

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
CONOCOPHILLIPS COMPANY
(CONOCOPHILLIPS LOS ANGELES LUBRICANTS PLANT)

NPDES Permit No.: CA0059846
Public Notice No.: 04-057

FACILITY ADDRESS

ConocoPhillips Los Angeles Lubricants
Terminal
13707 South Broadway Avenue
Los Angeles, CA 90061

FACILITY MAILING ADDRESS

ConocoPhillips Los Angeles Lubricants
Terminal
13707 South Broadway Avenue
Los Angeles, CA 90061
Contact: William Carroll
Telephone: (310) 538-7664

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 November 8, 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: December 9, 2004
Time: 9:00 A.M.
Location: Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA

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 www.swrcb.ca.gov/rwgcb4 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

ConocoPhillips Company (formerly Tosco Corporation) (hereinafter ConocoPhillips or Discharger) discharges treated storm water runoff from its ConocoPhillips Los Angeles Lubricants Plant under waste discharge requirements (WDRs) contained in Order No. 97-082 (NPDES No. CA0059864) adopted by the Regional Board on June 16, 1997. Order No. 97-082 expired on May 10, 2002.

Tosco Corporation (Tosco) filed a report of waste discharge on March 18, 2002, and applied for renewal of its WDRs and a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastes to surface waters. On January 1, 2003, Tosco Corporation, a subsidiary of ConocoPhillips merged into ConocoPhillips Company. ConocoPhillips assumed all rights and responsibilities associated with all environmental permits and licenses previously held by Tosco. An amendment to the renewal application was submitted on May 13, 2003, which states that ownership has been transferred from Tosco to ConocoPhillips and it also addresses the construction of a new materials (ethanol) receiving area.

An NPDES permit compliance evaluation inspection (CEI) was conducted on January 6, 2004, that also served as a site visit to observe operations and collect additional data to develop Order limitations and conditions.

III. Description of Facility and Waste Discharge

ConocoPhillips is the owner and operator of the ConocoPhillips Los Angeles Lubricants Plant (Plant) located at 13707 S. Broadway Avenue, Los Angeles, California. The Plant is a non-marine transfer facility which includes three bulk storage areas (Tank Farms #1, #2, and #3), a storage warehouse (including lubricating oil packaging, storage, and package loading), maintenance shop, office, seven truck racks, and railcar offloading area.

The Plant receives lubricating oil base stocks, and additives via railcars, tank trucks, and barrel trucks. Finished products are produced in the blender building by mixing base stocks and additives. Batches of finished lubricating oils are stored in bulk storage tanks and in barrels in the warehouse. Products are shipped off-site via bulk tank trucks, pallets, and barrels from the warehouse.

ConocoPhillips completed the construction of the ethanol rail rack in October 31, 2003, and began the ethanol unloading operations in November 2003. The ethanol rail rack consists of 20 unloading stations and was designed to offload maximum of twenty, 30,000-gallon railcars per day. Ethanol received at the Plant is pumped to a permitted Ethanol Aboveground Storage Tank located at the ConocoPhillips Los Angeles Gasoline Terminal across the street. No Ethanol is stored at the Plant.

The ethanol rail rack is completely bermed and each unloading station has a quick flow drain and containment pan collection system. This drain system is tied into a 12,000-gallon, emergency spill collection tank and then into the process and storm water separator systems

which is automated with high level alarms in the spill tank. The entire system is protected with a series of quick emergency shut down (ESD) switches which close all valves in the event of emergency or spill.

ConocoPhillips discharges up to 648,130 gallons per day (gpd) of treated storm water through Discharge Serial No. 001, and storm water runoff (sheet flow) through Discharge Serial Nos. 002 and 003, into Dominguez Channel, a water of the United States, above the Estuary.

The storm water runoff may pick up pollutants from the process areas, parking lots/driveway areas, truck loading areas, ethanol rail rack collection pans and drains, and the diked tank farm area. All storm water from these areas is collected via an internal storm drain system and the first tenth of an inch of rainfall plus the next 15 minutes of rainfall (first flush) is discharged into the sanitary sewer. All storm water runoff after the diversion of the first one tenth of an inch of rain plus fifteen minutes into the sanitary sewer is collected and treated in a storm water oil-water separator prior to discharged to the outfall Discharge Serial No. 001.

