

**State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**ORDER NO. R4-2006-0089
NPDES NO. CA0000337**

**WASTE DISCHARGE REQUIREMENTS
FOR
CHEVRON PRODUCTS COMPANY
(EL SEGUNDO REFINERY)**

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

1. Chevron Products Company (Chevron or Discharger) discharges waste from its El Segundo Refinery under Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit contained in Order No. 97-112, adopted by this Regional Board on August 25, 1997 (NPDES Permit No. CA0000337).
2. Chevron filed a Report of Waste Discharge (ROWD) and applied for renewal of its WDRs and NPDES permit.

PURPOSE OF ORDER

3. The purpose of this Order is to renew the NPDES permit for the Discharger. This NPDES permit regulates the discharge of treated wastewater from the Discharger's secondary Effluent Treatment Plant into Santa Monica Bay, waters of the United States, through Discharge Outfall 001. Discharge Outfall 001 is located at Latitude 33°54'29" North, Longitude 118°26'17" West.

DESCRIPTION OF FACILITY

Description of Location and Facility Operation

4. The El Segundo Refinery is located at 324 W. El Segundo Boulevard, El Segundo, California. The refinery manufactures the following products from crude oil: reformulated gasoline, jet fuel, diesel fuel, fuel oils, gas oils, liquefied petroleum gases, fuel blending components, coke, ammonia, and molten sulfur. The refinery processes include atmospheric and vacuum distillation, catalytic cracking, alkylation, isomerization, coking, catalytic reforming, hydrogenation, sulfur recovery, chemical treating, and product blending. The refinery has a rated crude throughput capacity of 275,000 barrels per operating day (bpod), and a production rate of 265,000 bpod. In 2001, the highest single day throughput rate was 292,000 bpod, and the highest weekly average rate was 267,000 bpod.

Figure 1 shows the location of the plant relative to the vicinity. Figures 2 and 3, and 4 show the plant separator flow diagrams, and outfall flow contributions, respectively.

5. The Chevron El Segundo Refinery is categorized as a cracking refinery as defined in 40 CFR 419.20.
6. The Regional Board and the United States Environmental Protection Agency (USEPA) have classified the El Segundo Refinery as a major discharger.

Description of Waste Discharges

7. The Effluent Treatment Plant discharges an average flow of 7.0 million gallons per day (mgd) of treated wastewater, with up to 8.8 mgd during dry weather and up to 27 mgd during wet weather. The wastewater is comprised of refinery wastewater (6.45 mgd), petroleum hydrocarbon contaminated shallow well groundwater (up to 2.34 mgd), other intermittent sources (4 mgd), and rainfall runoff, which may be contaminated (14 mgd).
8. The ROWD, Form 2C, describes the effluent characteristics as follows:

<u>Constituent</u>	<u>Units</u>	<u>Concentration</u>	
		<u>Daily Maximum</u>	<u>Monthly Average</u>
CBOD	mg/L	31	23*
COD	mg/L	392	157
Total Suspended solids	mg/L	38	23*
Oil and grease	mg/L	13	7.6*
pH	standard unit	8.8	8.0
Ammonia as N	mg/L	11.1	6.8
Temperature	°C	38	37
Benzene	µg/L	<6.97	<6.97
Toluene	µg/L	<5.38	<5.38
Ethylbenzene	µg/L	ND	ND
Total Phenols	µg/L	72	72

* These values are monthly averages calculated with multiple daily effluent monitoring data in a particular month which contain at least one data point below the detection/reporting limits.

Effluent monitoring data from January 1999 to September 2006 showed that the Discharger has been in compliance with all current permit effluent limitations.

9. Wastes that are permitted to be discharged to Santa Monica Bay include:
 - A. Refinery wastewater including both process and non-process wastewater.
 - B. Groundwater generated from a groundwater remediation project as required by Regional Board Cleanup and Abatement Order No. 88-055. This Order directs Chevron to extract and treat hydrocarbon-contaminated groundwater from the Old Dune Sand Aquifer which underlies Chevron's facility. The flow weighted analyses of

the extracted groundwater, i.e., after separation of petroleum free products, show that it is similar to the refinery's wastewater quality, but has less concentration of total suspended solids (TSS), chemical oxygen demand (COD), phenolics, and oil and grease. The extracted groundwater is treated together with the refinery wastewater in the Effluent Treatment Plant.

