

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. This information shall be included in the monitoring report for that month.
- 2. Visual Observation.** The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A “significant storm water discharge” is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

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 toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section V.F.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit **quarterly SMRs** including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Annual monitoring results shall be included in the quarterly SMR that covers the annual sampling events. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
1/Discharge Event	July 2, 2011	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/Quarter	July 2, 2011	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/Year	July 2, 2011	January 1 through December 31	May 1 or First day of second month following the quarter of conducting annual sampling.

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.

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) – Not Applicable

D. Other Reports

- 1. Within 90 days** of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
 - a.** Initial Investigation TRE workplan
 - b.** Updated SWPPP
 - c.** Updated BMP Plan
 - d.** Updated SPCC Plan
- 2.** The Discharger shall file with 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	4B192238002
Discharger	Kinder Morgan Liquids Terminals, LLC
Name of Facility	Carson Terminal
Facility Address	2000 East Sepulveda Boulevard
	Carson, CA 90810
	Los Angeles County
Facility Contact, Title and Phone	Karina Hankins, Senior EHS Specialist, 714-560-4887
Authorized Person to Sign and Submit Reports	Robert Granado, Director, Environmental Compliance, 714-560-4873
Mailing Address	1100 Town and Country Road, Orange, CA 92868
Billing Address	Same as Mailing Address
Type of Facility	Bulk Petroleum Storage and Distribution Facility
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	C
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	2.5 million gallons per day (MGD)
Facility Design Flow	Not Available
Watershed	Dominguez Channel Watershed
Receiving Water	Dominguez Channel Estuary
Receiving Water Type	Inland Surface Water, Estuary

- A. Kinder Morgan Liquids Terminals, LLC (hereinafter Discharger) is the owner and operator of the Carson Terminal (hereinafter Facility), a bulk petroleum storage and distribution facility.

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

- B.** The Facility discharges storm water runoff to the Dominguez Channel, within the Estuary, a water of the United States, and is currently regulated by Order No. R4-2006-0032, which was adopted on March 9, 2006 and expired on February 15, 2011. The permit has been administratively extended as per 40 CFR part 122 and remains in effect until a new permit is adopted.
- C.** The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on October 14, 2010. Site visits were conducted on September 1, 2010 and February 16, 2011, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger owns and operates a bulk petroleum storage facility known as the Carson Terminal. Most petroleum products are received via pipeline from area refineries and Kinder Morgan Harbor Terminal. Ethanol is received by rail car. Fuel additives, including ethanol and proprietary substances, are stored within a loading rack area located in the northeast area of the site. In July of 2010, the Facility constructed six new above ground storage tanks, replacing older tanks for a total of 59 above ground storage tanks. The capacity of the storage tanks varies from 5,000 to 178,000 barrels. Products stored within the tank farm including crude oil, diesel, and jet fuel are transferred from the Facility via pipeline or tank truck. The Facility also includes truck loading racks, a railcar unloading rack, piping and manifold systems, ancillary operations, office buildings, parking lots, and roadways. The site occupies approximately 100 acres, of which 64.6 acres are impervious surface.

A. Description of Wastewater and Biosolids Treatment or Controls

The discharge from the Facility is comprised of storm water runoff from tank farm areas and roadways. Storm water from most areas of the Facility flows to the retention pond (retention pond) by gravity. However, storm water from the southwest area of the Facility drains to a slough, from which storm water is pumped to the Facility's storm water drainage system routed to the retention pond. Storm water from Facility roadways flows by gravity to a sump, and is subsequently pumped to the retention pond. Pump suction is at the bottom of the sump to reduce introduction of floatable material to the retention pond. During the last permit term, the retention pond system was modified to improve performance. Modifications included removal of the berm separating the two-pond system to form a single pond; excavation of sediment to provide for increased capacity; and installation of a liner. The retention pond is equipped with underflow pipes to prevent discharge of floating material. In addition, a boom is placed across the center of the pond to skim floating oil prior to discharge. Any skimmed oil from the pond is ultimately transported as hazardous waste to a treatment, storage, and disposal facility.

The Facility plans to install seven new above ground storage tanks beginning in 2011. The construction of new tanks will occur in the southwest area of the Facility, at the location of the slough. The new tanks will occupy a portion of the slough, decreasing slough capacity. Storm water volume that would normally enter the slough will be redirected to the retention pond. The Discharger plans to expand the capacity of the retention pond to account for the redirected flow.

Process wastewaters generated at the Facility include water draw from storage tanks, and wash waters from loading racks. Process wastewaters and storm water from operational areas, such as loading racks, are collected in a wastewater storage tank and are treated by a contractor using portable equipment prior to discharge to the sanitary sewer under an Industrial Wastewater Permit issued by the County Sanitation Districts of Los Angeles County (CSDLAC). The Facility generates hydrotest water, which flows through Discharge Point No. 001 and is regulated under the General NPDES Permit No. CAG674001 (Waste Discharge Requirements for Discharges of Low Threat Hydrostatic Test Water to Surface Waters). The hydrotest water does not pass through the retention pond and is not discharged during periods of storm water discharge. This Order does not include discharge of hydrotest water.

This Order authorizes the discharge of 2.5 MGD of storm water through Discharge Point No. 001. The previous Order (Order No. R4-2006-0032) reduced the permitted flow from 2.5 MGD to 1.6 MGD of storm water based on an addendum submitted by the Discharger indicating that the maximum flow was 1.6 MGD at that time. However, during the last permit term, daily flow exceeded 1.6 million gallons occurred in several discharge events (see Table F-2 below). The Discharger requested an increase in the permitted flow of up to 2.5 MGD; equal to the permitted volume included in Order No. 00-087. Because the discharge of storm water runoff will occur when the water level reaches the height of the outfall pipe in the retention pond and the Discharger has limited controls over the quantity of daily discharge by managing operations of pumps and valves that are connected to the retention pond, this Order reinstates the maximum permitted flow rate of 2.5 MGD of storm water prescribed in Order No. 00-087.

Table F-2. Summary of Discharges from Discharge Point No. 001

Year	No. of Days Discharging	Maximum Flow (MGD)
2006	23	0.593
2007	0	--
2008	50	0.633
2009	26	1.684
2010	42	1.863

B. Discharge Points and Receiving Waters

The Facility intermittently discharges up to 2.5 MGD of storm water runoff from the tank farm areas to a drainage ditch along side the pond system, which flows off-site approximately 125 yards through Discharge Point No. 001, located at a point near

Sepulveda Boulevard (Latitude 33°48'22" North, Longitude 118°13'46" West), to the Dominguez Channel, within the Estuary, a water of the United States.

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

1. Discharge Point No. 001

Effluent limitations contained in the existing Order (Order No. R4-2006-0032) for discharges from Discharge Point No. 001 at Monitoring Location EFF-001 and representative monitoring data from the term of the existing Order are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data for Discharge Point No. 001

Parameter	Units	Effluent Limitation	Monitoring Data (May 2006 – Sep. 2010)
		Maximum Daily	Highest Daily Discharge ¹
Flow	MGD	1.6	1.863
pH	S. U.	6.5-8.5 ²	7.39-9.5 ²
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	30	35
	lbs/day ³	400	NR
Oil and Grease	mg/L	15	< 0.47
	lbs/day ³	200	NR
Total Suspended Solids (TSS)	mg/L	75	130
	lbs/day ³	1,001	NR
Phenols, Total	µg/L	1,000	< 100
	lbs/day ³	13	NR
Settleable Solids	ml/L	0.3	0.1
Temperature	°F	86 ⁴	60 ⁵
Turbidity	NTU	75	200
Total Petroleum Hydrocarbons (TPH)	µg/L	100	190
	lbs/day ³	1.33	NR
Xylenes,	µg/L	10	17
	lbs/day ³	0.13	NR
Acute Toxicity	% Survival	⁶	100 ⁷
Copper, Total Recoverable ⁸ (Interim Limitations)	µg/L	42	13
	lbs/day ³	0.56	NR
Copper, Total Recoverable (Final Limitations)	µg/L	5.8	27
	lbs/day ³	0.077	NR
Lead, Total Recoverable	µg/L	50	35
	lbs/day ³	0.67	NR

Parameter	Units	Effluent Limitation	Monitoring Data (May 2006 – Sep. 2010)
		Maximum Daily	Highest Daily Discharge ¹
Zinc, Total Recoverable ⁸ (Interim Limitations)	µg/L	271	150
	lbs/day ³	3.6	NR
Zinc, Total Recoverable (Final Limitations)	µg/L	95	120
	lbs/day ³	1.3	NR
Benzene	µg/L	1.0	1.2
	lbs/day ³	0.01	NR
1,2-Dichlorobenzene	µg/L	130	< 0.32
	lbs/day ³	1.7	NR
1,3-Dichlorobenzene	µg/L	130	< 0.35
	lbs/day ³	1.7	NR
1,4-Dichlorobenzene	µg/L	5.0	< 0.37
	lbs/day ³	0.067	NR
Ethylbenzene	µg/L	10	2.1
	lbs/day ³	0.13	NR
2,4,6-Trichlorophenol	µg/L	1.2	< 4.2
	lbs/day ³	0.016	NR
Toluene	µg/L	10.0	3.3
	lbs/day ³	0.13	NR

NR= Mass loadings not reported in Self Monitoring Reports.

¹ The lowest reported detection level is indicated by "<".

² Range of instantaneous minimum and maximum.

³ The mass emissions rate is based on a maximum flow of 1.6 MGD and is calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

⁴ Instantaneous maximum.

⁵ Temperature reported in self monitoring reports as approximate value.

⁶ The acute toxicity of the effluent shall be such that:

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

⁷ Lowest percent survival in 100 percent effluent.

⁸ Interim effluent limitations assigned in Time Schedule Order No. R4-2006-0033 effective March 9, 2006 through June 5, 2008.

D. Compliance Summary

Data submitted to the Regional Water Quality Control Board, Los Angeles (Regional Water Board) indicate that the Discharger has exceeded existing permit limitations as outlined in the table below:

Table F-4. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
02/22/08	1 st Quarter, 2008	Maximum Daily	Turbidity	200	75	NTU
12/17/08	4 th Quarter, 2008	Instantaneous Maximum	pH	9.5	8.5	mg/L
12/17/08	4 th Quarter, 2008	Maximum Daily	TSS	130	75	mg/L
12/17/08	4 th Quarter, 2008	Maximum Daily	TPH	190	100	µg/L
12/17/08	4 th Quarter, 2008	Maximum Daily	Copper, Total Recoverable	27	5.8	µg/L
12/17/08	4 th Quarter, 2008	Maximum Daily	Zinc, Total Recoverable	120	95	µg/L
02/05/09	1 st Quarter, 2009	Maximum Daily	Turbidity	100	75	NTU
02/05/09	1 st Quarter, 2009	Maximum Daily	Copper, Total Recoverable	14	5.8	µg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	BOD	35	30	mg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	TSS	100	75	mg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	TPH	120	100	µg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	Turbidity	120	100	NTU
01/19/10	1 st Quarter, 2010	Maximum Daily	Xylenes, Total	17	10	µg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	Benzene	1.2	1.0	µg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	Copper, Total Recoverable	22	5.8	µg/L
01/19/10	1 st Quarter, 2010	Maximum Daily	Zinc, Total Recoverable	120	95	µg/L
02/05/10	1 st Quarter, 2010	Maximum Daily	Copper, Total Recoverable	8.7	5.8	µg/L

The Regional Water Board issued Settlement Offers R4-2008-0090-M and R4-2010-0007-M to address violations that occurred from the first quarter of 2003 through the first quarter of 2009. Violations occurred during the last permit term up to the first quarter of 2010 are shown in Table F-4. In response to Settlement Offers R4-2008-0090-M and R4-2010-007-M, the Discharger accepted the Regional Water Board's offers to participate in the Expedited Payment Program and waived their right to a hearing on April 23, 2009 and March 8, 2010, respectively. Exceedances of effluent limitations that occurred after February 5, 2009 are currently being evaluated for appropriate enforcement action.