The storm water treatment system consists of one 20,000-gallon oil/water separator equipped with petropaks to facilitate oil coalescing and floatation and an underflow/overflow weir system for storm water discharge and oil removal. Separated oil is pumped from the storm water oil/water separator to a 12,000-gallon underground storage tank (UST). Influent valves to the oil/water separator are designed to close when the oil/water separator reaches a high level.

ConocoPhillips also discharges storm water runoff (sheet flow) from the northeast perimeter of the Plant located near the maintenance shop, and from the front vehicle/truck entrance gate located on the eastern perimeter of the Plant through the storm drain (Discharge Serial Nos. 002, and 003, respectively), into Dominguez Channel. These areas were visually monitored pursuant to the Plant' s Storm Water Pollution Prevention Plan (SWPPP). The proposed Order will require the Discharger to monitor the discharges of sheet flow from these areas for conventional and priority pollutants through Discharge Serial Nos. 002 and 003, into Dominguez Channel.

ConocoPhillips discharges process water, initial washdown water from the spill collection pans and drains around the ethanol rail rack, and the first one tenth of an inch of rain plus fifteen minutes from the Plant into the sanitary sewer. In addition, all storm water collected in the dike containment of all aboveground storage tanks is impounded and discharged to the sanitary sewer after the storm events. The discharges to the sanitary sewer are permitted under an industrial wastewater permit by the Los Angeles County Sanitation District.

The diversion system to discharge to the sanitary sewer is designed to switch discharge from the sewer to the storm channel, after (0.10" inch of rain plus fifteen minutes) has been received. In addition, any rain event less than this amount is always discharged to the sanitary sewer.

The existing Order permitted ConocoPhillips to discharge up to 60,000 gpd of treated storm water into the Dominguez Channel. On March 16, 2004, the Discharger submitted additional

information regarding the maximum daily flow rate of storm water discharge from the Plant. The Discharger calculated the maximum daily storm water discharge to be 648,128 gpd (based on a 2.5 inch storm event). Based on this information, the proposed permit will increase the allowable flow rate from 60,000 gpd to 650,000 gpd.

The Regional Board and U.S. EPA have classified ConocoPhillips Los Angeles Lubricants Terminal as a minor discharge.

Effluent data presented in the permit renewal application are summarized in the following Table:

Constituent (units)	Reported Effluent Concentration
Temperature (°C)	15.29 – 15.55
Total Suspended Solids (mg/L)	93.67 ¹
pH (standard units)	6.05 – 7.67
Oil and Grease (mg/L)	12.12 ¹
Arsenic (øg/L)	6.3
Chromium (øg/L)	18
Copper (øg/L)	42.5 ¹
Lead (øg/L)	40.5 ¹
Nickel (øg/L)	20
Zinc (øg/L)	655 ¹
Phenols (mg/L)	<0.10 ¹
Toluene (øg/L)	16.1 ¹
Phenol (øg/L)	<0.10 ¹

¹ Represents a long-term average value.

All other toxic pollutants were reported as “believed absent” or “not detected.”

Effluent limitations contained in the existing Order for ConocoPhillips Discharge Serial No. 001 and representative monitoring data from the previous Order term are presented in the following Table. These constituents were monitored once per discharge and submitted quarterly.

Constituent (units)	Effluent Limitation (Daily Maximum)	Monitoring Data (January 1999 – March 2003)
		Range of Reported Values
Oil and Grease (mg/L)	15	4.3 – 31
Oil and Grease (lbs/day)	7.51	NR ¹
Phenols (mg/L)	1.0	<0.1
Phenols (lbs/day)	0.50	NR ¹

¹ Not reported.

As shown in the Table above, the Discharger exceeded the existing oil and grease daily maximum effluent limit of 15 mg/L on December 16, 2002 (31 mg/L), December 1, 2001 (19 mg/L), and on February 25, 2003 (19 mg/L).

The existing Order also required ConocoPhillips to monitor for pollutants for which no effluent limitations were developed. Monitoring data for these pollutants are presented in the following Table. The Table below summarizes the range of reported effluent concentrations for those pollutants that were reported as detected (all other pollutants were reported as below detection levels).