Reclaimed water from West Basin Municipal Water District (WBMWD) is injected into the aquifer to create a groundwater mound that prevents the liquid hydrocarbon (LHC) plume from migrating offsite and directs the flow of the LHC plume to the extraction wells.

- C. Storm water runoff at the El Segundo Refinery is collected and treated in the refinery's unsegregated drain system along with non-process wastewater. The refinery has two storage tanks for storm water with a combined capacity of approximately 14 million gallons. If required for the total effluent stream to meet limitations contained in this Order, storm water runoff can be diverted to auxiliary diversion tanks for induced air flotation (IAF) treatment to remove solids. Based on the information provided by the Discharger, 89.3% of the rainfall run-off is considered contaminated as defined in 40 CFR Part 419.11(g).
- D. Other intermittent sources. Chevron also operates numerous land-based marketing terminals and gas stations, which generate washdown water, hydrotest water, tank water draws, tank rinsate, and other wastewater similar in quality to that typically generated by the El Segundo Refinery. These Chevron facilities and the Chevron Pipeline Company may occasionally send non-hazardous wastewater batch shipments and recoverable oil-water mixtures to the refinery for oil recovery, treatment, and discharge. In addition, the refinery may occasionally receive ship ballast water or tank rinsates from its marine terminal. 40 CFR §§419.23(c) and 419.24(c) provide for incremental pollutant allowances for ballast and similar wastes.

Description of Effluent Treatment Plant

- 10. The El Segundo Refinery's wastewater is collected and treated in two separate drain and treatment systems; the unsegregated and segregated systems.
 - A. The unsegregated system is normally used for non-process wastewater including cooling tower blowdown, steam condensate, a portion of the refinery's recovery well groundwater, and other wastewater streams containing free oil that is removed with primary treatment only. This system is also used to treat storm water. The unsegregated system includes a gravity separator and an IAF unit.
 - B. The segregated system is normally used to treat petroleum process wastewater containing emulsified oils and a portion of the refinery's recovery well groundwater. It is comprised of gravity separators, a dissolved air flotation (DAF) unit, and activated sludge units for secondary (biological) treatment.

11. Effluent from the segregated system that does not meet the refinery's operational specifications may receive additional solids removal from an auxiliary off-specification DAF unit, or be routed to auxiliary effluent diversion tanks for additional IAF treatment. The auxiliary effluent diversion tanks are available for handling off-specification process wastewater from either of the two systems, in addition to storing rainfall runoff. The two systems can be operated such that flow from either system can be diverted either to effluent diversion tanks or to the other system, where, if needed, the diverted flow can receive alternative or additional treatment. This operational treatment flexibility provides control such that final effluent quality is maintained in compliance with permit requirements.
12. Biosolids from the biological treatment system are disposed of through the sanitary sewer for treatment by the City of Los Angeles (Hyperion Treatment Plant) under an Industrial Waste Discharge permit.

Description of Discharge Outfall

13. Chevron discharges to Santa Monica Bay within the El Segundo/Los Angeles Airport sub-watershed area through an outfall line located approximately 2,200 feet south of Grand Avenue which extends approximately 3,500 feet offshore with its terminus at a depth of 42 feet (Latitude 33° 54' 29", Longitude 118° 26' 17").
14. Prior to 1994, the outfall consisted of a 300-foot outfall. The former 300-foot outfall had a minimum dilution ratio of 38 parts of sea water to one part of effluent (38:1).
15. The new outfall was constructed in 1994. It extended the former outfall with a 3,200-foot line extension made of 60-inch nominal diameter, high-density polyethylene pipe, with a multi-port diffuser. Dilution studies showed a minimum dilution ratio of 80:1. Chevron submitted this information about the outfall to the Regional Board and State Water Resources Control Board (State Board) for review. The State Board determined, and the Regional Board concurred, that this outfall allows for a minimum dilution ratio of 80:1.