The Regional Water Board issued Time Schedule Order (TSO) No. R4-2006-0033 on March 9, 2006 to address the Discharger's inability to immediately comply with copper and zinc limitations established in Order R4-2006-0032. The TSO established interim effluent limitations for copper and zinc based on performance data and required the Discharger to "investigate and implement any required upgrades" to ensure that the

effluent would meet final limitations by June 6, 2008. During the term of the TSO, the Discharger completed the hydrologic characterization of the Facility in February 2005 and additional sampling activities in August 2007 to evaluate the potential sources of contaminants in the storm water runoff. The monitoring results indicated that the sediment accumulated on the bottom of the retention pond could contribute to contaminants in the facility storm water discharge. Therefore, the Discharger has implemented a set of activities to repair and improve the operation of the retention pond and some erosion control activities in several tank farm areas, as well as structural Best Management Practices (BMPs) including preventive covering, secondary containment, retention measures and flow diversion in order to bring the effluent into full compliance with final permit limitations. However, since the expiration of the TSO, the Discharger has been unable to consistently meet final limitations for copper and zinc as indicated in Table 4. On January 25, 2011, the Discharger requested that the Regional Water Board issue a new TSO with interim effluent limitations for turbidity, copper, zinc and lead. The Discharger will conduct additional assessment and feasibility studies that will result in the implementation of revised BMPs and the installation of treatment processes at the Facility. A new TSO has been issued with the Order.

E. Planned Changes

The Discharger plans to construct seven new above ground storage tanks at the Facility beginning in 2011. The newly constructed tanks will replace a portion of the existing storm water slough. Some storm water that would normally enter the slough will be redirected to the retention pond. To account for this redirected flow, the Discharger plans to expand the capacity of the retention pond.

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 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 Board adopted a Water Quality Control Plan for Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that

designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water 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-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel Estuary	<p><u>Existing:</u> Water Contact Recreation (REC1), 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).</p> <p><u>Potential:</u> Navigation (NAV)</p>

Requirements of this Order implement the Basin Plan.

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

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
6. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

- 7. Antidegradation Policy.** 40 CFR part 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 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 Regulations¹ section 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. Impaired Water Bodies on CWA 303(d) List

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

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. Certain receiving waters in the Los Angeles watershed 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. The pollutants of concern include 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). The inclusion of the Dominguez Channel on the 2006 303(d) list documents the waterbody's lack of assimilative capacity for the pollutants of concern. A TMDL is developed for the pollutants of concern in a 303(d)-listed waterbody to facilitate the waterbody's recover of its ability to fully support its beneficial uses.

Available effluent data indicate that lead and zinc are present in the discharge and could contribute to impairment. This Order establishes effluent limitations for lead and zinc, as discussed in section IV.C. Effluent data indicates that the Facility is not likely to contribute to impairment due to PAHs, benzo(a)anthracene, chlordane, chrysene, DDT, dieldrin, PCBs, phenanthrene, or pyrene; therefore this Order does not contain restrictions for these constituents. To date no TMDLs have been developed; therefore,

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

no conditions in this Order are based on TMDLs. The effluent limitations in the permit for constituents with reasonable potential are established to protect the beneficial uses of the Dominguez Channel and to ensure that the discharge does not degrade its water quality.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

The list of pollutants of concern is based on constituents that are regulated in the Basin Plan or CTR and were detected in the effluent, as well as pollutants commonly associated with storage and distribution of petroleum products. The following pollutants are pollutants of concern as they are commonly associated with storage and transfer of fuels: benzene, toluene, ethylbenzene, xylenes, total petroleum hydrocarbons (TPH), phenols and oil and grease. In addition, turbidity, total suspended solids (TSS), BOD, settleable solids, and pH are pollutants typically used to characterize storm water discharge and are considered pollutants of concern as well. Further, copper, lead, nickel and zinc demonstrated reasonable potential; therefore, these are also considered pollutants of concern. In this Order, effluent limitations for temperature, turbidity, TSS, BOD, settleable solids, pH, benzene, toluene, ethylbenzene, xylenes, total petroleum hydrocarbons (TPH), phenols and oil and grease are carried over from Order No. R4-2006-0032 and are based on Best Professional Judgment (BPJ) and water quality objectives contained in the Basin Plan as well as the typical limitations prescribed in similar permits. Effluent limitations for copper, lead, nickel and zinc are based on CTR and derived according to the procedures in the SIP. Since the discharge from the Facility is not continuous as defined in 40 CFR section 122.2, only maximum daily effluent limitations are established in the Order. This is consistent with other similar permits adopted in the Los Angeles Region.

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

122.45(f), mass-based effluent limitations have also been established in the Order for conventional, non-conventional, and toxic pollutants.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges 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 section 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, section 125.3.

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

- a.** Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b.** Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c.** Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering 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 section 125.3 of the Code of Federal Regulations authorize the use of

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

2. Applicable Technology-Based Effluent Limitations

Currently, no technology-based ELGs exist for bulk liquid storage or for bulk petroleum storage, loading, and transfer facilities. This Order includes technology-based effluent limitations based on BPJ in accordance with section 125.3. The maximum daily effluent limitations (MDELs) for BOD, TSS, oil and grease, total phenols, settleable solids, TPH, turbidity, benzene, ethylbenzene, toluene, and xylene, have been carried over from Order No. R4-2006-0032 for Discharge Point No. 001. The effluent limitations for these pollutants are consistent with technology-based limitations included in other Orders within the State for similar types of discharges.

Order No R4-2006-0032 established effluent limitations for benzene, toluene, ethylbenzene, and xylene based on effluent limitations contained in Order No. 00-087. Although these effluent limitations are more stringent than applicable water quality criteria, these effluent limitations have been carried over to be consistent with federal and State anti-backsliding regulations. Table F-6 summarizes the technology-based effluent limitations for Discharge Point No. 001.

Order No. R4-2006-0032 requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to update and continue to implement the SWPPP. The revised SWPPP will reflect current operations, treatment activities, and staff responsible for implementing and supporting the SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water contamination and for preventing contaminated storm water from being discharged directly into the storm drain. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. This Order requires the SWPPP be consistent with requirements in Attachment G.

This Order requires the Discharger to update and continue to implement a BMP Plan. The Discharger shall address specific areas that are considered sources of pollutants, including, but not limited to the tank farm area, truck parking area, loading racks, ship and rail car loading area, and other areas where equipment is located. The BMPs shall include measures to minimize the amount of pollutants entering the discharge.

The Order also requires the Discharger to develop a Spill Prevention Control and Countermeasure (SPCC) Plan. The SPCC Plan is required in order to report on preventive and contingency (cleanup) procedures for controlling accidental discharges and for minimizing the adverse effects of such events.

The combination of the SWPPP, BMP Plan, SPCC Plan and existing Order limitations reflecting BPJ will serve as the equivalent of technology-based effluent

limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

Table F-6. Summary of Technology-based Effluent Limitations for Discharge Point No. 001.

Parameter	Units	Maximum Daily
BOD	mg/L	30
	lbs/day ¹	630
TSS	mg/L	75
	lbs/day ¹	1,600
Oil and Grease	mg/L	15
	lbs/day ¹	310
Phenols, Total	µg/L	1,000
	lbs/day ¹	21
Settleable Solids	ml/L	0.3
Total Petroleum Hydrocarbons (TPH) as gasoline (C ₄ – C ₁₂)	µg/L	100
	lbs/day ¹	2.1
Turbidity	NTU	75
Benzene	µg/L	1.0
	lbs/day ¹	0.021
Ethylbenzene	µg/L	10
	lbs/day ¹	0.21
Toluene	µg/L	10
	lbs/day ¹	0.21
Xylene	µg/L	10
	lbs/day ¹	0.21

¹ The mass emissions rate is based on a maximum flow of 2.5 MGD and is calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Section 122.44(d)(1)(i) 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 section 122.44(d)(1)(vi).

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

The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs are contained in the Technical Support Document (TSD) for storm water discharges and in the SIP for non-storm water discharges. However, the TSD states that "an analogous approach developed by a regulatory authority can be used to determine the reasonable potential" (for storm water discharges). The Regional Water Board has determined that the procedures for determining reasonable potential and calculating WQBELs contained in the SIP for non-storm water discharges may also be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. Hence, in this Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for storm water discharges through Discharge Point No. 001.

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 Dominguez Channel Estuary. The CTR contains both saltwater and freshwater criteria. As specified in the CTR, saltwater criteria apply at salinities of 10 parts per thousand (ppt) and above at locations where this occurs 95 percent or more of the time. Limited salinity data were available for the evaluation of applicable criteria. Under the 2003 Surface Water Ambient Monitoring Program (SWAMP), a salinity concentration of 18 ppt was measured within the Dominguez Channel at Sepulveda Boulevard, just upstream of the discharge, indicating the receiving water in this area is under tidal influence so that saltwater criteria should apply to discharges from the Facility.² Therefore, the CTR criteria for saltwater aquatic life or human health for consumption of organisms, whichever is more stringent, are used to prescribe the

² Lyons, J.M. and S. Birosik. 2007. *Water Quality in the Dominguez Channel and Los Angeles/Long Beach Harbor Watershed Management Area Under the Surface Water Ambient Monitoring Program Fiscal Year 2002-2003*. California Regional Water Quality Control Board, Los Angeles Region.

effluent limitations in this Order to protect the beneficial uses of the Dominguez Channel Estuary, a water of the United States in the vicinity of the discharge.

Table F-7 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the RPA for this Order.

Table F-7. Applicable Water Quality Criteria

Constituent	Selected Criteria	CTR Water Quality Criteria					
		Freshwater		Saltwater		Human Health for Consumption of:	
		Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Arsenic, Total Recoverable	36	N/A	N/A	69	36	N/A	--
Chromium, VI	50			1100	50		--
Copper, Total Recoverable	3.7			5.8	3.7		--
Lead, Total Recoverable	8.5			220	8.5		--
Mercury, Total Recoverable	0.051			--	--		0.051
Nickel, Total Recoverable	8.3			75	8.3		4,600
Selenium, Total Recoverable	71			291	71		--
Silver, Total Recoverable	2.2			2.2	--		--
Zinc, Total Recoverable	86			95	86		--
Cyanide, Total (as CN)	1.0			1.0	1.0		220,000
TCDD Equivalents	1.4 x 10 ⁻⁸			--	--		1.4 x 10 ⁻⁸
Benzene	71			--	--		71
Ethylbenzene	29,000			--	--		29,000
Methylene Chloride	1,600			--	--		1,600
Toluene	200,000			--	--		200,000
Bis(2-Ethylhexyl)Phthalate	5.9			--	--		5.9

“N/A” indicates the receiving water body is not characterized as freshwater, nor is the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

a. Applicable Basin Plan Objectives

The Basin Plan Objectives applicable to the Discharger are identified in Table F-8. These objectives were evaluated with respect to effluent monitoring data and Facility operations when considering effluent limitations to be included in this Order. Further discussion on each objective can be found in section IV.C.5 of this Fact Sheet.