Constituent	Range of Reported Effluent Concentrations (January 1999 – March 2003)
Total Suspended Solids (TSS) (mg/L)	<10 – 280 ¹
Arsenic (µg/L)	<5 – 6.3
Total Chromium (µg/L)	<5 – 18
Copper (µg/L)	14 – 64
Lead (µg/L)	13 – 78
Nickel (µg/L)	<10 – 20
Zinc (µg/L)	150 – 960
Toluene (µg/L)	1.2 – 46
Aquatic Toxicity (Percent Survival)	0 – 100
Flow (gpd)	129,626 – 648,128
Specific Conductance (µmhos/cm)	44 – 4,400
Temperature (Degrees Fahrenheit)	55 – 68
pH (Standard Units)	5.9 – 7.67

¹ The data for TSS are for the period from October 2000 through February 2003 only.

Although the previous permit did not contain effluent limitations for acute toxicity, it should be noted that the facility's effluent demonstrated toxicity several times: October 2000 (75 percent survival); November 2002 (0 percent survival); and February 2003 (10 and 15 percent survival).

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:

1. 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 an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.
2. 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.
3. 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 areas and for the

Pacific Ocean. The immediate receiving water body for the permitted discharge covered by this Order is the Dominguez Channel, which then conveys water to the Dominguez Estuary. The Basin Plan contains beneficial uses and water quality objectives for the Dominguez Channel Estuary. The beneficial uses listed in the Basin Plan for the Dominguez Channel are:

Dominguez Channel (to Estuary) – Hydro Unit No. 405.12

Existing: Non-contact water recreation and preservation of rare, threatened or endangered species.

Potential: Municipal and domestic water supply, water contact recreation (prohibited by LA County DPW), warm fresh-water habitat, and wildlife habitat.

4. **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 United States Environmental Protection Agency (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.
5. 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.
6. On May 18, 2000, the 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 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. The CTR also allows for a schedule of compliance not to exceed 5 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.
7. 40 CFR §122.44(d)(1)(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 water quality-based effluent limitations (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.

8. State and Federal antibacksliding and antidegradation policies require that Regional Board actions to protect the water quality of a water body and to ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in sections 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.
9. 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 Dominguez Channel.
10. Existing waste discharge requirements contained in Board Order No. 97-082, adopted by the Regional Board on June 16, 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 Order.

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 water quality-based effluent limitations (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

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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 exists for pollutants in a discharge to exceed water quality standards, 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 that are composed entirely of storm water, such as the potential discharges to inland surface waters, enclosed bays, and estuaries, the U.S. EPA’s *Technical Support Document for Water Quality-Based Toxics Control (TSD)* of 1991 (USEPA/505/2-90-001) established 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. With respect to a reasonable potential analysis, the TSD identifies an appropriate step-wise approach that can be used to determine whether a discharge has a reasonable potential.

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

1. **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 an NPDES permit. Further, the NPDES regulations 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.

ConocoPhillips operates a tank farm and receives, blends, and ships lubricating oils. Typical pollutants expected to be in the discharge of storm water runoff may include: solids, oil and grease, phenols, total petroleum hydrocarbons and certain metals.

Effluent limitations for Discharge Serial No. 001 in the current Order were established for oil and grease and phenols. Phenols and oil and grease are constituents commonly present in storm water at industrial facilities and are associated with lubricating oils; therefore, oil and grease and phenols are pollutants of concern under the proposed Order, as well as total petroleum hydrocarbons. Storm water runoff may affect the pH and temperature of the discharge. Effluent limitations have been established for pH and temperature and are based on the Basin Plan water quality objectives. Storm water runoff from the tank farm areas may contain constituents that may contribute to biochemical oxygen demand (BOD), turbidity, total suspended solids (TSS), settleable solids, and sulfide to the discharge, and are considered pollutants of concern. Therefore, effluent limitations for BOD, turbidity, TSS, settleable solids, and sulfide have been established for in the proposed Order. Further, certain metals (copper, lead, and zinc) were reported as detected in the monitoring reports, thus, the proposed Order established effluent limitations for these pollutants.

Due to the recent addition of the new ethanol unloading rail spur area, ethanol will be considered a pollutant of concern under the proposed Order.

2. **Technology-Based Effluent Limitations**

This Order will require the Discharger to update and continue to implement, consistent with the existing Order 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 directly into surface waters. The SWPPP should address areas of concern noted during the CEI, including oil transfer areas and other process areas. The CEI states that the facility surface was oil-stained even though drip pans are used at those connections. The updated SWPPP should address these concerns for both Discharge Serial Nos. 001, 002, and 003.

