

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 W. 4th Street, Suite 200, Los Angeles

FACT SHEET
WASTE DISCHARGE REQUIREMENTS
for
EXXONMOBIL OIL CORPORATION
SOUTHWESTERN TERMINAL AREA 1

NPDES Permit No.: CA0003689
Public Notice No.: 04-034

FACILITY ADDRESS

ExxonMobil Oil Corporation –
Southwestern Terminal
799 South Seaside Avenue
Terminal Island, CA 90731
Contact: Keith R. Tront
Telephone: (310) 241-5021

FACILITY MAILING ADDRESS

ExxonMobil Oil Corporation –
Southwestern Terminal
799 South Seaside Avenue
Terminal Island, CA 90731
Contact: Joel Larkin
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I. Public Participation

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments should be received at the Regional Board offices by 5:00 p.m. on October 15, 2004.

B. Public Hearing

The Regional 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: November 4, 2004
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California, Board Room
700 North Alameda Street, Los Angeles, California.

Interested persons are invited to attend. At the public hearing, the Regional 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.

C. Waste Discharge Requirements Appeals

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

State Water Resources Control Board, Office of Chief Counsel
Attn: Elizabeth Miller Jennings, Senior Staff Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95814

D. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California 90013, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Regional Board by calling (213) 576-6600.

E. 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 Board, reference this facility, and provide a name, address, and phone number.

II. Introduction

ExxonMobil Oil Corporation (hereinafter EMOC or Discharger) discharges wastewater from the Southwestern Terminal Area 1 to the Main Channel of the Los Angeles Inner Harbor, at Berth 238, a water of the United States. Wastes discharged from EMOC are regulated by WDRs and NPDES permit contained in Board Order No. 97-060 (NPDES Permit No. CA0003689). Order No. 97-060 expired on March 10, 2002.

EMOC filed a report of waste discharge and applied for renewal of its WDRs and NPDES permit on October 16, 2001. The permit renewal application was reviewed in December 2003 and based on changes at the facility since the application, the Regional Board staff requested an updated permit renewal package. This package was submitted on January 6, 2004. EMOC also submitted corrections to the January 6, 2004 permit application package on January 15, 2004. The tentative Order is the reissuance of the WDRs and NPDES permit for discharges from EMOC as represented in the revised application package. In addition, a NPDES permit compliance evaluation inspection was conducted on January 7, 2004, to verify operations and conditions, and to collect additional data to develop permit limitations and conditions.

III. Description of Facility and Waste Discharge

EMOC is the owner and operator of the Southwest Terminal Area 1 located at 799 South Seaside Avenue, Terminal Island, California, which stores crude oil and refined petroleum products. The permit renewal application (January 6, 2004) reported the maximum daily discharge flow rate as 0.15 million gallons per day (mgd), and a long-term average flow rate of 0.0048 mgd consisting of tank washing/line displacement, storm water runoff, steam condensate, ship ballast water, and product testing water.

Discharge Type	Average Daily Flow (gpd)
Tank wash/line displacement	4,000
Storm water runoff	500
Steam condensate	200
Ship ballast water	50
Product testing	50

Hydrostatic test waters will be regulated under the Regional Board's general permit, and will not be addressed by the proposed Order. Further, the composition of product testing water is similar to that of the previously permitted tank washing/line displacement wastewater source; it is not a new discharge type.

Storm water is collected in drains located in the berthing areas and is pumped to the preliminary oil separation tank. Ballast water is collected from ships that are loading product (this has not occurred in the past few years). The public water supply is used for tank wash water, line displacement water, water from product testing, and steam

condensate.

Maximum daily discharge flows are substantially greater than the long-term average discharge flows due to the periodic generation and collection of wastewaters, and the "batch" wastewater treatment operation. The facility waits until a substantial quantity of water is collected in the oil separation tank before it activates the oil-water separator (Clarifier) and begins to discharge treated effluent to the Los Angeles Inner Harbor. The Clarifier is capable of handling flows up to 150,000 gallons per day (gpd). When rainfall is low, or no ballast water is received, and tank washing and line displacement are minimal, the terminal may not have to discharge treated effluent for extended periods of time. The amount of steam condensate generated has also been less in recent years than its historic level, and this source was previously a major portion of the wastewater discharged.