Table F-8. Applicable Basin Plan Numeric Water Quality Objectives

Constituent	Units	Water Quality Objectives
Ammonia	mg/L NH ₃	0.035 un-ionized, as a 4-day average 0.233 un-ionized as a 1-hour average
Bacteria	MPN/100 ml	<u>Geometric Means Limits</u> 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. <u>Single Sample Limits</u> i. Total coliform density shall not exceed 10,000/100 ml. ii. Fecal coliform density shall not exceed 400/100 ml iii. Enterococcus density shall not exceed 104/100 ml iv. Total coliform density shall not exceed 1,000/100 ml if the ratio of fecal-to-total coliform exceeds 0.1.
Dissolved Oxygen	mg/L	Mean annual dissolved oxygen concentration shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L.
pH	Standard units	Between 6.5 and 8.5 at all times, ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge.
Temperature	°F	Receiving water shall not be altered by more than 5°F above the natural temperature.
Turbidity	NTU	Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%.

- i. Ammonia Water Quality Objectives. Resolution No. 2004-022, effective on May 19, 2005) provides applicable ammonia water quality objectives for saltwater inland surface water bodies and guidance for determining whether freshwater or saltwater ammonia objectives apply. Provision 1 of the amendment states:

“For inland surface waters in which salinity is equal or less to 1 part per thousand 95% or more of the time, the applicable objectives are the freshwater objectives, based on the US EPA “1999 Update of Ambient Water Quality Criteria for Ammonia.” (2) For waters in which salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable objectives are a 4-day average concentration of 0.035 mg un-ionized NH₃/L and a one-hour average concentration of 0.233 mg unionized NH₃/L. (emphasis added), (3) For waters in which salinity is greater than 1 but less than 10 parts per thousand, the applicable objectives are the more stringent of the freshwater or saltwater objectives. (a) However, the Regional Water Board may by adoption of a resolution approve the use of either freshwater or saltwater objectives for an enclosed bay, wetland or estuary with findings that scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater objectives are more appropriate . . .”

In this Order, the applicable objectives are a 4-day average concentration of 0.035 mg un-ionized NH₃/L and a one-hour average concentration of 0.233 mg unionized NH₃/L. Those unionized ammonia (NH₃/L) objectives are to be translated to total ammonia (NH₄⁺+NH₃) utilizing the implementation procedure contained in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan. The equation for the translation is as follows:

$$[\text{NH}_4^+] + [\text{NH}_3] = [\text{NH}_3] + [\text{NH}_3] * 10^{(\text{pK}_a^s + 0.0324(298 - T) + 0.0415 P/T - \text{pH})}$$

Where: P = 1 atm

T = temperature (°K)

$\text{pK}_a^s = 0.116 * i + 9.425$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

i = $19.9273 S (1000 - 1.005109 S)^{-1}$, the molal ionic strength of saltwater based on S

S = salinity

In order to calculate total ammonia objectives, receiving water pH, temperature, and salinity data are required. Since these monitoring data are not available for the receiving water, no total ammonia water quality objectives can be calculated. Therefore, the reasonable potential analysis for total ammonia was not conducted in this Order.

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.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Effluent data for storm water discharged through Discharge Point No. 001 are available for the term of R4-2006-0032 for all pollutants with effluent limitations and monitoring requirements. Receiving water data for the Dominguez Channel Estuary are available for February 27, 2006 and February 10, 2010. The sample was collected within the estuary, at the Main Street Bridge, approximately 4.75 miles upstream of the discharge. Based on the RPA, pollutants that demonstrate reasonable potential are copper, lead, nickel, and zinc.

Order No. R4-2006-0032 established effluent limitations for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and 2,4,6-trichlorohphenol based on BPJ and previous permit. The most recent RPA did not find reasonable potential for these compounds. Based on the newly available data and RPA, and consistent with 40 CFR 122.44(l)(2)(i)(B)(1), the effluent limitations for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and 2,4,6-trichlorohphenol have been removed. Monitoring for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and 2,4,6-trichlorohphenol is required as part of the annual priority pollutant monitoring to ensure that concentrations of these parameters remain below any applicable water quality criteria.

The results of the RPA are shown in Table F-9 for all CTR parameters that were detected in the effluent. Although the RPA results did not show reasonable potential for benzene, ethylbenzene and toluene, effluent limitations for these parameters have been carried over as described in the section B (Technology-Based Effluent Limitations). Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

Table F-9. Summary Reasonable Potential Analysis

Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
	µg/L	µg/L	µg/L		
Arsenic, Total Recoverable	36	7.4	3.0	No	MEC<C, B<C

Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
	µg/L	µg/L	µg/L		
Chromium, VI	50	35 ¹	3.1 ¹	No	MEC<C, B<C
Copper, Total Recoverable	3.7	27	25	Yes	Trigger 1, MEC>C
Lead, Total Recoverable	8.5	35	9.2	Yes	Trigger 1, MEC>C
Nickel, Total Recoverable	8.3	14	6.6	Yes	Trigger 1, MEC>C
Selenium, Total Recoverable	71	2.0	0.48	No	MEC<C, B<C
Zinc, Total Recoverable	86	150	130	Yes	Trigger 1, MEC>C
Benzene	71	1.2	< 0.15	No	MEC<C ND in B
Ethylbenzene	29,000	2.1	0.21	No	MEC<C, B<C
Methylene Chloride	1,600	1.5	< 0.22	No	MEC<C, ND in B
Toluene	200,000	3.3	1.7	No	MEC<C, B<C

NA=Not Available; BPJ=Best Professional Judgment

¹ Result is for total chromium.

4. WQBEL Calculations

- a. If reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:
 - i. If applicable and available, use of the WLA established as part of a total maximum daily load (TMDL).
 - ii. Use of a steady-state model to derive 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. Water quality based effluent limitations for copper, lead, nickel, and zinc are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.
- 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 in the Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. WQBELs Calculation Example

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

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 criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

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

- Where
- C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. Saltwater criterion is used for this Facility since it is discharging to an estuary, so pH and hardness are not a factor.
 - D = The dilution credit, and
 - B = The ambient background concentration

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

$$\text{ECA} = C$$

For total recoverable nickel the applicable water quality criteria are (reference Table F-7):

$$\begin{aligned} \text{ECA}_{\text{acute}} &= 75 \mu\text{g/L} \\ \text{ECA}_{\text{chronic}} &= 8.3 \mu\text{g/L} \end{aligned}$$

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to

account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP.

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

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

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 total recoverable nickel, 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}
3	0.6	0.321	0.527

$$LTA_{acute} = 75 \mu\text{g/L} \times 0.321 = 24.1 \mu\text{g/L}$$

$$LTA_{chronic} = 8.3 \mu\text{g/L} \times 0.527 = 4.37 \mu\text{g/L}$$

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

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

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

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

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the 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 total recoverable nickel, 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

$$AMEL_{\text{aquatic life}} = 4.37 \mu\text{g/L} \times 1.55 = 6.8 \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 4.37 \mu\text{g/L} \times 3.11 = 14 \mu\text{g/L}$$

Calculation of human health AMEL and MDEL:

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

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

For total recoverable nickel:

$$AMEL_{\text{human health}} = 4,600$$

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.

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

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

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

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 total recoverable nickel:

AMEL _{aquatic life}	MDEL _{aquatic life}	AMEL _{human health}	MDEL _{human health}
6.8	14	4,600 µg/L	9,246 µg/L

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For total recoverable copper, total recoverable lead, and total recoverable zinc, there are no human health criteria; therefore, the effluent limitations based on aquatic life criteria are established as the WQBELs. These limitations are expected to be protective of beneficial uses.

The Facility discharges to the Dominguez Channel Estuary only during rainfall periods. The discharges are intermittent and generally of short duration (less than one week). Because of these discharge characteristics, this Order establishes MDELs, without AMELS to be protective of beneficial uses.

5. WQBELS based on Basin Plan Objectives

To meet the water quality objectives in the Basin Plan and to protect the beneficial uses of the receiving water, the numeric Objectives presented in Table F-8 were evaluated and this Order includes effluent or receiving water limitations as follows:

- a. **Ammonia.** In accordance with the Basin Plan, for inland surface waters not characteristic of freshwater, the un-ionized ammonia objectives presented in Table F-8 are to be translated to total ammonia based on receiving water pH, temperature, and salinity. However, receiving water data for these constituents were not available for the Dominguez Channel Estuary during the term of the current permit. Therefore, no effluent limitations for ammonia have been established in this Order. Instead, effluent monitoring for ammonia and receiving water monitoring for ammonia, pH, temperature, and salinity in the Dominguez Channel Estuary have been included in Section VIII of the MRP.
- b. **Temperature.** The Basin Plan identifies numeric temperature objectives for enclosed bays and estuaries and references the Thermal Plan. A white paper was developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. The effluent limitation for temperature is carried forward from the previous Order, which was based on the findings included in the white paper.
- a. **Bacteria.** The Basin Plan contains bacteria water quality objectives in marine waters for the protection of contact recreation, and non-contact recreation beneficial uses. This Order includes receiving water limitations for total coliform, fecal coliform and enterococcus in order to protect the contact water recreation (REC-1) beneficial use of the receiving water.

- b. Dissolved Oxygen.** This Order applies the Basin Plan water quality objective for dissolved oxygen as a receiving water limitation in lieu of an effluent limitation.
- c. pH.** Based on the requirements of the Basin Plan, an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in the permit.
- d. Turbidity.** Based on the requirements of the Basin Plan, this Order applies the Basin Plan Objective for turbidity as a receiving water limitation in V.A.13. In addition, this permit includes the BPJ-based effluent limitation for turbidity which was carried over from Order No. R4-2006-0032.

6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. This existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. In addition, the Order establishes thresholds that when exceeded requires the Discharger to conduct accelerated toxicity testing and/or conduct toxicity reduction evaluation (TRE) and toxicity identification evaluation (TIE) studies.

Acute toxicity data for the years 2006 through 2010 submitted by the Discharger consistently showed 100 percent survival. Due to the potential for storm water contamination, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

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.

The discharges from the Facility are infrequent and typically short-term. The discharges at the Facility are not expected to contribute to long-term effects,

therefore no chronic toxicity limitations or monitoring requirements are included in this Order. Intermittent discharges have the potential to contribute to short-term effects; therefore the Discharger will be required to comply with acute toxicity effluent limitations in accordance with the Basin Plan and this Order.

7. Numeric Criterion for TCDD equivalents:

The CTR establishes numeric water quality objectives for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) for the protection of human health from consumption of aquatic organisms only and consumption of water and aquatic organisms, respectively. When the 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 have therefore used TEFs to express the measured concentrations of 17 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.