Description of Receiving Waters

16. The receiving water into which the Chevron outfall discharges is part of the Santa Monica Bay watershed. The watershed is home to unique wetland, sand dune, and open ocean ecosystems that support a rich diversity of wildlife and serve as migration stopovers for marine mammals and birds. The Bay and its beaches are invaluable recreational resources and important sources of revenue for the region. The Bay is heavily used for fishing, swimming, surfing, diving, and other activities classified as water contact and noncontact recreation.
17. Over the years, the beneficial uses of the Bay have been impaired to various degrees due to pollution, resource over-exploitation, and habitat destruction. The primary problems of concern include:
 - A. acute health risks associated with swimming in runoff-contaminated surf zone

waters;

- B. chronic (cancer) risk associated with consumption of certain sport fish species in areas impacted by DDT and PCB contamination;
- C. pollutant loading from point sources, urban runoff, and other nonpoint sources in light of projected population increases and their projected impacts on marine ecosystem;
- D. health of fishery resources, and degradation of natural habitats, and population decline of key species; and
- E. the USEPA 303(d) listing of the Santa Monica Bay offshore/nearshore and Santa Monica beach as impaired for chlordane, DDT, PAH, sediment toxicity, fish consumption advisory, and debris, as well as high coliform count and beach closures.

Storm Water Management

- 18. Pursuant to Section 402 (p) of the Clean Water Act and 40 CFR Parts 122, 123 and 124, the State Board adopted the General Permit for Storm Water Discharges Associated with Industrial Activity (State Board Order No. 97-03-DWQ, NPDES Permit No. CAS000001). Since Chevron treats all of its storm water flows, the only applicable requirement of the general permit to Chevron is updating and continued implementation of its storm water pollution prevention plan (SWPPP).

APPLICABLE PLANS, POLICIES, AND REGULATIONS

Clean Water Act

- 19. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of Santa Monica Bay.

Water Quality-based Effluent Limitations (WQBELs)

- 20. Under 40 CFR 122.44(d), *Water Quality Standards and State Requirements*, "Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants), which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Where numeric effluent limitations for a pollutant or pollutant parameter have not been established in the applicable state water quality control plan, 40 CFR Part 122.44(d)(1)(vi) specifies that water quality-based effluent limitations (WQBELs) may be set based on U.S. EPA criteria, and may be supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria, and to fully protect

designated beneficial uses.

Reasonable Potential Analysis

21. 40 CFR Part 122.44(d)(1)(I and iii) provides that effluent limitations shall be prescribed in permits for all pollutants or pollutant parameters determined to (or may) be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. 40 CFR Part 122.44(d)(1)(ii) provides the procedure and factors, including variability of the pollutants in the effluent, to be considered in determining reasonable potential. The procedure for statistical determination of the reasonable potential for a discharged pollutant to exceed an objective is outlined in the USEPA guidance, the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, March 1991).

Effluent Limitation Guidelines

22. Effluent limitation guidelines requiring the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT), were promulgated by U.S. EPA for some pollutants in this discharge. The Chevron El Segundo Refinery is classified under the cracking subcategory of the Petroleum Refining Point Sources Category. Therefore, the U.S. EPA Effluent Guidelines and Standards for Petroleum Refining Point Sources (40 CFR §419 Subpart B) based on Best Available Technology Economically Achievable (BAT), Best Practicable Control Technology (BPT), and/or Best Conventional Pollutant Control Technology (BCT), whichever is more stringent, are applicable to the refinery's discharges.
23. Effluent limitations for pollutants not subject to the USEPA Effluent Limitation Guidelines are based on Best Professional Judgment (BPJ) of BPT, BCT or BAT; current plant performance; or WQBELs. The WQBELs are based on the State Ocean Plan, other State plans and policies, the Basin Plan, or USEPA water quality criteria. These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water. The attached Fact Sheet for this Order includes specific bases for the effluent limitations.

Mass Based Effluent Limits

24. 40 CFR §122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR §122.45(f)(2) allows the permit writer, at his discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based effluent limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low flow periods and would require proper operation of treatment units at all times. In the

absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low flow periods and still meet its mass-based effluent limits.

Antibacksliding and Antidegradation

25. State and Federal antibacksliding and antidegradation policies require 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 Clean Water Act (CWA) and in 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.
26. Codified in the NPDES regulations at 40 CFR 122.44(l), Section 402(o)(2) provided that the establishment of less stringent limits may be allowed where there have been material and substantial alterations or additions to the permitted facility which justify the relaxation of effluent limitations.