The sources of the treated effluent that are discharged from Discharge Serial No. 001 during any specific time period are highly variable and dependent upon the operations that generate the wastewater during the period when the oil separation tank is filling. During periods of high rainfall, a substantial fraction of the effluent may be storm water. At other times, tank washing and line displacement water may constitute the majority, or all, of the treated effluent discharged.

EMOC has not discharged wastewater through Discharge Serial No. 001 since December 2001; all wastewaters have been collected in the facility's "slop oil" tank, and have been sent by pipeline to the EMOC refinery for treatment. The accumulated wastewaters are sent to the refinery on a batch basis during a product change or pipeline cleanout. The on-site treatment system remains on standby if the wastewater volume becomes too large for the refinery to manage.

The wastewater is collected in a 1.05 million gallon oil separator, where oil is decanted (skimmed). The water then discharges by gravity to a 138,600-gallon capacity oil-water separator (Clarifier) for further separation of oil, water, and solids. Flow into the oil-water separator is measured with an ultrasonic flow meter and represents the reported discharge flow at Discharge Serial No. 001. The proposed Order will require the Discharger to measure and report discharge flow at the exit of the oil-water separator and prior to discharge through Discharge Serial No. 001 (i.e., at the discharge line from the oil-water separator to the Inner Harbor). Oil recovered from the oil separation tank and the oil-water separator is stored in the terminal slop oil tank, and transported off-site for recovery. Solids removed from the oil separation tank and the oil-water separator are transported off-site for management and disposal.

Neutralizing chemicals are added to the wastewater at the inlet of the oil-water separator if needed to adjust the pH within the range of 6.5 to 8.5 pH units. Hydrogen peroxide can be injected into the wastewater at one of the multi-compartments of the oil-water separator to oxidize sulfides, as necessary. Previously, chlorine was used to oxidize sulfides. Diffused air is added to multiple compartments of the oil-water separator to promote flotation of entrained oil and oil-coated particles. Following the aeration compartments, the water is

filtered through excelsior (wood shavings) to remove any remaining trace oil prior to discharge through Discharge Serial No. 001.

The oil-water separator has a recycle line located in the final compartment (after excelsior filtration) prior to the outfall and the discharge line from the oil-water separator to Discharge Serial No. 001 has a block valve. According to the inspection report, if the facility operator determines the oil-water separator is not producing satisfactory effluent quality for discharge, the influent to the oil-water separator is shut off by closing the block valve on the effluent. The wastewater in the oil-water separator would then be pumped back to the oil separation tank for further processing.

According to the most recent permit renewal application and findings from the January 2004 facility inspection, Area 1 had a MTBE-contaminated (fuel additive) waste stream that was periodically generated from MTBE-containing product lines and tank cleanouts. The MTBE-contaminated wastewater was transferred to Area 2 (located at 551 Pilchard Street, 0.5 miles from Area 1) for pretreatment, and then discharged to Los Angeles County Sanitation District (LACSD) sewer system. EMOC has an LACSD pretreatment permit for wastewaters that are discharged to the Publicly Owned Treatment Works (POTW). MTBE is no longer used as an additive, and no wastewaters currently generated in Area 1 are transferred to Area 2. Area 1 does not currently discharge wastewaters to the LACSD POTW, and Terminal Area 1 does not receive any wastewater from Terminal Area 2.

The January 7, 2004 inspection report states all of the wastewater generated and treated at the terminal is from intermittent sources. The estimated flows and the frequency of discharges from Discharge Serial No. 001 are based on operating records from 1989-2001. The terminal did not discharge during 2002 and 2003. According to the permit renewal application, the long-term average discharge flow from Discharge Serial No. 001 is 5,800 gpd (0.0058 mgd). EMOC discharges treated wastewater through Discharge Serial No. 001 (Latitude 33° 44' 02", Longitude 118° 16' 20") to the Los Angeles Inner Harbor, a water of the United States.

The Regional Board and the U.S. EPA have classified the EMOC facility as a minor discharge.