Due to the lack of national ELGs for lubricating oil blending facilities and the absence of data to apply BPJ, and pursuant to 40 CFR section 122.44(k), the Regional Board will require the Discharger to develop and implement Best Management Practices (BMPs) to be included in the SWPPP. The combination of the SWPPP and BMPs and existing Order limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA. The previous Order states that maximum discharge limitations specified in the Order are based upon the Basin Plan, U.S. EPA Water Quality Criteria, the California Ocean Plan, and/or best available technology economically feasible.

3. **Water Quality-Based Effluent Limitations**

As specified in 40 CFR section 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 procedures for determining reasonable potential, and if necessary for calculating WQBELs, are contained in the TSD for storm water discharges. Further, in the best professional judgment of the Regional Board staff the TSD identifies an appropriate, rational step-wise approach that can be used to determine whether storm water discharges have a reasonable potential.

The CTR contains both saltwater and freshwater criteria. According to 40 CFR section 131.38(c)(3) freshwater criteria apply at salinities of 1 part per thousand (ppt) and below 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. Because the discharge from the storm drain to the receiving water occurs above the Estuary, the CTR criteria for freshwater 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 Dominguez Channel.

Some water quality criteria for metals are hardness dependent. Since there is no available receiving water data for hardness, the default value of 100 mg/L, which is based on CTR, was used to calculate the WQBEL for copper, lead and zinc.

(a) Reasonable Potential Analysis (RPA)

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 Order. 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.

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 Order will be reopened for appropriate modification.

The RPA was performed for the priority pollutants for which effluent data were

available. Effluent monitoring data collected on March 25, 1999; April 7, 2001; November 13, 2001; and November 8, 2002 were used to conduct the RPA. Based on the RPA, there was reasonable potential to exceed water quality standards for copper, lead, and zinc. Refer to Attachment D for a summary of the RPA and associated effluent limitation calculations.

(b) 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 5.4 of the TSD. These procedures include:

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

(c) 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.

U.S. EPA has 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 2002 303(d) list, some of which have been scheduled for TMDL development.

Dominguez Channel (above Vermont) is located in Dominguez Channel Watershed. The 2002 State Board's California 303(d) List classifies Dominguez Channel as impaired. The pollutants of concern detected in fish tissue, sediment, and the water column include aldrin (tissue), ammonia, Chem A (tissue) [refers to the sum of aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene], chlordane (tissue), chromium (sediment), copper, DDT (tissue and sediment), dieldrin (tissue), high coliform count, lead (tissue), PAHs (sediment), and zinc (sediment).

(d) 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 Order contains acute toxicity monitoring requirements, but not effluent limitations. It should be noted that the acute toxicity levels reported during the previous Order were below 90 percent survival four times: October 2000 (75 percent survival); November 2002 (0 percent survival); and February 2003 (10 and 15 percent survival). Due to the low percent survivals reported, this Order prescribed semiannual monitoring frequency for acute toxicity.

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 the Basin Plan this Order includes acute toxicity limitations.

The discharges at the ConocoPhillips facility occur only after a significant storm event; they are not continuous. The discharge at the ConocoPhillips facility is not expected to contribute to long-term toxic effects, therefore the Discharger will not be required to monitor for chronic toxicity. Intermittent discharges are likely to have short-term effects; therefore at this facility, ConocoPhillips will be required to comply with acute toxicity effluent limitations in accordance with the Basin Plan and the proposed Order.

4. Specific Rationale for Each Numerical Effluent Limitation

Section 402(o) of the Clean Water Act and 40 CFR section 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 the regulated pollutants (oil and grease and phenols) are carried over to this permit. The effluent limitations for pH and acute toxicity are based on the Basin Plan. The effluent limitations for temperature was established based on the new information available which indicates that the 100°F

temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. The Basin Plan lists temperature requirements for the receiving waters.

Effluent limitations for BOD, TSS, settleable solids, turbidity, and sulfides were added because of the nature of operations (non-marine transfer facility), storage and handling of materials (lubricating oil packaging, storage, and package loading), maintenance shop, office, seven truck racks, and railcar offloading area, and the wastes discharged to surface waters.