California Ocean Plan

27. The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan. The major changes from the 1997 Ocean Plan upon which the previous permit was based include the following:
 - A. Replace the acute toxicity effluent limitation in Table A with an acute toxicity water quality objective in Table B;
 - B. Revise chemical water quality objectives for protection of human health:
 - a. The following four pollutants are moved from noncarcinogens to carcinogens and have more stringent water quality objectives: 1,1-dichloroethylene, isophorone, 1,1,2,2-tetrachloroethane, and 1,1,2-trichloroethane.
 - b. The following three constituents are new additions to carcinogens: chlorodibromomethane, dichlorobromomethane, and N-nitrosodi-N-propylamine.
 - c. The following five pollutants have more stringent water quality objectives (WQOs): Thallium, 1,2-dichloroethane, heptachlor and heptachlor epoxide (separate WQOs), and tetrachloroethylene.

- C. Addition of provisions for compliance determination for chemical water quality objectives.
 - D. Addition of reasonable potential analysis (RPA) procedure for determining the need for WQBELs for Table B - WQOs.
28. This Order includes effluent and receiving water limitations, prohibitions, and provisions, which implement the objectives of the Ocean Plan.
29. The Ocean Plan allows the Regional Board to establish more stringent water quality objectives and effluent limitations than those set forth in the Ocean Plan as necessary for the protection of the beneficial uses of ocean waters (Page 21, III. Program of Implementation, F. Revisions of Waste Discharge Requirements).

Basin Plan

30. 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) as amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region.
31. The Basin Plan incorporates (by reference) applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with all previously adopted State and Regional Board plans and policies.
32. The Basin Plan contains water quality objectives and beneficial uses for inland surface waters, enclosed bays, and estuaries, and for the Pacific Ocean. Inland surface waters, enclosed bays, and estuaries include rivers, streams, lakes, reservoirs, and inland wetlands. Beneficial uses can be designated, whether or not they have been attained in a waterbody, in order to implement federal or state mandates and goals (such as fishable and swimmable for regional waters).
33. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.

Receiving Water Beneficial Uses

34. The Basin Plan contains water quality objectives for and lists the following beneficial uses of waterbodies in the El Segundo Los Angeles (El Segundo/LAX) sub-watershed area:

Dockweiler Beaches (Hydrologic Unit 405.12)

Existing Uses: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, and wild habitat.

Potential Uses: spawning, reproduction, and/or early development.

Nearshore Zone

Existing Uses: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, preservation of biological habitats, rare, threatened, or endangered species, and migration of aquatic organisms.

Offshore Zone

Existing Uses: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development.

35. The requirements in this Order are intended to protect the beneficial uses and enhance the water quality of the watershed.

WATERSHED MANAGEMENT APPROACH AND TOTAL MAXIMUM DAILY LOAD (TMDL)

Watershed Management Approach

36. The Regional Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed management may include diverse issues as defined by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the Watershed Management Approach integrates the Regional Board's many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and non-point sources. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and ambient water quality conditions. TMDLs establish the allowable loadings or other quantifiable parameters for a waterbody and thereby provide the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. TMDL establish waste load allocation (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

Santa Monica Bay 303(d) Listing

37. On July 25, 2003, USEPA approved a revised list of impaired waterbodies prepared by the State (the 2002 303(d) list) in accordance with Section 303(d) of the federal Clean Water Act to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limits on point sources. The 303(d) list includes the following impairments:

Santa Monica Bay offshore/nearshore:

- chlordane,
- DDT (tissue and sediment),
- PAHs (sediment),
- PCBs (tissue and sediment),
- sediment toxicity,
- fish consumption advisory, and
- debris.

Santa Monica Bay beaches:

- high coliform count, and
- beach closures

Santa Monica Bay Beaches Bacteria Total Maximum Daily Loads (TMDLs).