Dioxin-TEQ (TCDD-equivalent) values reflect the combined effect of numerous dioxin and furan compounds (congeners). The effluent limits implement the *Los Angeles 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, WQBELs must be established. If the potentially violated objective is narrative, the narrative objective must be translated into an effluent limitation. The dioxin-TEQ (TCDD-equivalent) 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-TCDD. The World Health

Organization developed toxicity TEFs to convert congener concentrations into equivalent concentrations of 2,3,7,8-TCDD, which when added together are expressed as dioxin-TEQ (TCDD-equivalent). *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 (TCDD-equivalent). To complete the translation of the Basin Plan's narrative bioaccumulation objective into a numeric effluent limit, dioxin-TEQ limits are derived from the CTR 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 USEPA, 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 bioaccumulation equivalency factors (BEFs) to dioxin and furan concentrations when calculating dioxin-TEQ;
- Do not use dioxin and furan congener concentrations reported below MLs when computing dioxin-TEQ.

Bioaccumulation Equivalency Factors (BEFs)

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 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-10 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 USEPA adopted the approach of using both TEFs and BEFs to calculate dioxin-TEQ (TCDD-equivalent) for the Great Lakes System (40 CFR 132, Appendix F). In the absence of site-specific BEFs, the USEPA 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 USEPA states, "*Limited comparison to BEFs calculated from data obtained for other ecosystems confirms these bioaccumulation potential differences for [dioxins and furans] for fish in ecosystems outside the Great Lakes.*" Recently, the USEPA 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 No. R2-2009-0062).

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 BEFs derived for the Great Lakes System is preferable to omitting BEFs altogether. The panel also explained 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 at the time) may mischaracterize the significance of dioxin and furan discharges by as much as two orders of magnitude.

Therefore, for the purpose of the compliance determination and/or the future RPAs with respect to TCDD-equivalent, this Order requires the Dischargers to calculate and report dioxin-TEQ (TCDD-equivalent) using the following formula, where the TEFs and BEFs are as listed in following table:

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

where:

C_x = concentration of dioxin or furan congener x

TEF_x = TEF for congener x

BEF_x = BEF for congener x

Table F-10. Minimum Levels, Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors – Dioxin Congeners

Dioxin or Furan Congener	Minimum Level (pg/L)	Toxicity Equivalency Factor (TEF)	Bioaccumulative Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	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 USEPA Method 1613 (*Tetra-through Octa- Chlorinated 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 USEPA 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 includes the dioxin and furan MLs to be used in the Dioxin-TEQ (TCDD-equivalents) reporting, the Discharger must continue to report all measured and estimated congener concentrations with appropriate data qualifiers.

8. Final WQBELs

This Order includes effluent limitations for copper, lead, nickel and zinc based on CTR and SIP procedures. An effluent limitation for nickel was newly added because the recent RPA results indicate reasonable potential for this parameter. For lead, a more stringent effluent limitation based on CTR was prescribed in place of that in the previous Order. Effluent limitations for pH, temperature and acute toxicity are carried over from the previous Order and are consistent with the water quality objectives contained in the Basin Plan.

Table F-11. Summary of Water Quality-based Effluent Limitations for Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard Units	6.5-8.5			
Temperature		--	--	--	86

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	--	5.8	--	--
	lbs/day ¹	--	0.12	--	--
Lead, Total Recoverable	µg/L	--	16	--	--
	lbs/day ¹	--	0.33	--	--
Nickel, Total Recoverable	µg/L	--	14	--	--
	lbs/day ¹	--	0.29	--	--
Zinc, Total Recoverable	µg/L	--	95	--	--
	lbs/day ¹	--	2.0	--	--
Acute Toxicity	% Survival	2			

¹ The mass emissions rate is based on a maximum flow of 2.5 MGD and is calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

² The acute toxicity of the effluent shall be such that:

- i. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay test shall be at least 90%, and
- ii. No single test shall produce less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP (Attachment E).

D. Final Effluent Limitations

Section 402(o) of the CWA and 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 pH, temperature, BOD, oil and grease, TSS, phenols, settleable solids, total petroleum hydrocarbons, turbidity, benzene, ethylbenzene, toluene, and xylenes are being carried over from Order No. R4-2006-0032. 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.

In addition to these limitations, the Regional Water Board is implementing the CTR and SIP, and effluent limitations are only prescribed for those regulated pollutants that show reasonable potential to exceed water quality standards.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. However, Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitations on a case-by-case basis, limitations expressed in terms of mass are infeasible because the mass of the pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment. New mass-based limitations at Discharge Point No. 001 are included in this Order to comply with Section 122.45(f)(1).

1. Satisfaction of Anti-Backsliding Requirements

Some effluent limitations in this Order are less stringent than those in the current Order. As discussed below this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Order No. R4-2006-0032 established effluent limitations for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and 2,4,6-trichlorophenol based on BPJ. However, effluent limitations for these parameters are no longer included in the reissued permits for similar discharges. Further, the results of the recent RPA showed no reasonable potential for these parameters to exceed water quality criteria. Consistent with 40 CFR 122.44(l), based on the new effluent data and the most recent RPA, effluent limitations for these contaminants were removed. However, monitoring requirements for these parameters are retained so that the potential for these parameters to exceed water quality criteria can continue to be evaluated. The removal of effluent limitations for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and 2,4,6-trichlorophenol is consistent with the exceptions to the anti-backsliding regulations because it reflected "new information" that was not available during the existing permit renewal.

All other effluent limitations are at least as stringent as the effluent limitations in the previous permit.

2. Satisfaction of Antidegradation Policy

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

The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16. The final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or water quality degradation. Although this Order does reinstate the permitted maximum flow of 2.5 MGD as prescribed in Order No. 00-087, the discharge is not expected to have significant impact on the receiving water because the high discharge flow will only occur at heavy rainfall events. In addition, the Discharger will continue to implement the SWPPP and BMPs as well as any required treatment process. Therefore, the issuance of this permit is consistent with the state's antidegradation policy.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS, oil and grease, BOD, settleable solids, turbidity, total phenols, TPH, turbidity, benzene, ethylbenzene, toluene, and xylene at Discharge Point No. 001. Restrictions on these parameters are discussed in section IV.B.2 of this Fact Sheet. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

This Order includes WQBELs for pH, temperature, copper, lead, nickel, zinc, and acute toxicity. 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. 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. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to part 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Table F-12. Summary of Final Effluent Limitations for Discharge Point No. 001

Parameter	Units	Effluent Limitations				Basis ¹
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	Standard Units	--	--	6.5 - 8.5		E, BP
Temperature	°F	--	--	--	86	E, BP, TP, WP
BOD (5-day @ 20 deg. C)	mg/L	--	30	--	--	E, BPJ
	lbs/day ²	--	630	--	--	
TSS	mg/L	--	75	--	--	E, BPJ
	lbs/day ²	--	1,600	--	--	
Oil and Grease	mg/L	--	15	--	--	E, BPJ
	lbs/day ²	--	310	--	--	
Phenols, Total	µg/L	--	1,000	--	--	E, BPJ
	lbs/day ²	--	21	--	--	
Settleable Solids	ml/L	--	0.3	--	--	E, BPJ
TPH as Gasoline (C ₄ – C ₁₂)	µg/L	--	100	--	--	E, BPJ
	lbs/day ²	--	2.1	--	--	
Turbidity	NTU	--	75	--	--	E, BPJ

Parameter	Units	Effluent Limitations				Basis ¹
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Copper, Total Recoverable	µg/L	--	5.8	--	--	E, CTR, SIP
	lbs/day ²	--	0.12	--	--	
Lead, Total Recoverable	µg/L	--	16	--	--	CTR, SIP
	lbs/day ²	--	0.33	--	--	
Nickel, Total Recoverable	µg/L	--	14	--	--	CTR, SIP
	lbs/day ²	--	0.29	--	--	
Zinc, Total Recoverable	µg/L	--	95	--	--	E, CTR, SIP
	lbs/day ²	--	2.0	--	--	
Benzene	µg/L	--	1.0	--	--	E, BPJ
	lbs/day ²	--	0.021	--	--	
Ethylbenzene	µg/L	--	10	--	--	E, BPJ
	lbs/day ²	--	0.21	--	--	
Toluene	µg/L	--	10	--	--	E, BPJ
	lbs/day ²	--	0.21	--	--	
Xylenes, Total	µg/L	--	10	--	--	E, BPJ
	lbs/day ²	--	0.21	--	--	
Acute Toxicity	% Survival	3				E. BP

¹ BP = Basin Plan; E = Existing Order (Order No. R4-2006-0032); BPJ = Best Professional Judgment; CTR = California Toxics Rule; SIP = State Implementation Policy; TP=Thermal Plan, and WP = White Paper.

² The mass emissions rate is based on a maximum flow of 2.5 MGD and is calculated as follows:

$$\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day.}$$

³ The acute toxicity of the effluent shall be such that:

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

Compliance with the toxicity objectives will be determined by the method described in section V of the MRP (Attachment E).

4. Mass-based Effluent Limitations

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

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

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 (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

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 pollutants expected to be present in the discharge will be required as established in the MRP (Attachment E) and as required in the SIP. To demonstrate compliance with effluent limitations, the Order establishes monitoring at a frequency of once per discharge event, with a maximum of once per week (or a 7-day period) at Discharge Point No. 001 for the following pollutants: flow, pH, BOD, TSS, oil and grease, temperature, phenols (total), settleable solids, TPH (gasoline, diesel and waste oil), turbidity, copper, lead, nickel and zinc.

Monitoring requirements for MTBE and TBA established in R4-2006-0032 are carried over to this Order, as they remain as pollutants of concern. This Order establishes quarterly monitoring requirements for ammonia to ensure that the discharge will not contribute to impairment of beneficial uses.

The frequency of monitoring in Order No. R4-2006-0032 for several constituents is once per discharge event with a maximum frequency of once per month. Flow data from the Facility during the previous term indicated there may be multiple discharges within a one month period. The wet season, during which discharges occur, however, is typically less than four months of the year. This will result in a limited number of monitoring events, typically four or less per year. In order to better characterize the effluent, this Order increases the monitoring frequency to once per discharge with a maximum frequency of once per week (or in a 7-day period). Order No. R4-2006-0032

included a monitoring frequency of once per year for benzene, ethylbenzene, toluene, and xylene. Effluent data from May 22, 2006 through February 5, 2010 includes detected concentrations of these constituents. As a result, this Order includes an increased monitoring frequency of once per quarter in order to more closely monitor potential for exceeding water quality criteria.

Monitoring for acute toxicity is annually in order to demonstrate compliance with acute toxicity effluent limitations. Total coliform, fecal coliform and enterococcus are added in the effluent monitoring program to determine reasonable potential and are monitored once per quarter.

For the constituents 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, and 2,4,6-trichlorophenol, this Order carries over the monitoring frequency of once per year. Effluent data reported in the fact sheet of Order No. R4-2006-0032 as well as annual effluent monitoring data collected during the previous term did not result in any detected concentrations. Considering the lack of detected values, the monitoring frequency of once per year is deemed sufficient to ensure that effluent concentrations remain below water quality criteria.

The SIP states that the Regional Water Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires the Discharger to conduct annual monitoring for all CTR priority pollutants and TCDD Equivalents, as listed in the MRP (Attachment E), in the effluent for the life of the permit. The Regional Water Board will use the additional data to conduct an RPA and determine if a WQBEL is required. The Regional Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in section IV.A of this Order.