Detections of pollutants in effluent data presented in this permit renewal application are outlined in the following table.

Constituent (units)	Reported Maximum Daily Effluent Values
Flow (gpd)	16,219
Biochemical oxygen demand (BOD) (mg/L)	16
Total suspended solids (mg/L)	4
Temperature (winter and summer) (deg. C)	20/25.6
pH (standard units)	6.1 – 8.5

Constituent (units)	Reported Maximum Daily Effluent Values
Oil and grease (mg/L)	4.5
Chromium (µg/L)	15
Copper (µg/L)	16
Zinc (µg/L)	33

The above data represent the effluent discharged during 8 months in 2001. According to the permit application, no discharge occurred during 2002 or 2003; therefore, no additional monitoring was done to characterize the effluent for the permit renewal application.

Monitoring required to confirm compliance with effluent limitations contained in the existing permit for EMOC Discharge Serial No. 001 and all monitoring data submitted during the previous permit term are presented in the following Table (these data include the subset presented above).

Constituent (units)	Daily Maximum Effluent Limitation	Range of Reported Values (April 1997 – March 2002)
Turbidity (NTU)	75	1.7 - 44
Settleable solids (ml/L)	0.2	<0.1
Suspended solids (mg/L)	75	<1 - 7
Suspended solids (lbs/day) ¹	93.71	NR
Oil and grease (mg/L)	15	<2 - 13
Oil and grease (lbs/day) ¹	18.74	NR
BOD ₅ 20°C (mg/L)	30	<1 - 16
BOD ₅ 20°C (lbs/day) ¹	37.49	NR
Residual chlorine (mg/L)	0.1	<0.1 – 0.2
Residual chlorine (lbs/day)	0.125	NR
Detergents (as MBAS) (mg/L)	0.5	<0.2 – 0.2
Detergents (mg/L) (lbs/day)	0.625	NR
Acute Toxicity (% survival)	²	85 – 100

¹ Mass-based effluent limitations were based on 150,000 gallons per day maximum discharge flow rate. The Discharger did not report discharge data in units of mass.

² Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

NR Not reported

As shown in the table above, the Discharger exceeded the existing permit effluent limitation of 0.1 mg/L for residual chlorine on January 25, 2001 (0.2 mg/L). According to the most recent permit renewal application, the facility no longer uses chlorine to oxidize

sulfides. However, potable city-supplied water is used for hydrotesting. Therefore, it is believed that chlorine may be present in the discharge of hydrotest water.

The existing permit also requires EMOC to monitor for phenols and sulfides for which no effluent limitations were developed at this time. Phenols were reported as detected only once, at 0.7 mg/L (June 1999).

On July 10, 2002, the Regional Board filed a facility violation report for EMOC for a failure to submit the 1st Quarter 2000 monitoring report. In addition, this violation report cited an exceedance of the residual chlorine effluent limitation of 0.1 mg/L on January 25, 2001 (0.2 mg/L), and an exceedance of the pH effluent limitation of a minimum of 6.0 pH units, on June 25, 2001 (4.87). Due to subsequent correspondence from EMOC, the reporting violation and pH exceedance violation were rescinded. However, the chlorine violation was retained and a \$3,000 penalty was assessed against the facility.

On July 27, 2001, the Regional Board sent a letter to EMOC to request monitoring of priority pollutants regulated under the California Toxics Rule. The facility provided monitoring data results for six quarters to the Regional Board, three of which included effluent monitoring data (September 25, 2001, December 1, 2001, and March 19, 2002).

The Facility notified the Regional Board by phone (December 2, 2003) that the process that previously produced steam condensate discharge was taken out of service on September 30, 2001; therefore, the effluent monitoring data generated in the fourth quarter of 2001 and the first quarter of 2002 characterized only storm water runoff and any line wash water or ship ballast that had been generated since the last discharge event. Available correspondence and monitoring data indicate no discharges occurred after this date. However, two additional quarters of sampling and analysis were submitted (December 2001 and March 2002) for wastewater being stored in the oil-water separator prior to being hauled off-site.