38. The Regional Board has adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches during dry and wet weather. The Regional Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002 and December 12, 2002, respectively (Resolution Nos. 2002-004 and 2002-022). These TMDLs were approved by the State Board, State Office of Administrative Law and USEPA Region 9 and became effective on July 15, 2003. In these TMDLs, waste load allocations (WLAs) are expressed as the number of sample days at a shoreline monitoring site that may exceed the single sample targets for total coliform, fecal coliform and enterococcus identified under "Numeric Target" in the TMDLs. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection at beaches. The final shoreline compliance point for the WLAs in the TMDLs is the wave wash where there is a freshwater outlet (i.e., publicly owned storm drain or natural creek) to the beach, or at ankle depth at beaches without a freshwater outlet. Although Chevron was not assigned a WLA in this TMDL, because of the potential to contribute bacteria from its biological treatment system, Chevron must be provided with effluent limits which do not result in any exceedance of the water quality standards.

Santa Monica Bay Restoration Project

39. The Santa Monica Bay Watershed Management Area includes the Santa Monica Bay and the land area that drains naturally into the Bay, including the El Segundo/LAX area. Santa Monica extends from the Los Angeles/Ventura County line to the northwest near Point Dume to Point Fermin on Palos Verdes Peninsula to the southwest and is one of the most heavily used recreational areas in California.
40. The El Segundo/LAX sub-watershed area extends from Playa del Rey to the north, Westchester, the LAX area of the City of Los Angeles, the City of El Segundo, the area adjacent to Chevron Refinery and adjacent area, and a small portion of the City of Manhattan Beach to the south.
41. The Chevron refinery discharges to Santa Monica Bay, which is one of the most heavily used recreational areas in California. Recognizing the importance of Santa Monica Bay as a national resource, the State of California and the USEPA nominated, and Congress included, Santa Monica Bay in the National Estuary Program. This led to the formation of the Santa Monica Bay Restoration Project that developed the Bay Restoration Plan (BRP) that serves as a blueprint for the restoration and enhancement of the Bay. The Regional Board plays a leading role in the implementation of the plan. Two of the proposed priorities of the plan are reduction of pollutants of concern at the sources (which include refineries) and implementation of mass emission approach.

Atmospheric Deposition on Santa Monica Bay

42. The Santa Monica Bay air deposition study was conducted with the overall support of the Santa Monica Bay Restoration Project (SMBRP) and the Los Angeles County Department of Public Works. Although the motivation of this study encompassed nutrient deposition and the measurements conducted by this study included some organic compounds, the primary emphasis was on deposition of trace metals because of the limitation on resources available for data collection and analysis.
43. Data collection and analysis were undertaken collaboratively by scientists from University of California at Los Angeles (UCLA) and the Southern California Coastal Water Research Project (SCCWRP). This study ran concurrently with a study of air toxics conducted by the South Coast Air Quality Management District (AQMD). During the study, scientists used air concentration data gathered from a site located on the UCLA campus, as well as data collected by AQMD from 24 locations throughout the airshed. This information was then entered into a computer model, which calculated and plotted distribution of deposition rates at different locations under varying weather conditions. Researchers also collected sea surface microlayer (the very thin, upper surface layer of the ocean) information from eight locations in the Bay and analyzed it for contaminant concentrations to study the spatial pattern of deposition. The observed distribution pattern, which indicates that the farther away from the shore, the less zinc fallout, agrees well the modeling results.

44. The major conclusions of this study in the final report (September 2001) are:
- A. Aerial deposition is a significant contributor to the overall pollutant load to the Bay for trace metals such as lead, chromium, and zinc.
 - B. On an annual basis, daily dry deposition of metals on Santa Monica Bay and its watershed far exceeds the amount deposited during rain events. Chronic daily dry deposition is also far greater than deposition resulted during Santa Ana conditions when large volume of polluted air are blown off from inland to the ocean.
 - C. Most of the mass of metals deposited by dry deposition on Santa Monica Bay and its watershed originates as relatively large (bigger than 10 microns) aerosols from area sources (off-road vehicles and small business) in the Santa Monica Bay watershed.

SPECIFIC ISSUES TO CHEVRON

Dilution Ratio

45. The relaxation of the dilution ratio from 38:1 is allowed under the antibacksliding and antidegradation, 40CFR 122.44(l), Section 402(o)(2), material change provision.
46. The new outfall constructed in 1994 constitutes a material and substantial alteration to the permitted facility discharge.
47. The numerical effluent limitations for toxic pollutants, per Table B of the Ocean Plan, were calculated using the State Board approved minimum dilution ratio of 80:1.