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

D. Receiving Water Monitoring

1. Surface Water

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream

receiving water monitoring of the CTR priority pollutants at Monitoring Location RSW-001. Additionally, the Discharger must analyze pH, temperature, salinity and ammonia of the upstream receiving water at the same.

During the term of Order No. R4-2006-0032, the Discharger did not have direct access to the Dominguez Channel Estuary in the immediate vicinity of the discharge, where receiving water monitoring could occur. This Order allows the Discharger to propose an appropriate receiving water sampling location if the immediate vicinity of the discharge is not accessible for sampling within 90 days of the effective date of this permit. Upon approval by the Regional Water Board, the proposed location will serve as RSW-001. This condition is included in the footnote of Table E-1 in the MRP.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. Storm Water Monitoring

Because the discharge is comprised of storm water runoff, the Discharger is required to measure and record the rainfall each day of the month. The Discharger is also required to conduct visual observations of all storm water discharges 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 section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 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. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

These provisions are based on section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

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

3. Best Management Practices and Pollution Prevention

These provisions are based on section 122.44(k) and includes the requirement to develop and implement a SWPPP, BMPP and a SPCC Plan.

4. Construction, Operation, and Maintenance Specifications

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

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 Kinder Morgan Liquids Terminals, LLC, Carson Terminal. 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. Notification was provided to all interested parties.

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 **April 29, 2011**.

C. Public Hearing

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

Date: June 2, 2011
Time: 9:00 A.M.
Location: Metropolitan Water District, Board Room
700 N. Alameda Street
Los Angeles, California

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

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

D. Nature of Hearing

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

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional 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 **April 29, 2011**. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

G. Hearing Procedure

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

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

H. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

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

I. Information and Copying

The Report of Waste Discharge (RWD), 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 Jau Ren Chen at (213) 576-6656.

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 8-1/2 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

<p>IMPLEMENTATION PHASE</p> <p>Train employees Implement BMPs Conduct recordkeeping and reporting</p>
--

<p>EVALUATION / MONITORING</p> <p>Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP</p>

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 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 VIII below.

VIII. Storm Water Best Management Practices

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

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

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. 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 consists of practical procedures to maintain a clean and orderly facility.
2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.
3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.
5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.
8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

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

B. Structural BMPs.

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

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

IX. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

- A.** A review of all visual observation records, inspection records, and sampling and analysis results.
- B.** A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

- C.** A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- D.** An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.D.5 of Attachment D.

X. SWPPP General Requirements

- A.** The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.
- B.** The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.
- C.** The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- D.** The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.
- E.** When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water

discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

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

ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The Minimum Levels (MLs) in 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		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
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		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

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

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

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

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

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

Table 2d – PESTICIDES – PCBs*	GC
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	Methods in 40 CFR part 136
2	Arsenic	7440382	Methods in 40 CFR part 136
3	Beryllium	7440417	Methods in 40 CFR part 136
4	Cadmium	7440439	Methods in 40 CFR part 136
5a	Chromium (III)	16065831	Methods in 40 CFR part 136
5a	Chromium (VI)	18540299	Methods in 40 CFR part 136
6	Copper	7440508	Methods in 40 CFR part 136
7	Lead	7439921	Methods in 40 CFR part 136
8	Mercury	7439976	Methods in 40 CFR part 136
9	Nickel	7440020	Methods in 40 CFR part 136
10	Selenium	7782492	Methods in 40 CFR part 136
11	Silver	7440224	Methods in 40 CFR part 136
12	Thallium	7440280	Methods in 40 CFR part 136
13	Zinc	7440666	Methods in 40 CFR part 136
14	Cyanide	57125	Methods in 40 CFR part 136
15	Asbestos	1332214	Methods in 40 CFR part 136
16	2,3,7,8-TCDD	1746016	Methods in 40 CFR part 136
17	Acrolein	107028	Methods in 40 CFR part 136
18	Acrylonitrile	107131	Methods in 40 CFR part 136
19	Benzene	71432	Methods in 40 CFR part 136
20	Bromoform	75252	Methods in 40 CFR part 136
21	Carbon Tetrachloride	56235	Methods in 40 CFR part 136
22	Chlorobenzene	108907	Methods in 40 CFR part 136
23	Chlorodibromomethane	124481	Methods in 40 CFR part 136
24	Chloroethane	75003	Methods in 40 CFR part 136
25	2-Chloroethylvinyl Ether	110758	Methods in 40 CFR part 136
26	Chloroform	67663	Methods in 40 CFR part 136
27	Dichlorobromomethane	75274	Methods in 40 CFR part 136
28	1,1-Dichloroethane	75343	Methods in 40 CFR part 136
29	1,2-Dichloroethane	107062	Methods in 40 CFR part 136
30	1,1-Dichloroethylene	75354	Methods in 40 CFR part 136
31	1,2-Dichloropropane	78875	Methods in 40 CFR part 136
32	1,3-Dichloropropylene	542756	Methods in 40 CFR part 136
33	Ethylbenzene	100414	Methods in 40 CFR part 136
34	Methyl Bromide	74839	Methods in 40 CFR part 136
35	Methyl Chloride	74873	Methods in 40 CFR part 136
36	Methylene Chloride	75092	Methods in 40 CFR part 136
37	1,1,2,2-Tetrachloroethane	79345	Methods in 40 CFR part 136
38	Tetrachloroethylene	127184	Methods in 40 CFR part 136
39	Toluene	108883	Methods in 40 CFR part 136
40	1,2-Trans-Dichloroethylene	156605	Methods in 40 CFR part 136
41	1,1,1-Trichloroethane	71556	Methods in 40 CFR part 136
42	1,1,2-Trichloroethane	79005	Methods in 40 CFR part 136
43	Trichloroethylene	79016	Methods in 40 CFR part 136

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
44	Vinyl Chloride	75014	Methods in 40 CFR part 136
45	2-Chlorophenol	95578	Methods in 40 CFR part 136
46	2,4-Dichlorophenol	120832	Methods in 40 CFR part 136
47	2,4-Dimethylphenol	105679	Methods in 40 CFR part 136
48	2-Methyl-4,6-Dinitrophenol	534521	Methods in 40 CFR part 136
49	2,4-Dinitrophenol	51285	Methods in 40 CFR part 136
50	2-Nitrophenol	88755	Methods in 40 CFR part 136
51	4-Nitrophenol	100027	Methods in 40 CFR part 136
52	3-Methyl-4-Chlorophenol	59507	Methods in 40 CFR part 136
53	Pentachlorophenol	87865	Methods in 40 CFR part 136
54	Phenol	108952	Methods in 40 CFR part 136
55	2,4,6-Trichlorophenol	88062	Methods in 40 CFR part 136
56	Acenaphthene	83329	Methods in 40 CFR part 136
57	Acenaphthylene	208968	Methods in 40 CFR part 136
58	Anthracene	120127	Methods in 40 CFR part 136
59	Benzidine	92875	Methods in 40 CFR part 136
60	Benzo(a)Anthracene	56553	Methods in 40 CFR part 136
61	Benzo(a)Pyrene	50328	Methods in 40 CFR part 136
62	Benzo(b)Fluoranthene	205992	Methods in 40 CFR part 136
63	Benzo(ghi)Perylene	191242	Methods in 40 CFR part 136
64	Benzo(k)Fluoranthene	207089	Methods in 40 CFR part 136
65	Bis(2-Chloroethoxy)Methane	111911	Methods in 40 CFR part 136
66	Bis(2-Chloroethyl)Ether	111444	Methods in 40 CFR part 136
67	Bis(2-Chloroisopropyl)Ether	108601	Methods in 40 CFR part 136
68	Bis(2-Ethylhexyl)Phthalate	117817	Methods in 40 CFR part 136
69	4-Bromophenyl Phenyl Ether	101553	Methods in 40 CFR part 136
70	Butylbenzyl Phthalate	85687	Methods in 40 CFR part 136
71	2-Chloronaphthalene	91587	Methods in 40 CFR part 136
72	4-Chlorophenyl Phenyl Ether	7005723	Methods in 40 CFR part 136
73	Chrysene	218019	Methods in 40 CFR part 136
74	Dibenzo(a,h)Anthracene	53703	Methods in 40 CFR part 136
75	1,2-Dichlorobenzene	95501	Methods in 40 CFR part 136
76	1,3-Dichlorobenzene	541731	Methods in 40 CFR part 136
77	1,4-Dichlorobenzene	106467	Methods in 40 CFR part 136
78	3,3'-Dichlorobenzidine	91941	Methods in 40 CFR part 136
79	Diethyl Phthalate	84662	Methods in 40 CFR part 136
80	Dimethyl Phthalate	131113	Methods in 40 CFR part 136
81	Di-n-Butyl Phthalate	84742	Methods in 40 CFR part 136
82	2,4-Dinitrotoluene	121142	Methods in 40 CFR part 136
83	2,6-Dinitrotoluene	606202	Methods in 40 CFR part 136
84	Di-n-Octyl Phthalate	117840	Methods in 40 CFR part 136
85	1,2-Diphenylhydrazine	122667	Methods in 40 CFR part 136
86	Fluoranthene	206440	Methods in 40 CFR part 136
87	Fluorene	86737	Methods in 40 CFR part 136
88	Hexachlorobenzene	118741	Methods in 40 CFR part 136

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
89	Hexachlorobutadiene	87863	Methods in 40 CFR part 136
90	Hexachlorocyclopentadiene	77474	Methods in 40 CFR part 136
91	Hexachloroethane	67721	Methods in 40 CFR part 136
92	Indeno(1,2,3-cd)Pyrene	193395	Methods in 40 CFR part 136
93	Isophorone	78591	Methods in 40 CFR part 136
94	Naphthalene	91203	Methods in 40 CFR part 136
95	Nitrobenzene	98953	Methods in 40 CFR part 136
96	N-Nitrosodimethylamine	62759	Methods in 40 CFR part 136
97	N-Nitrosodi-n-Propylamine	621647	Methods in 40 CFR part 136
98	N-Nitrosodiphenylamine	86306	Methods in 40 CFR part 136
99	Phenanthrene	85018	Methods in 40 CFR part 136
100	Pyrene	129000	Methods in 40 CFR part 136
101	1,2,4-Trichlorobenzene	120821	Methods in 40 CFR part 136
102	Aldrin	309002	Methods in 40 CFR part 136
103	alpha-BHC	319846	Methods in 40 CFR part 136
104	beta-BHC	319857	Methods in 40 CFR part 136
105	gamma-BHC	58899	Methods in 40 CFR part 136
106	delta-BHC	319868	Methods in 40 CFR part 136
107	Chlordane	57749	Methods in 40 CFR part 136
108	4,4'-DDT	50293	Methods in 40 CFR part 136
109	4,4'-DDE	72559	Methods in 40 CFR part 136
110	4,4'-DDD	72548	Methods in 40 CFR part 136
111	Dieldrin	60571	Methods in 40 CFR part 136
112	alpha-Endosulfan	959988	Methods in 40 CFR part 136
113	beta-Endosulfan	33213659	Methods in 40 CFR part 136
114	Endosulfan Sulfate	1031078	Methods in 40 CFR part 136
115	Endrin	72208	Methods in 40 CFR part 136
116	Endrin Aldehyde	7421934	Methods in 40 CFR part 136
117	Heptachlor	76448	Methods in 40 CFR part 136
118	Heptachlor Epoxide	1024573	Methods in 40 CFR part 136
119	PCB-1016	12674112	Methods in 40 CFR part 136
120	PCB-1221	11104282	Methods in 40 CFR part 136
121	PCB-1232	11141165	Methods in 40 CFR part 136
122	PCB-1242	53469219	Methods in 40 CFR part 136
123	PCB-1248	12672296	Methods in 40 CFR part 136
124	PCB-1254	11097691	Methods in 40 CFR part 136
125	PCB-1260	11096825	Methods in 40 CFR part 136
126	Toxaphene	8001352	Methods in 40 CFR part 136