The Table below summarizes data for those priority pollutants that were detected in the sample that contained the steam condensate discharge (all other pollutants were reported as below detection levels).

Constituent (units)	Reported Effluent Concentrations (September 2001)
Chromium III (µg/l)	1.05
Copper (µg/l)	4.24

The following table summarizes data for those priority pollutants that were detected in the two subsequent samples (all other pollutants were reported as below detection levels).

Constituent (units)	Range of Reported Effluent Concentrations (December 2001 and March 2002)
Chromium III (µg/l)	14.5 ¹
Copper (µg/l)	4.52 – 16
Zinc (µg/l)	15.3- 33
Beryllium (µg/l)	0.245 - 0.64
Nickel (µg/l)	2.33 ¹

¹ Only one value was reported for these parameters.

There is no discharge to surfacewater since December 2001. The water is sent to the refinery for treatment. The discharge to Harbor is a standby option and will occur if the wastewater volume becomes too large for the refinery to manage. The reuse of wastewater at the site was evaluated. The property and the immediate vicinity have no landscaped areas that require irrigation. Since there are no feasible reuse options, the majority of emergency wastewater will be discharged to the Harbor.

A facility inspection report dated January 7, 2004 stated the facility was not in violation of existing permit conditions. According to the inspector, housekeeping throughout the facility was very good and all treatment units (slop oil tank, oil separation tank, wastewater Clarifier) were well maintained and appeared to be in good working condition during the inspection. The discharge structure was also observed during the inspection and was free of accumulated oil, solids, and foam.

IV. Applicable Plans, Policies, Laws, and Regulations

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

- A. The federal Clean Water Act (CWA). The federal Clean Water Act requires that any point source discharges of pollutants to a water of the United States must be done in conformance with a NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.
- B. Title 40, Code of Regulations (40 CFR) – Protection of Environment, Chapter I, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These CWA regulations provide effluent limitations for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limitations for certain pollutants discharged.

- C. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The immediate receiving body for the permitted discharge covered by this permit is the Los Angeles Inner Harbor. The beneficial uses listed in the Basin Plan for the Los Angeles Inner Harbor are:

Existing uses: Industrial service supply, navigation, non-contact recreation, commercial and sport fishing, marine habitat, preservation of rare and endangered species.

Potential uses: Water contact recreation, shellfish harvesting.

- D. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with U.S. EPA's 1999 ammonia criteria update.
- E. The State Water Resources Control Board (State 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 inland surface waters.
- F. On May 18, 2000, the U.S. Environmental Protection Agency (U.S. EPA) promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR §131.38]. In the CTR, U.S. EPA promulgated human health criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens, and criteria for the protection of freshwater and saltwater aquatic life. The CTR also allows for a schedule of compliance not to exceed five years from the date of permit renewal for an existing discharger if the Discharger demonstrates that it is infeasible to promptly comply with effluent limitations derived from the CTR criteria.

- G. On March 2, 2000, State 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 was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their Basin Plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limitations (WQBELs) and to calculate the effluent limitations. The CTR criteria for salt water or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of the Los Angeles Inner Harbor.
- H. 40 CFR §122.44(d)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial uses. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that WQBELs may be set based on U.S. EPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.
- I. State and Federal antibacksliding and antidegradation policies require that Regional Board actions protect the water quality of a water body and ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in section 402(o) and 303(d)(4) of the CWA and in the Title 40 of the Code of Federal Regulations (40 CFR), section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed.
- J. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the federal CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Los Angeles Inner Harbor.
- K. Existing waste discharge requirements contained in Board Order No. 97-060, adopted by the Regional Board on May 12, 1997. In some cases, permit conditions (effluent limitations and other special conditions) established in the existing waste discharge requirements have been carried over to this permit.

V. Regulatory Basis for Effluent Limitations

The CWA requires point source discharges to control the amount of conventional, nonconventional, and toxic pollutants that are discharged into the waters of the United States. The control of the discharge of pollutants is established through NPDES permits that contain effluent limitations and standards. The CWA establishes two principal bases for effluent limitations. First, dischargers are required to meet technology-based effluent limitations that reflect the best controls available considering costs and economic impact. Second, they are required to meet WQBELs that are developed to protect applicable designated uses of the receiving water.