In compliance with section 122.45(d), permit limitations shall be expressed, unless impracticable, as both average monthly effluent limitations and maximum daily effluent limitations. Therefore, average monthly effluent limitations (AMELs) are established in the Order for certain pollutants. These average monthly effluent limitations are based on BPJ and are consistent with current individual permits adopted by the Regional Board to industrial facilities of a similar nature. In addition, Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in reissued permits be at least as stringent as those in the existing permit. Thus, average monthly limitation is now established in the proposed Order for oil and grease. For priority pollutants, AMELs are established in accordance with the requirements contained in the TSD and based on the applicable water quality criteria contained in the CTR.,

In addition to these limitations, the Regional Board is implementing the CTR and additional effluent limitations are required for those regulated pollutants that show reasonable potential to exceed water quality standards. CTR-based WQBELs are established for copper, lead, and zinc because effluent data for these pollutants demonstrate reasonable potential to exceed state water quality standards.

The storm water discharge is not continuous (i.e., it is periodic in nature) and mass-based limitations are not established in this Order because of the nature of the discharge.

Effluent limitations established in the proposed Order are applicable to storm water discharges from the NPDES Discharge Serial No. 001.

Constituents	Units	Discharge Limitations		Rationale
		Monthly Average ¹	Daily Maximum	
pH	pH Units	6.5 – 8.5		Basin Plan ²
Temperature	°F	86		Thermal Plan, BPJ ³
Total suspended solids	Mg/L	50	75	BPJ ³
Turbidity	NTU	50	75	BPJ ³
BOD ₅ 20°C	Mg/L	20	30	BPJ ³
Oil and grease	Mg/L	10	15	E, BPJ ³
Total Petroleum Hydrocarbons	µg/L	---	100	BPJ ³

Constituents	Units	Discharge Limitations		Rationale
		Monthly Average ¹	Daily Maximum	
Settleable solids	MI/L	---	0.3	BPJ ³
Phenols	Mg/L	---	1.0	E
Sulfides	Mg/L	---	0.1	BPJ
Copper ⁴	µg/L	7	14	CTR
Lead ⁴	µg/L	2.6	5.2	CTR
Zinc ⁴	µg/L	60	120	CTR
Acute toxicity	% survival	Average survival 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.		Basin Plan ²

¹ Average monthly effluent limitations are established in the Order for certain pollutants. These average monthly effluent limitations are based on BPJ and are consistent with current individual permits adopted by the Regional Board to industrial facilities of a similar nature. In addition, Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in reissued permits be at least as stringent as those in the existing permit.

² Basin Plan Objectives are instantaneous maximum concentrations of pollutants that when not exceeded are protective of the beneficial uses of the particular water body. They are generally set at the level required to protect the most sensitive beneficial use or at an even lower level based on antidegradation principles.

³ BPJ = Best Professional Judgement is the method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data. BPJ limits are established in cases where effluent limitation guidelines are not available for a particular pollutant of concern. Authorization for BPJ limits is found under section 401(a)(1) of the Clean Water Act and under 40 CFR 125.3.

For Temperature:

The new temperature effluent limit is reflective of new information available which indicates that the 100⁰F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86⁰F temperature was found to be protective. The Basin Plan lists temperature requirements for the receiving waters.

⁴ Discharge limitations for these metals are expressed as total recoverable.

E - Existing Permit.

CTR - California Toxics Rule

(b) Interim Effluent Limitations and Compliance Schedule for Discharges to Discharge Serial No. 001

The Discharger may not be able to achieve immediate compliance with the WQBELs for copper, lead and zinc. Data submitted in self-monitoring reports indicate that these constituents have been detected at concentrations greater than the new limits proposed in this Order. The Discharger may not be able to achieve immediate compliance with the effluent limitations based on CTR criterion for these constituents.

40 CFR 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. The CTR allow inclusion of an interim limit with a specific compliance schedule included in a NPDES permit for priority pollutants if the limit for the priority pollutant is CTR-based. Numeric interim limitations for the pollutants shall be based on current treatment facility performance. Interim limits for copper, lead, and zinc have been included in this Order. During the compliance period, the current treatment facility performance is imposed as the interim effluent limitations.