ATTACHMENT J – RPA ANALYSIS FOR CTR CONSTITUENTS

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	
					Freshwater		Saltwater		Human Health for consumption of:						
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only					
1	Antimony	ug/L		2						4300.00	4300.00	No	No	Y	
2	Arsenic	ug/L		7.4			69.00	36.00			36.00	No	No	Y	
3	Beryllium	ug/L		No Criteria					Narrative	No Criteria	No Criteria	No Criteria	No Criteria	Y	
4	Cadmium	ug/L		1			42.25	9.36		Narrative	9.36	No	No	Y	
5a	Chromium (III)			No Criteria					Narrative	No Criteria	No Criteria	No Criteria	No Criteria	N	
5b	Chromium (VI)	ug/L		35			1107.75	50.35		Narrative	50.35	No	No	Y	
6	Copper	ug/L	0.53	27			5.78	3.73			3.73	Yes	Yes	Y	
7	Lead	ug/L	1.00	35			220.82	8.52		Narrative	8.52	Yes	Yes	Y	
8	Mercury	ug/L					Reserved	Reserved			0.05			Y	
9	Nickel	ug/L	0.6	14			74.75	8.28			4600.00	8.28	Yes	Yes	Y
10	Selenium	ug/L		2			290.58	71.14		Narrative	71.14	No	No	Y	
11	Silver	ug/L		1			2.24				2.24	No	No	Y	
12	Thallium	ug/L		1							6.30	No	No	Y	
13	Zinc	ug/L	0.69	150			95.14	85.62			85.62	Yes	Yes	Y	
14	Cyanide	ug/L					1.00	1.00			220000.00	1.00			Y
15	Asbestos	Fibers/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
16	2,3,7,8 TCDD	ug/L									0.00	0.00			Y
	TCDD Equivalentents	ug/L	0								0.00	0.00			Y
17	Acrolein	ug/L		4							780.00	780.00	No	No	Y
18	Acrylonitrile	ug/L									0.66	0.66			Y
19	Benzene	ug/L		1.2							71.00	71.00	No	No	Y
20	Bromoform	ug/L		0.4							360.00	360.00	No	No	Y
21	Carbon Tetrachloride	ug/L		0.28							4.40	4.40	No	No	Y
22	Chlorobenzene	ug/L		0.36							21000	21000	No	No	Y
23	Chlorodibromomethane	ug/L		0.4							34	34.00	No	No	Y
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
27	Dichlorobromomethane	ug/L		0.28							46	46.00	No	No	Y
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
29	1,2-Dichloroethane	ug/L		0.28							99	99.00	No	No	Y
30	1,1-Dichloroethylene	ug/L		0.42							3.2	3.200	No	No	Y
31	1,2-Dichloropropane	ug/L		0.35							39	39.00	No	No	Y
32	1,3-Dichloropropylene	ug/L		0.22							1700	1700	No	No	Y
33	Ethylbenzene	ug/L		2.1							29000.00	29000.00	No	No	Y
34	Methyl Bromide	ug/L		0.42							4000	4000	No	No	Y
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
36	Methylene Chloride	ug/L		1.5							1600	1600.0	No	No	Y
37	1,1,2,2-Tetrachloroethane	ug/L		0.24							11	11.00	No	No	Y
38	Tetrachloroethylene	ug/L		0.32							8.85	8.9	No	No	Y
39	Toluene	ug/L		3.3							200000.00	200000.00	No	No	Y
40	1,2-Trans-Dichloroethylene	ug/L		0.3							140000	140000	No	No	Y
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	
42	1,1,2-Trichloroethane	ug/L		0.3							42	42.0	No	No	Y

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							
		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
1	Antimony	N		4		B<=C, Step 7		No	MEC<C & B<=C
2	Arsenic	N		3		B<=C, Step 7		No	MEC<C & B<=C
3	Beryllium	N		0.026		No Criteria	No Criteria	Uc	No Criteria
4	Cadmium	N		0.41		B<=C, Step 7		No	MEC<C & B<=C
5a	Chromium (III)					No Criteria	No Criteria	Uc	No Criteria
5b	Chromium (VI)	N		3.1		B<=C, Step 7		No	MEC<C & B<=C
6	Copper	N	N	25		Limit required, B>C & pollutant		Yes	MEC>=C
7	Lead	N	N	9.2		Limit required, B>C & pollutant		Yes	MEC>=C
8	Mercury	N		0.22		B>C & eff ND, Step 7		no	ud; effluent ND, MDL>C & B>
9	Nickel	N		6.6		B<=C, Step 7		Yes	MEC>=C
10	Selenium	N		0.48		B<=C, Step 7		No	MEC<C & B<=C
11	Silver	N		0.12		B<=C, Step 7		No	MEC<C & B<=C
12	Thallium	Y	0.015		N	No detected value of B, Step 7		No	MEC<C & B is ND
13	Zinc	N	N	130		Limit required, B>C & pollutant		Yes	MEC>=C
14	Cyanide	N		3		B>C & eff ND, Step 7		no	ud; effluent ND, MDL>C & B>
15	Asbestos					No Criteria	No Criteria	Uc	No Criteria
16	2,3,7,8 TCDD	Y	0.0028		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
	TCDD Equivalents	N		1.35E-08		B<=C, Step 7		Ud	No effluent data & B<=C
17	Acrolein	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
18	Acrylonitrile	Y	1.4		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
19	Benzene	Y	0.15		N	No detected value of B, Step 7		No	MEC<C & B is ND
20	Bromoform	Y	0.17		N	No detected value of B, Step 7		No	MEC<C & B is ND
21	Carbon Tetrachloride	Y	0.38		N	No detected value of B, Step 7		No	MEC<C & B is ND
22	Chlorobenzene	Y	0.17		N	No detected value of B, Step 7		No	MEC<C & B is ND
23	Chlorodibromomethane	Y	0.18		N	No detected value of B, Step 7		No	MEC<C & B is ND
24	Chloroethane	Y	0.35		N	No Criteria	No Criteria	Uc	No Criteria
25	2-Chloroethylvinyl ether	Y	0.14		N	No Criteria	No Criteria	Uc	No Criteria
26	Chloroform	Y				No Criteria	No Criteria	Uc	No Criteria
27	Dichlorobromomethane	Y	0.21		N	No detected value of B, Step 7		No	MEC<C & B is ND
28	1,1-Dichloroethane	Y	0.17		N	No Criteria	No Criteria	Uc	No Criteria
29	1,2-Dichloroethane	Y	0.16		N	No detected value of B, Step 7		No	MEC<C & B is ND
30	1,1-Dichloroethylene	Y	0.19		N	No detected value of B, Step 7		No	MEC<C & B is ND
31	1,2-Dichloropropane	Y	0.2		N	No detected value of B, Step 7		No	MEC<C & B is ND
32	1,3-Dichloropropylene	Y	0.23		N	No detected value of B, Step 7		No	MEC<C & B is ND
33	Ethylbenzene	N		0.21		B<=C, Step 7		No	MEC<C & B<=C
34	Methyl Bromide	Y	0.28		N	No detected value of B, Step 7		No	MEC<C & B is ND
35	Methyl Chloride	Y	0.32		N	No Criteria	No Criteria	Uc	No Criteria
36	Methylene Chloride	Y	0.22		N	No detected value of B, Step 7		No	MEC<C & B is ND
37	1,1,2,2-Tetrachloroethane	Y	0.2		N	No detected value of B, Step 7		No	MEC<C & B is ND
38	Tetrachloroethylene	Y	0.19		N	No detected value of B, Step 7		No	MEC<C & B is ND
39	Toluene	N		1.7		B<=C, Step 7		No	MEC<C & B<=C
40	1,2-Trans-Dichloroethylene	Y	0.19		N	No detected value of B, Step 7		No	MEC<C & B is ND
41	1,1,1-Trichloroethane	Y	0.27		N	No Criteria	No Criteria	Uc	No Criteria
42	1,1,2-Trichloroethane	Y	0.2		N	No detected value of B, Step 7		No	MEC<C & B is ND

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS								
		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
1	Antimony												
2	Arsenic												
3	Beryllium												
4	Cadmium												
5a	Chromium (III)									0.00			
5b	Chromium (VI)												
6	Copper		1.900412899		0.35	2.04593	0.5623565	2.10	2.05	1.49	3.04	2.83	5.78
7	Lead		2.518539701		0.20	45.1114	0.3731894	3.18	3.18	1.94	6.18	4.90	15.56
8	Mercury												
9	Nickel	4600	2.01	9228.47012	0.32	24.00	0.53	4.37	4.37	1.55	6.78	3.11	13.60595
10	Selenium												
11	Silver												
12	Thallium												
13	Zinc		2.137976772		0.29	27.1501	0.4858979	41.60	27.15	1.64	44.50	3.50	95.14
14	Cyanide												
15	Asbestos												
16	2,3,7,8 TCDD												
	TCDD Equivalents												
17	Acrolein												
18	Acrylonitrile												
19	Benzene												
20	Bromoform												
21	Carbon Tetrachloride												
22	Chlorobenzene												
23	Chlorodibromomethane												
24	Chloroethane												
25	2-Chloroethylvinyl ether												
26	Chloroform												
27	Dichlorobromomethane												
28	1,1-Dichloroethane												
29	1,2-Dichloroethane												
30	1,1-Dichloroethylene												
31	1,2-Dichloropropane												
32	1,3-Dichloropropylene												
33	Ethylbenzene												
34	Methyl Bromide												
35	Methyl Chloride												
36	Methylene Chloride												
37	1,1,2,2-Tetrachloroethane												
38	Tetrachloroethylene												
39	Toluene												
40	1,2-Trans-Dichloroethylene												
41	1,1,1-Trichloroethane												
42	1,1,2-Trichloroethane												