Temperature Limit

48. On July 24, 1989, the Board adopted Order No. 89-079 increasing the effluent temperature limitation from 100°F to 104°F. This provision was also carried over to Order No. 97-112. This Order is also consistent with Order No. 89-079.

Use of Recycled Water

49. The El Segundo Refinery currently uses recycled water from the West Basin Municipal Water District (WBMWD) for both irrigation and cooling towers. WBMWD applies tertiary treatment to the secondary treated effluent from the City of Los Angeles' Hyperion Treatment Plant, which would have otherwise been discharged to Santa Monica Bay (in the same general location where Chevron discharges). The refinery's daily consumption of recycled water for irrigation purposes is approximately 200,000 gallons per day (gpd). Additionally, the cooling towers use approximately 3,000,000 gpd of nitrified recycled water: The low and high pressure boiler feeds consume approximately 1,230,000 gpd and 2,570,000 gpd of recycled water, respectively.

50. Depending on the quality of the recycled water received from WBMWD, the refinery may incur significant additional contaminant loadings to its effluent treatment system. Due to evaporation in the cooling towers, contaminants from the recycled make-up water are concentrated in the cooling tower blowdown, which is normally discharged to the unsegregated drain system for treatment.
51. California Senate Bill (SB) 1196, (which amended Water Code section 13142.5) allows dischargers to adjust their discharge requirements to reflect the additional contaminants in recycled water not normally present in potable water.
52. No credits are granted because the discharge effluent limitations are based on higher dilution credit approved by the State Board.

RECEIVING WATER MONITORING PROGRAM

53. Since 1994, Chevron has been monitoring its receiving water at least annually at several stations around the extended outfall to examine the impact on the water quality, sediment, and benthic infaunal. The following findings summarize the monitoring results.

Water Quality and Water Chemistry

54. Chevron is required by the previous Order to perform quarterly water quality monitoring for temperature, conductivity, dissolved oxygen, and pH, and semi-annually for water chemistry monitoring at the receiving water stations. Monitoring from the past several years (2000 through 2002) showed that water quality parameters were normal and consistent with ambient levels in Santa Monica Bay, with the exception of slightly elevated pH readings at three receiving water stations in one of the 2001 sampling events. Some trace metals (arsenic, chromium, copper, lead, mercury, selenium, and zinc) were detected in either, or both, of the 2000 and 2002 monitoring events at several receiving water stations. No pollutants, including a complete set of USEPA priority pollutants, were detected in the 2001 monitoring event. To continue to evaluate potential impacts on water quality, the Discharger is required under this Order to continue its water quality monitoring at the existing frequency.

Sediment Chemistry and Toxicity

55. Sediment monitoring results showed that all stations including the station at the discharge outfall have not significantly changed from the baseline data collected prior to the outfall extension in 1994. A comparison with the reference station does not show any significant difference in concentration levels for all contaminants, although concentrations of several metals (arsenic, chromium, copper, lead, mercury, nickel, and zinc) have been detected at most of the sampling stations. The year 2002 annual toxicity testing result demonstrated that the bottom sediments were not toxic to the tested aquatic organisms.

Benthic Infaunal

56. During an enhanced study performed in 2001, analysis of the infaunal community parameters showed a stabilized infaunal community in which there were regular seasonal fluctuations for the past three years. The community has stabilized since the 1998 El Niño, when lowest infaunal values of abundance, richness, diversity and biomass were observed. The study also observed intermittent increase in the abundance of pollution tolerant organisms "*capitata*" at the stations where biosolids were present. It was also observed that "*capitata*" has the effect of reducing diversity (H') at the stations in which it is found. This leads to a general pattern of reduced diversity and increased abundance associated with the station at the outfall.