The Regional Board may establish other interim requirements, such as requiring the Discharger to develop a pollutant minimization plan and/or source control measures, and participate in the activities necessary to achieve final effluent limitations. These interim limitations shall be effective until December 9, 2007, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

The Discharger is required to develop and implement a compliance plan that will identify the measures that will be taken to reduce the concentrations of copper, lead, and zinc in their discharge. This plan must evaluate options to achieve compliance with the Order limitations specified in provision 1.B.4.

The Discharger is required to submit quarterly progress reports to describe the progress of studies and or actions undertaken to reduce copper, lead, and zinc in the effluent, and to achieve compliance with the limitations in the Order by the deadline specified in provision I.B.5. The Regional Board shall receive the first annual progress report at the same time the annual summary report is due, as required in section I.B of *M&RP* No. CI-6773.

The interim limitations stipulated in section I.B.5 is in effect for a period not to extend beyond December 9, 2007. Thereafter, the Discharger is required to comply with the limitations specified in section I.B.4 of this Order.

From the effective date of this Order until December 9, 2007, discharges from Discharge Serial No. 001, in excess of the following interim effluent limitations is prohibited:

Constituents	Units	Maximum Daily Discharge Limitations	Rationale
Copper ¹	µg/L	64	MEC
Lead ¹	µg/L	78	MEC
Zinc ¹	µg/L	960	MEC

¹ Discharge limitation for copper is expressed as total recoverable.

MEC= Maximum Effluent Concentration

4. Monitoring Requirements

The previous Order for ConocoPhillips required monitoring for temperature, flow, oil and grease, pH, and phenols at a frequency of once per discharge event. Order No. 97-082 also required annual acute toxicity monitoring. Further, the existing Order required monitoring for priority pollutants listed on page T-4 of Monitoring and Reporting Program CI-6773, annually.

Monitoring requirements are discussed in greater detail in section III of the Monitoring and Reporting Program (*MR&P*) CI-6773.

(a) *Effluent Monitoring*

To demonstrate compliance with effluent limitations established in the Order, this Order carries over the existing monitoring requirements for most parameters. Monitoring once per discharge for flow, temperature, pH, oil and grease, and phenols, as required in the existing Order is required to ensure compliance with effluent limitations. In addition, this Order will increase the monitoring frequency from annually to semiannually for acute toxicity, because four values during the previous Order term were less than 90 percent survival and it is unclear if the discharge is contributing to acute toxicity. Also, monitoring once per discharge for copper, lead, and zinc is established in this Order to demonstrate compliance with final and interim effluent limitations for these constituents. Due to the addition of the new ethanol rail spur area, the Discharger also will be required to monitor for ethanol, at a frequency of once per discharge, to determine its presence in the effluent. The Discharger is required to monitor once per discharge event for total suspended solids, BOD, settleable solids, turbidity sulfides because they are considered a pollutant of concern. The Discharger is also required to monitor for dissolved oxygen, conductivity, ammonia (as N), methyl tertiary butyl ether, tertiary butyl ether, total petroleum hydrocarbons because of the nature of operations, and discharge. For priority pollutants the Discharger is required to monitor for once per storm event, where no more than one sample is required each calendar year as described in the footnote No. 6 in Section III (A) of the *MR&P*.

Because of the nature of operations at the areas located at the northeast perimeter of the Plant located near the maintenance shop, and from the front vehicle/truck entrance gate located on the eastern perimeter of the Plant, the proposed Order requires the Discharger to monitor the conventional and priority pollutants for discharges from these areas.

(c) 2,3,7,8-TCDD Monitoring for Reasonable Potential

The Regional Board is requiring, as part of the Monitoring and Reporting Program, that the Discharger conduct effluent monitoring for 2,3,7,8-TCDD, semi-annually during the first year of the permit. Samples shall be collected during the months of October – March. The Regional Board requires monitoring for 2,3,7,8-TCDD and the 16 congeners listed in the Table in section V. of the associated *MR&P*. The Discharger is required to calculate Toxic Equivalence (TEQ) for each congener by multiplying its analytical concentration by the appropriate Toxicity Equivalent Factors (TEF).

(d) Storm Water Monitoring

In addition to the effluent monitoring for storm water runoff, the Discharger is also required to conduct rainfall monitoring and visual observation of all discharge points at least one storm event per month that produces a significant storm water discharge. The Discharger shall 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 three hours in a 12-hour period.