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	LIMITS		Recommendation	Comment
		Lowest AMEL	Lowest MDEL		
1	Antimony			No Limit	No Reasonable Potential
2	Arsenic			No Limit	No Reasonable Potential
3	Beryllium			No Limit	No Reasonable Potential
4	Cadmium			No Limit	No Reasonable Potential
5a	Chromium (III)			No Limit	No Reasonable Potential
5b	Chromium (VI)			No Limit	No Reasonable Potential
6	Copper	3.0	5.8		MEC >= C, Limit Required
7	Lead	6.2	16		MEC >= C, Limit Required
8	Mercury			No Limit	No Reasonable Potential
9	Nickel	6.8	14		MEC >= C, Limit Required
10	Selenium			No Limit	No Reasonable Potential
11	Silver			No Limit	No Reasonable Potential
12	Thallium			No Limit	No Reasonable Potential
13	Zinc	44	95		MEC >= C, Limit Required
14	Cyanide			No Limit	No Reasonable Potential
15	Asbestos			No Limit	No Reasonable Potential
16	2,3,7,8 TCDD			No Limit	No Reasonable Potential
	TCDD Equivalents			No Limit	No Reasonable Potential
17	Acrolein			No Limit	No Reasonable Potential
18	Acrylonitrile			No Limit	No Reasonable Potential
19	Benzene			No Limit	No Reasonable Potential
20	Bromoform			No Limit	No Reasonable Potential
21	Carbon Tetrachloride			No Limit	No Reasonable Potential
22	Chlorobenzene			No Limit	No Reasonable Potential
23	Chlorodibromomethane			No Limit	No Reasonable Potential
24	Chloroethane			No Limit	No Reasonable Potential
25	2-Chloroethylvinyl ether			No Limit	No Reasonable Potential
26	Chloroform			No Limit	No Reasonable Potential
27	Dichlorobromomethane			No Limit	No Reasonable Potential
28	1,1-Dichloroethane			No Limit	No Reasonable Potential
29	1,2-Dichloroethane			No Limit	No Reasonable Potential
30	1,1-Dichloroethylene			No Limit	No Reasonable Potential
31	1,2-Dichloropropane			No Limit	No Reasonable Potential
32	1,3-Dichloropropylene			No Limit	No Reasonable Potential
33	Ethylbenzene			No Limit	No Reasonable Potential
34	Methyl Bromide			No Limit	No Reasonable Potential
35	Methyl Chloride			No Limit	No Reasonable Potential
36	Methylene Chloride			No Limit	No Reasonable Potential
37	1,1,2,2-Tetrachloroethane			No Limit	No Reasonable Potential
38	Tetrachloroethylene			No Limit	No Reasonable Potential
39	Toluene			No Limit	No Reasonable Potential
40	1,2-Trans-Dichloroethylene			No Limit	No Reasonable Potential
41	1,1,1-Trichloroethane			No Limit	No Reasonable Potential
42	1,1,2-Trichloroethane			No Limit	No Reasonable Potential

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
43	Trichloroethylene	ug/L		0.26						81	81.0	No	No	Y
44	Vinyl Chloride	ug/L		0.3						525	525	No	No	Y
45	2-Chlorophenol	ug/L		2.8						400	400	No	No	Y
46	2,4-Dichlorophenol	ug/L		3.3						790	790	No	No	Y
47	2,4-Dimethylphenol	ug/L		3.3						2300	2300	No	No	Y
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		3.8						765	765.0	No	No	Y
49	2,4-Dinitrophenol	ug/L		7.5						14000	14000	No	No	Y
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
51	4-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
53	Pentachlorophenol	ug/L		3.3			13.00	7.90		8.2	7.90	No	No	Y
54	Phenol	ug/L		1.9						4600000	4600000	No	No	Y
55	2,4,6-Trichlorophenol	ug/L		4.2						6.5	6.5	No	No	Y
56	Acenaphthene	ug/L		2.8						2700	2700	No	No	Y
57	Acenaphthylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
58	Anthracene	ug/L		1.9						110000	110000	No	No	Y
59	Benzidine	ug/L								0.00054	0.00054			Y
60	Benzo(a)Anthracene	ug/L								0.049	0.0490			Y
61	Benzo(a)Pyrene	ug/L								0.049	0.0490			Y
62	Benzo(b)Fluoranthene	ug/L								0.049	0.0490			Y
63	Benzo(ghi)Perylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
64	Benzo(k)Fluoranthene	ug/L								0.049	0.0490			Y
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
66	Bis(2-Chloroethyl)Ether	ug/L								1.4	1.400			Y
67	Bis(2-Chloroisopropyl)Ether	ug/L		2.4						170000	170000	No	No	Y
68	Bis(2-Ethylhexyl)Phthalate	ug/L		3.8						5.9	5.9	No	No	Y
69	4-Bromophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
70	Butylbenzyl Phthalate	ug/L		3.8						5200	5200	No	No	Y
71	2-Chloronaphthalene	ug/L		2.8						4300	4300	No	No	Y
72	4-Chlorophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
73	Chrysene	ug/L								0.049	0.0490			Y
74	Dibenzo(a,h)Anthracene	ug/L								0.049	0.0490			Y
75	1,2-Dichlorobenzene	ug/L		0.32						17000	17000	No	No	Y
76	1,3-Dichlorobenzene	ug/L		0.35						2600	2600	No	No	Y
77	1,4-Dichlorobenzene	ug/L		0.37						2600	2600	No	No	Y
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			Y
79	Diethyl Phthalate	ug/L		3.3						120000	120000	No	No	Y
80	Dimethyl Phthalate	ug/L		1.9						2900000	2900000	No	No	Y
81	Di-n-Butyl Phthalate	ug/L		2.8						12000	12000	No	No	Y
82	2,4-Dinitrotoluene	ug/L		3.3						9.10	9.10	No	No	Y
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							
		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
43	Trichloroethylene	Y	0.15		N	No detected value of B, Step 7		No	MEC<C & B is ND
44	Vinyl Chloride	Y	0.23		N	No detected value of B, Step 7		No	MEC<C & B is ND
45	2-Chlorophenol	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
46	2,4-Dichlorophenol	Y	2.1		N	No detected value of B, Step 7		No	MEC<C & B is ND
47	2,4-Dimethylphenol	Y	2.3		N	No detected value of B, Step 7		No	MEC<C & B is ND
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	Y	1.2		N	No detected value of B, Step 7		No	MEC<C & B is ND
49	2,4-Dinitrophenol	Y	1.3		N	No detected value of B, Step 7		No	MEC<C & B is ND
50	2-Nitrophenol	Y	1.8		N	No Criteria	No Criteria	Uc	No Criteria
51	4-Nitrophenol	N		1.8		No Criteria	No Criteria	Uc	No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	Y	1.9		N	No Criteria	No Criteria	Uc	No Criteria
53	Pentachlorophenol	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
54	Phenol	Y	1.4		N	No detected value of B, Step 7		No	MEC<C & B is ND
55	2,4,6-Trichlorophenol	Y	2		N	No detected value of B, Step 7		No	MEC<C & B is ND
56	Acenaphthene	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
57	Acenaphthylene	Y	1.7		N	No Criteria	No Criteria	Uc	No Criteria
58	Anthracene	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
59	Benzidine	Y	2		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
60	Benzo(a)Anthracene	Y	1.4		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
61	Benzo(a)Pyrene	Y	1.3		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
62	Benzo(b)Fluoranthene	Y	1.7		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
63	Benzo(ghi)Perylene	Y	1.3		N	No Criteria	No Criteria	Uc	No Criteria
64	Benzo(k)Fluoranthene	Y	1.6		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
65	Bis(2-Chloroethoxy)Methan	Y	1.8		N	No Criteria	No Criteria	Uc	No Criteria
66	Bis(2-Chloroethyl)Ether	Y	1.8		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
67	Bis(2-Chloroisopropyl)Ether	Y	2		N	No detected value of B, Step 7		No	MEC<C & B is ND
68	Bis(2-Ethylhexyl)Phthalate	N		5.3		B<=C, Step 7		No	MEC<C & B<=C
69	4-Bromophenyl Phenyl Ethe	Y	1.7		N	No Criteria	No Criteria	Uc	No Criteria
70	Butylbenzyl Phthalate	Y	1.4		N	No detected value of B, Step 7		No	MEC<C & B is ND
71	2-Chloronaphthalene	Y	1.7		N	No detected value of B, Step 7		No	MEC<C & B is ND
72	4-Chlorophenyl Phenyl Ethe	Y	1.7		N	No Criteria	No Criteria	Uc	No Criteria
73	Chrysene	Y	1.5		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
74	Dibenzo(a,h)Anthracene	Y	1.4		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
75	1,2-Dichlorobenzene	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
76	1,3-Dichlorobenzene	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
77	1,4-Dichlorobenzene	Y	1.9		N	No detected value of B, Step 7		No	MEC<C & B is ND
78	3,3 Dichlorobenzidine	Y	2		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
79	Diethyl Phthalate	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
80	Dimethyl Phthalate	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
81	Di-n-Butyl Phthalate	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
82	2,4-Dinitrotoluene	Y	1.6		N	No detected value of B, Step 7		No	MEC<C & B is ND
83	2,6-Dinitrotoluene	Y	1.7		N	No Criteria	No Criteria	Uc	No Criteria
84	Di-n-Octyl Phthalate	Y	1.6		N	No Criteria	No Criteria	Uc	No Criteria

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS								
		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
43	Trichloroethylene												
44	Vinyl Chloride												
45	2-Chlorophenol												
46	2,4-Dichlorophenol												
47	2,4-Dimethylphenol												
48	4,6-dinitro-o-resol (aka2- methyl-4,6-Dinitrophenol)												
49	2,4-Dinitrophenol												
50	2-Nitrophenol												
51	4-Nitrophenol												
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)												
53	Pentachlorophenol												
54	Phenol												
55	2,4,6-Trichlorophenol												
56	Acenaphthene												
57	Acenaphthylene												
58	Anthracene												
59	Benzidine												
60	Benzo(a)Anthracene												
61	Benzo(a)Pyrene												
62	Benzo(b)Fluoranthene												
63	Benzo(ghi)Perylene												
64	Benzo(k)Fluoranthene												
65	Bis(2-Chloroethoxy)Methane												
66	Bis(2-Chloroethyl)Ether												
67	Bis(2-Chloroisopropyl)Ether												
68	Bis(2-Ethylhexyl)Phthalate												
69	4-Bromophenyl Phenyl Ether												
70	Butylbenzyl Phthalate												
71	2-Chloronaphthalene												
72	4-Chlorophenyl Phenyl Ether												
73	Chrysene												
74	Dibenzo(a,h)Anthracene												
75	1,2-Dichlorobenzene												
76	1,3-Dichlorobenzene												
77	1,4-Dichlorobenzene												
78	3,3 Dichlorobenzidine												
79	Diethyl Phthalate												
80	Dimethyl Phthalate												
81	Di-n-Butyl Phthalate												
82	2,4-Dinitrotoluene												
83	2,6-Dinitrotoluene												
84	Di-n-Octyl Phthalate												