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

- Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.
- 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 nonconventional pollutants.
- Best conventional pollutant control technology (BCT) is a standard for 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.
- New source performance standards (NSPS) that 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 EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BCT, BAT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 125.3 of the NPDES 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.

If a reasonable potential to exceed water quality standards exists for pollutants in a discharge, WQBELs are also required under 40 CFR 122.44(d)(1)(i). WQBELs are established after determining that technology-based limitations are not stringent enough to ensure that state water quality standards are met for the receiving water. WQBELs are

based on the designated use of the receiving water, water quality criteria necessary to support the designated uses, and the state's antidegradation policy. For discharges to inland surface waters, enclosed bays, and estuaries, the SIP establishes specific implementation procedures for determining reasonable potential and establishing WQBELs for priority pollutant criteria promulgated by U.S. EPA through the CTR and NTR, as well as the Basin Plan.

There are several other specific factors affecting the development of limitations and requirements in the proposed Order. These are discussed as follows:

A. Pollutants of Concern

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through a NPDES permit. Further, the NPDES regulations and SIP require regulation of any pollutant that (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality criteria or objective. The SIP includes provisions for priority pollutant criteria promulgated by U.S. EPA in the CTR and NTR, and for those priority pollutants outlined in the Basin Plan.

Effluent limitations for Discharge Serial No. 001 in the current permit were established for suspended solids, oil and grease, and BOD₅ because they are parameters typically used to characterize wastewater and are associated with storm water runoff; thus effluent limitations for these parameters have been established in this permit. Turbidity, settleable solids, and detergents are possible parameters which may be present in tank wash water and storm water; thus effluent limitations for these parameters were established in the existing permit, and will be established in this permit.

The previous Order also established effluent limitations for residual chlorine. The Discharger has stated that chlorine was previously used in their process to oxidize sulfides, but they currently use hydrogen peroxide for sulfide destruction. In addition, the Discharger uses potable city-supplied water for hydrotesting. The Discharger exceeded the residual chlorine effluent limitation of 0.1 mg/L in January 2001 (0.2 mg/L), but did not discharge in 2002 or 2003; therefore, it is believed that chlorine may be present in the discharge of hydrotest water. The effluent limitations for residual chlorine will be carried over to this permit.

A limitation has also been added for Total Petroleum Hydrocarbons, because there may be hydrocarbon species present not covered by the limitation for oil and grease.

Petrochemicals stored at the facility also may include hydrocarbons which are considered pollutants of concern. For this reason, monitoring requirements for total phenols, benzene, ethylbenzene, toluene, xylene, and total petroleum hydrocarbons have been included in this Order to determine their presence in the discharge. TPH

monitoring requirements for both the gas (volatile) and diesel (semi-volatile) ranges of hydrocarbons have been required due to the storage of crude and refined petroleum products as well as the use of gasoline and diesel at the facility. It is worthy to note that effluent monitoring data presented in the renewal application indicates that benzene, ethylbenzene, toluene, and most other priority pollutants have not been detected in the effluent. Furthermore, as is discussed in Section V.3.(a), based on available data, the reasonable potential analysis reveals these pollutants do not indicate reasonable potential to exceed water quality criteria. However, periodic monitoring is required for phenols, benzene, ethylbenzene, toluene, xylene, and total petroleum hydrocarbons to ensure these pollutants are not entering the effluent from on-site operations.

The permit renewal application states the following pollutants may also be present in discharge due to the nature of activities at the facility: cresol, methyl mercaptan, naphthenic acid, and cyclohexane, because they are components of crude petroleum and some refined products stored on-site. The proposed Order does not establish effluent limitations nor monitoring requirements for these specific parameters. Although these parameters may cause an impact to the receiving water if discharged in sufficient quantity or concentration, they are not priority pollutants and there are no specific applicable water quality criteria available. The total petroleum hydrocarbons monitoring described above should assist in determining the presence of these types of parameters. In addition, the proposed monitoring program includes monitoring requirements for whole effluent acute toxicity that may serve to identify sources of contamination.