Biosolids

57. During the annual mechanical inspection of the outfall line in September 1995, divers observed a fluffy dark "mat" at the base of the diffuser and a similar substance was found attached to the interior of the pipe. The "mat" was determined to consist of sulfur fixing bacteria and was referred to be as "biosolid" by the Chevron Research and Technology Company in Richmond, California. Subsequent inspection showed the microbial mat is abundantly growing on the inside diameter of the outfall line extension. Chevron is required by the previous permit to monitor the accumulation of biosolids in the vicinity of the outfall on a quarterly basis through visual observation to ensure that the biosolids do not significantly expand or change from the current condition. During the inspections conducted from 1997 through 2001, the dense mat was absent from the outfall while a thin microbial mat was observed occasionally. Biosolids which were emitted from the diffuser at a low rate were present in the study area during all surveys. The biosolid continues to penetrate the sediment in the vicinity of the outfall, a process of bioturbation in which the biosolid settles in the sediment and is probably due to the movement of infaunal organisms.

Tributyltin (TBT) Study

58. The previous permit required Chevron to conduct a study to determine the source/s of TBT and implement measures to reduce TBT in the effluent if necessary, to meet the limit and reduce its method detection limit from 20 µg/L to below its effluent limit of 55 ng/L. Effluent monitoring data from 1999 to 2002 showed that TBT was non-detect with a Practical Quantified Level (PQL) of 40.8 ng/L.
59. This Order requires Chevron to continue the above comprehensive monitoring program to evaluate any potential impacts of its discharge on the receiving water, benthic infauna, sediment toxicity, and biosolids.
60. The requirements contained in this Order were established by considering, and are consistent with, the aforementioned water quality control policies, plans, and regulations and, if they are met, will protect and maintain the beneficial uses of the receiving waters.

CEQA AND NOTIFICATIONS

61. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to submit their written views and recommendations.
62. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.
63. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect 30 days after adoption of the Order and in accordance with federal law, provided the Regional Administrator, USEPA, has no objections.
64. Pursuant to California Water Code section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, Office of Chief Counsel, ATTN: Elizabeth Miller Jennings, Senior Staff Counsel, 1001 I Street, 22nd Floor, Sacramento, California, 95814, within 30 days of adoption of this Order.
65. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) in accordance with the California Water Code, section 13389.

IT IS HEREBY ORDERED that Chevron Products Company, El Segundo Refinery, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted there under, shall comply with the following:

I. DISCHARGE REQUIREMENTS

A. Discharge Prohibitions

1. Wastes discharged shall be limited only to those described in the Findings, as proposed.
2. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Santa Monica Bay, or other waters of the State and/or United States, are prohibited.

B. Effluent Limitations and Performance Goals

The discharge of an effluent with constituents in excess of the following effluent limitations is prohibited.

The performance goals are also given below (Section I.B.2.a). The listed performance goals are not enforceable effluent limitations or standards. However, the Discharger shall maintain, if not improve, its treatment efficiency. Any exceedance of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in two successive monitoring periods, the Discharger shall submit a written report to the Regional Board on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with a timetable for implementation, if necessary.

Exceedances of the following mass emission rates attributed to use of recycled water shall not be considered as violations. Chevron shall demonstrate to the satisfaction of the Executive Officer that the exceedances are caused by use of recycled water.

1. Effluent Limitations for Conventional and Nonconventional Pollutants:

Constituents	Units	Effluent Limitations ^[5]	
		Monthly Average ^[4]	Daily Maximum ^[2]
BOD ₅ 20°C ^[1]	mg/L	30	60
	lbs/day	1,976	3,952
Suspended solids	mg/L	30	60
	lbs/day	1,976	3,952
COD	mg/L	264	528
	lbs/day	17,597	35,194
Oil and grease	mg/L	12	24
	lbs/day	733	1,466
Sulfide	µg/L	195	390
	lbs/day	13	26

2. Effluent Limitations for Toxic Constituents:

a. Effluent Limitations for the Protection of Marine Aquatic Life

Constituents	Units	Effluent Limitations ^[5]		Performance Goal ^[6]
		6-Month Median ^{[3][4]}	Daily Maximum ^[2]	6-Month Median
Arsenic	µg/L	408	2352	198
	Lbs/day	23.8	137.3	
Cadmium	µg/L	81	324	39
	Lbs/day	4.7	18.9	
Chromium (hexavalent)	µg/L	162	648	78
	Lbs/day	9.5	37.8	
Copper	µg/L	83	812	41
	Lbs/day	4.8	47.4	