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	LIMITS		Recommendation	Comment
		Lowest AMEL	Lowest MDEL		
43	Trichloroethylene			No Limit	No Reasonable Potential
44	Vinyl Chloride			No Limit	No Reasonable Potential
45	2-Chlorophenol			No Limit	No Reasonable Potential
46	2,4-Dichlorophenol			No Limit	No Reasonable Potential
47	2,4-Dimethylphenol			No Limit	No Reasonable Potential
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)			No Limit	No Reasonable Potential
49	2,4-Dinitrophenol			No Limit	No Reasonable Potential
50	2-Nitrophenol			No Limit	No Reasonable Potential
51	4-Nitrophenol			No Limit	No Reasonable Potential
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)			No Limit	No Reasonable Potential
53	Pentachlorophenol			No Limit	No Reasonable Potential
54	Phenol			No Limit	No Reasonable Potential
55	2,4,6-Trichlorophenol			No Limit	No Reasonable Potential
56	Acenaphthene			No Limit	No Reasonable Potential
57	Acenaphthylene			No Limit	No Reasonable Potential
58	Anthracene			No Limit	No Reasonable Potential
59	Benzidine			No Limit	No Reasonable Potential
60	Benzo(a)Anthracene			No Limit	No Reasonable Potential
61	Benzo(a)Pyrene			No Limit	No Reasonable Potential
62	Benzo(b)Fluoranthene			No Limit	No Reasonable Potential
63	Benzo(ghi)Perylene			No Limit	No Reasonable Potential
64	Benzo(k)Fluoranthene			No Limit	No Reasonable Potential
65	Bis(2-Chloroethoxy)Methane			No Limit	No Reasonable Potential
66	Bis(2-Chloroethyl)Ether			No Limit	No Reasonable Potential
67	Bis(2-Chloroisopropyl)Ether			No Limit	No Reasonable Potential
68	Bis(2-Ethylhexyl)Phthalate			No Limit	No Reasonable Potential
69	4-Bromophenyl Phenyl Ether			No Limit	No Reasonable Potential
70	Butylbenzyl Phthalate			No Limit	No Reasonable Potential
71	2-Chloronaphthalene			No Limit	No Reasonable Potential
72	4-Chlorophenyl Phenyl Ether			No Limit	No Reasonable Potential
73	Chrysene			No Limit	No Reasonable Potential
74	Dibenzo(a,h)Anthracene			No Limit	No Reasonable Potential
75	1,2-Dichlorobenzene			No Limit	No Reasonable Potential
76	1,3-Dichlorobenzene			No Limit	No Reasonable Potential
77	1,4-Dichlorobenzene			No Limit	No Reasonable Potential
78	3,3 Dichlorobenzidine			No Limit	No Reasonable Potential
79	Diethyl Phthalate			No Limit	No Reasonable Potential
80	Dimethyl Phthalate			No Limit	No Reasonable Potential
81	Di-n-Butyl Phthalate			No Limit	No Reasonable Potential
82	2,4-Dinitrotoluene			No Limit	No Reasonable Potential
83	2,6-Dinitrotoluene			No Limit	No Reasonable Potential
84	Di-n-Octyl Phthalate			No Limit	No Reasonable Potential

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
85	1,2-Diphenylhydrazine	ug/L								0.54	0.540			Y
86	Fluoranthene	ug/L		2.8						370	370	No	No	Y
87	Fluorene	ug/L		2.8						14000	14000	No	No	Y
88	Hexachlorobenzene	ug/L								0.00077	0.00077			Y
89	Hexachlorobutadiene	ug/L		3.8						50	50.00	No	No	Y
90	Hexachlorocyclopentadiene	ug/L		4.7						17000	17000	No	No	Y
91	Hexachloroethane	ug/L		3.3						8.9	8.9	No	No	Y
92	Indeno(1,2,3-cd)Pyrene	ug/L								0.049	0.0490			Y
93	Isophorone	ug/L		2.4						600	600.0	No	No	Y
94	Naphthalene	ug/L		No Criteria						No Criteria	No Criteria	No Criteria	No Criteria	Y
95	Nitrobenzene	ug/L		2.4						1900	1900	No	No	Y
96	N-Nitrosodimethylamine	ug/L		1.9						8.10	8.10000	No	No	Y
97	N-Nitrosodi-n-Propylamine	ug/L								1.40	1.400			Y
98	N-Nitrosodiphenylamine	ug/L		1.9						16	16.0	No	No	Y
99	Phenanthrene	ug/L		No Criteria						No Criteria	No Criteria	No Criteria	No Criteria	Y
100	Pyrene	ug/L		3.8						11000	11000	No	No	Y
101	1,2,4-Trichlorobenzene	ug/L		No Criteria						No Criteria	No Criteria	No Criteria	No Criteria	Y
102	Aldrin	ug/L					1.30			0.00014	0.00014			Y
103	alpha-BHC	ug/L								0.013	0.0130			Y
104	beta-BHC	ug/L								0.046	0.046			Y
105	gamma-BHC	ug/L					0.16			0.063	0.063			Y
106	delta-BHC	ug/L		No Criteria						No Criteria	No Criteria	No Criteria	No Criteria	Y
107	Chlordane	ug/L					0.09	0.004		0.00059	0.00059			Y
108	4,4'-DDT	ug/L					0.13	0.001		0.00059	0.00059			Y
109	4,4'-DDE (linked to DDT)	ug/L								0.00059	0.00059			Y
110	4,4'-DDD	ug/L								0.00084	0.00084			Y
111	Dieldrin	ug/L					0.71	0.0019		0.00014	0.00014			Y
112	alpha-Endosulfan	ug/L					0.034	0.0087		240	0.0087			Y
113	beta-Endosulfan	ug/L					0.034	0.0087		240	0.0087			Y
114	Endosulfan Sulfate	ug/L		0.19						240	240	No	No	Y
115	Endrin	ug/L					0.037	0.0023		0.81	0.0023			Y
116	Endrin Aldehyde	ug/L		0.094						0.81	0.81	No	No	Y
117	Heptachlor	ug/L					0.053	0.0036		0.00021	0.00021			Y
118	Heptachlor Epoxide	ug/L					0.053	0.0036		0.00011	0.00011			Y
119-125	PCBs sum (2)	ug/L						0.03		0.00017	0.00017			Y
126	Toxaphene	ug/L					0.21	0.0002		0.00075	0.0002			Y

Notes:

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Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							
		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
85	1,2-Diphenylhydrazine	Y	1.5		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
86	Fluoranthene	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
87	Fluorene	Y	1.7		N	No detected value of B, Step 7		No	MEC<C & B is ND
88	Hexachlorobenzene	Y	1.6		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
89	Hexachlorobutadiene	Y	1.7		N	No detected value of B, Step 7		No	MEC<C & B is ND
90	Hexachlorocyclopentadiene	Y	0.93		N	No detected value of B, Step 7		No	MEC<C & B is ND
91	Hexachloroethane	Y	1.7		N	No detected value of B, Step 7		No	MEC<C & B is ND
92	Indeno(1,2,3-cd)Pyrene	Y	1.4		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
93	Isophorone	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
94	Naphthalene	Y	0.35		N	No Criteria	No Criteria	Uc	No Criteria
95	Nitrobenzene	Y	1.8		N	No detected value of B, Step 7		No	MEC<C & B is ND
96	N-Nitrosodimethylamine	Y	2.6		N	No detected value of B, Step 7		No	MEC<C & B is ND
97	N-Nitrosodi-n-Propylamine	Y	1.2		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
98	N-Nitrosodiphenylamine	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
99	Phenanthrene	Y	1.6		N	No Criteria	No Criteria	Uc	No Criteria
100	Pyrene	Y	1.5		N	No detected value of B, Step 7		No	MEC<C & B is ND
101	1,2,4-Trichlorobenzene	Y	0.14		N	No Criteria	No Criteria	Uc	No Criteria
102	Aldrin	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
103	alpha-BHC	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
104	beta-BHC	Y	0.005		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
105	gamma-BHC	Y	0.005		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
106	delta-BHC	Y	0.005		N	No Criteria	No Criteria	Uc	No Criteria
107	Chlordane	Y	0.05		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
108	4,4'-DDT	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
109	4,4'-DDE (linked to DDT)	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
110	4,4'-DDD	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
111	Dieldrin	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
112	alpha-Endosulfan	Y	0.005		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
113	beta-Endosulfan	Y	0.005		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
114	Endosulfan Sulfate	Y	0.005		N	No detected value of B, Step 7		No	MEC<C & B is ND
115	Endrin	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
116	Endrin Aldehyde	Y	0.005		N	No detected value of B, Step 7		No	MEC<C & B is ND
117	Heptachlor	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
118	Heptachlor Epoxide	Y	0.005		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
119-125	PCBs sum (2)	Y	0.1		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and
126	Toxaphene	Y	0.5		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and

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Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALCULATIONS								
		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
85	1,2-Diphenylhydrazine												
86	Fluoranthene												
87	Fluorene												
88	Hexachlorobenzene												
89	Hexachlorobutadiene												
90	Hexachlorocyclopentadiene												
91	Hexachloroethane												
92	Indeno(1,2,3-cd)Pyrene												
93	Isophorone												
94	Naphthalene												
95	Nitrobenzene												
96	N-Nitrosodimethylamine												
97	N-Nitrosodi-n-Propylamine												
98	N-Nitrosodiphenylamine												
99	Phenanthrene												
100	Pyrene												
101	1,2,4-Trichlorobenzene												
102	Aldrin												
103	alpha-BHC												
104	beta-BHC												
105	gamma-BHC												
106	delta-BHC												
107	Chlordane												
108	4,4'-DDT												
109	4,4'-DDE (linked to DDT)												
110	4,4'-DDD												
111	Dieldrin												
112	alpha-Endosulfan												
113	beta-Endosulfan												
114	Endosulfan Sulfate												
115	Endrin												
116	Endrin Aldehyde												
117	Heptachlor												
118	Heptachlor Epoxide												
119-125	PCBs sum (2)												
126	Toxaphene												

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Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Kinder Morgan Carson Terminal

CTR#	Parameters	LIMITS		Recommendation	Comment
		Lowest AMEL	Lowest MDEL		
85	1,2-Diphenylhydrazine			No Limit	No Reasonable Potential
86	Fluoranthene			No Limit	No Reasonable Potential
87	Fluorene			No Limit	No Reasonable Potential
88	Hexachlorobenzene			No Limit	No Reasonable Potential
89	Hexachlorobutadiene			No Limit	No Reasonable Potential
90	Hexachlorocyclopentadiene			No Limit	No Reasonable Potential
91	Hexachloroethane			No Limit	No Reasonable Potential
92	Indeno(1,2,3-cd)Pyrene			No Limit	No Reasonable Potential
93	Isophorone			No Limit	No Reasonable Potential
94	Naphthalene			No Limit	No Reasonable Potential
95	Nitrobenzene			No Limit	No Reasonable Potential
96	N-Nitrosodimethylamine			No Limit	No Reasonable Potential
97	N-Nitrosodi-n-Propylamine			No Limit	No Reasonable Potential
98	N-Nitrosodiphenylamine			No Limit	No Reasonable Potential
99	Phenanthrene			No Limit	No Reasonable Potential
100	Pyrene			No Limit	No Reasonable Potential
101	1,2,4-Trichlorobenzene			No Limit	No Reasonable Potential
102	Aldrin			No Limit	No Reasonable Potential
103	alpha-BHC			No Limit	No Reasonable Potential
104	beta-BHC			No Limit	No Reasonable Potential
105	gamma-BHC			No Limit	No Reasonable Potential
106	delta-BHC			No Limit	No Reasonable Potential
107	Chlordane			No Limit	No Reasonable Potential
108	4,4'-DDT			No Limit	No Reasonable Potential
109	4,4'-DDE (linked to DDT)			No Limit	No Reasonable Potential
110	4,4'-DDD			No Limit	No Reasonable Potential
111	Dieldrin			No Limit	No Reasonable Potential
112	alpha-Endosulfan			No Limit	No Reasonable Potential
113	beta-Endosulfan			No Limit	No Reasonable Potential
114	Endosulfan Sulfate			No Limit	No Reasonable Potential
115	Endrin			No Limit	No Reasonable Potential
116	Endrin Aldehyde			No Limit	No Reasonable Potential
117	Heptachlor			No Limit	No Reasonable Potential
118	Heptachlor Epoxide			No Limit	No Reasonable Potential
119-125	PCBs sum (2)			No Limit	No Reasonable Potential
126	Toxaphene			No Limit	No Reasonable Potential

Notes:
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