B. Technology-Based Effluent Limitations

There are currently no national ELGs for above-ground storage tank facilities and associated discharges of storm water, tank wash water, steam condensate or ballast water.

This permit will require the Discharger to update and continue to implement, consistent with the existing permit requirements, a *Storm Water Pollution Prevention Plan* (SWPPP). The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged into surface waters.

National ELGs have not been developed for aboveground storage tank facilities. Also, data is not available to apply best professional judgement (BPJ). Therefore, pursuant to 40 CFR section 122.44(k), the Regional Board will require the Discharger to develop and implement a *Best Management Practices Plan* (BMPP). In the absence of established ELGs, and with the combination of the SWPPP and BMPP, the existing permit limitations based on past performance and BPJ will serve as the equivalent of technology-based effluent limitations to carry out the purposes and intent of the CWA.

C. Water Quality-Based Effluent Limitations

As specified in 40 CFR § 122.44(d)(1)(i), permits are required to include WQBELs for toxic pollutants (including toxicity) that are or may be discharged at levels which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for 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 U.S. EPA 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 SIP.

The CTR contains both saltwater and freshwater criteria. According to 40 CFR § 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95 percent or more of the time; and at salinities between 1 and 10 ppt the more stringent of the two apply. The CTR criteria for salt water or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of the Los Angeles Inner Harbor.

1. *Reasonable Potential Analysis (RPA)*

In accordance with Section 1.3 of the SIP, the Regional Board will conduct a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board would analyze effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) 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:

- a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.
- b. Trigger 2 – If $MEC < C$ and background water quality (B) $> C$, a limitation is

needed.

- c. 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 ambient 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 Board to conduct the RPA. Upon review of the data, and if the Regional Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The Regional Board issued a letter on July 27, 2001 that required EMOC to monitor for priority pollutants regulated in the CTR. Monitoring data for these pollutants are available for the period from September 2001 through December 2002. Three effluent data sets were submitted with corresponding receiving water data. Three additional sets of receiving water data were submitted with no effluent data. There are insufficient monitoring data available to perform an RPA for the priority pollutants. The SIP requires the dischargers to submit sufficient data to conduct the determination of priority pollutants requiring WQBELs and to calculate the effluent limitations. The proposed Order includes monitoring requirements to obtain the necessary data.

2. *Calculating WQBELs*

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

- a. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
- b. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
- c. Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Board.

3. *Impaired Water Bodies in 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 Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point

sources, as appropriate.

The U.S. EPA approved the State's 303(d) list of impaired water bodies on July 25, 2003. 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 1998 303(d) list and have been scheduled for TMDL development.

The Los Angeles/Long Beach Harbors are located in the southern portion of the Los Angeles Basin in the greater San Pedro Bay. These Harbors receive discharges from highly industrialized areas. The 2002 State Board's California 303(d) List classifies the Los Angeles Inner Harbor and several water bodies within the Harbor as impaired. These water bodies include: Consolidated Slip, Southwest Slip, a portion of Main Channel, Fish Harbor, Cabrillo Pier, and breakwater. The pollutants of concern, detected in the water column, in the sediment, and in the fish tissue, include: cadmium, copper, lead, mercury, nickel, ammonia, coliform, chromium, zinc, DDT, PAHs, sediment toxicity, benthic community effects, chlordane, PCBs, and tributyltin.

4. *Whole Effluent Toxicity*

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 measures 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 response on 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. The existing permit contains annual acute toxicity limitations and monitoring requirements. For the period from 1997 through 2002, acute toxicity test results have ranged from 85 to 100 percent survival.

In accordance with the Basin Plan, acute toxicity limitations dictate 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. Consistent with Basin Plan, this Order includes acute

toxicity limitations.

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 at the EMOC facility occur intermittently; the discharge is not continuous. Therefore, the discharge is not expected to contribute to long-term toxic effects. Intermittent discharges are likely to have short term toxic effects. Therefore, at this facility, EMOC will be required to conduct acute toxicity testing to determine compliance with effluent limitations that were developed in accordance with the Basin Plan.

D. Specific Rationale for Each Numerical Effluent Limitation

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in re-issued permits are at least as stringent as in the existing permit. Therefore, existing effluent limitations for most of the regulated pollutants are carried over to this permit. The requirements in the proposed Order for conventional and non-conventional pollutants (turbidity, settleable solids, suspended solids, oil and grease, BOD₅, detergents and residual chlorine) are based on limitations specified in EMOC's existing permit. The effluent limitations for pH and temperature are based on the Regional Board's interpretation of the Basin Plan and BPJ.

In addition to these limitations, the Regional Board is implementing the CTR and SIP, and additional effluent limitations are required for those regulated pollutants that show reasonable potential to exceed water quality standards. As discussed previously, there were insufficient data to conduct an RPA; therefore, the proposed Order does not establish effluent limitations for priority pollutants.

The previous permit did not establish average monthly effluent limitations (AMELs). In the previous Order, the permit limitations for parameters were expressed only as maximum daily effluent limitations (MDELs). Consistent with section 122.45(e), permit limitations may be allowed as maximum daily effluent limitations for non-continuous discharges; therefore, effluent limitations in the proposed Order for turbidity, settleable solids, TSS, oil and grease, BOD, residual chlorine, detergents, and total petroleum hydrocarbons are expressed as MDELs.

Effluent limitations established in this Order are applicable to wastewater discharges from the NPDES Discharge Serial No. 001 (Latitude 33°44'02", Longitude 118°16'20").

Constituent (units)	Maximum Daily Discharge Limitations	Rationale ¹
	Concentration	
pH (standard units)	Between 6.5 – 8.5	BP
Temperature (°F)	86 ²	BP, BPJ
Turbidity (NTU)	75	E
Settleable solids (ml/L)	0.2	E
Total suspended solids (mg/L)	75	E
Oil and grease (mg/L)	15	E
BOD ₅ @ 20°C (mg/L)	30	E
Residual chlorine (mg/L)	0.1	E
Detergents (as MBAS) (mg/L)	0.5	E
Total petroleum hydrocarbons (µg/L)	100	BPJ
Acute Toxicity (% survival)	³	BP

¹ BP = Basin Plan, E = Existing Permit, BPJ = Best Professional Judgment.

² The new temperature effluent limit is reflective of new information available which indicates that 86 °F temperature was found to be protective of aquatic organisms based on the survey that was completed for several kinds of fish. The Basin Plan lists temperature requirements for the receiving waters as well as the Thermal Plan sets 86 °F for estuary.

³ Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70 % survival.

E. Monitoring Requirements

On July 27, 2001 the Regional Board sent a letter to the Discharger requiring the monitoring of priority pollutants regulated in the CTR. Quarterly monitoring of the effluent and receiving water was required for the period from August 2001 through

March 2003.

Monitoring requirements are discussed in greater detail in Section III of the Monitoring and Reporting Program No. 1558. As described in the Monitoring and Reporting Program, monitoring reports must be submitted quarterly.

1. Effluent Monitoring

To demonstrate compliance with effluent limitations established in the permit, and to assess the impact of the discharge on the beneficial uses of the receiving waters, this Order requires the Discharger to monitor conventional and priority pollutants. Monitoring for acute toxicity is required annually.

2. Receiving Water Monitoring Requirements

To conduct RPA receiving water monitoring data is required. The receiving water monitoring of priority pollutants shall be conducted for the first two years on an annual basis. The two time annual monitoring of the receiving water shall be conducted at the same time as annual effluent monitoring of priority pollutants. The receiving water samples shall be collected at a point that is outside the influence of the effluent discharge. This will be accomplished by collecting the sample at a location that is at least 50 feet from the point of discharge and is in a direction that is opposite the direction of tidal flow at the discharge point at the time of collection.

3. Monitoring for TCDD Equivalents

The Regional Board is requiring, as part of the Monitoring and Reporting Program, that the Discharger conduct effluent/receiving water monitoring for the presence of the 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD or Dioxin) congeners. The monitoring shall be a grab sample with a minimum frequency of once during dry weather and once during wet weather in the first year after adoption of the permit. Compliance with the dioxin limitation shall be determined by the summation of the 17 individual TEQs.