Constituents	Units	Effluent Limitations ^[5]		Performance Goal ^[6]
		6-Month Median ^{[3][4]}	Daily Maximum ^[2]	6-Month Median
Lead	µg/L	162	648	78
	lbs/day	9.5	37.8	
Mercury	µg/L	3.2	12.9	1.37
	lbs/day	0.187	0.75	--
Nickel	µg/L	405	1620	195
	lbs/day	23.6	94.6	
Silver	µg/L	44	214	21.2
	lbs/day	2.6	12.5	
Cyanide	µg/L	81	324	39
	lbs/day	4.7	18.9	
Total Chlorine Residual	µg/L	162	648	78
	lbs/day	9.5	37.8	
Ammonia as N	mg/l	48.6	194.4	23.4
	lbs/day	2837.3	11349.1	
Chronic Toxicity ^[7]	TUc		81.0	
Chlorinated Phenolics ^[8]	µg/L	81	324	39
	lbs/day	4.7	18.9	
Endosulfan	µg/L	0.729	1.458	0.357
	lbs/day	0.043	0.085	
Endrin	µg/L	0.162	0.324	0.078
	lbs/day	0.0095	0.0189	
HCH ^[9]	µg/L	0.320	0.640	0.156
	lbs/day	0.0187	0.037	--
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the CFR. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			

b. Effluent Limitations for the Protection of Human Health – Non-Carcinogens

Parameter	Units	Monthly Average	
		Effluent Limitations	Performance Goals ^[6]
Thallium	µg/L	162	78
	lbs/day	9.5	

Parameter	Units	Monthly Average	
		Effluent Limitations	Performance Goals ^[6]
Tributyltin	µg/L	0.11	0.05
	lbs/day	0.006	

c. Effluent Limitations for the Protection of Human Health - Carcinogens

Pollutants	Unit	Monthly Average	
		Effluent Limitations	Performance Goals ^[6]
acrylonitrile	µg/L	8.1	3.9
	lbs/day	0.47	
aldrin	µg/L	0.00178	0.0009
	lbs/day	0.00010	
benzene	µg/L	478	230
	lbs/day	27.9	
benzidine	µg/L	0.0056	0.003
	lbs/day	0.00033	
beryllium	µg/L	2.7	1.3
	lbs/day	0.156	
bis (2-chloroethyl) ether	µg/L	3.6	1.75
	lbs/day	0.21	
carbon tetrachloride	µg/L	73	35.1
	lbs/day	4.3	
Chlordane ^[10]	µg/L	0.00186	0.0009
	lbs/day	0.000109	
DDT ^[11]	µg/L	0.0138	0.006
	lbs/day	0.00080	
3,3'-dichlorobenzidine	µg/L	0.66	0.32
	lbs/day	0.038	
dieldrin	µg/L	0.0032	0.0015
	lbs/day	0.000189	
1,2-diphenylhydrazine	µg/L	13.0	6.2
	lbs/day	0.76	
heptachlor	µg/L	0.0041	0.002
	lbs/day	0.00024	
heptachlor epoxide	µg/L	0.00162	0.00078
	lbs/day	0.000095	
hexachlorobenzene	µg/L	0.0170	0.0082
	lbs/day	0.00099	
N-nitrosodi-N-propylamine	µg/L	30.8	14.8
	lbs/day		

Pollutants	Unit	Monthly Average	
		Effluent Limitations	Performance Goals ^[6]
PAHs ^[12]	µg/L	0.71	0.34
	lbs/day	0.042	
PCBs ^[13]	µg/L	0.00154	0.00074
	lbs/day	0.000090	
TCDD equivalents ^[14]	µg/L	0.00000032	0.00000015
	lbs/day	0.0000000184	
toxaphene	µg/L	0.0170	0.0082
	lbs/day	0.00099	
2,4,6-trichlorophenol	µg/L	23	11.3
	lbs/day	1.37	

Footnotes for Tables:

- [1]. Analysis using Standard Method 5210 shall be reported as CBOD₅. When the nitrification inhibitor is not used, the monitoring report shall so state and the results shall be reported as BOD₅.
- [2]. The daily maximum effluent concentration limit shall apply to flow-weighted 24-hour composite samples.
- [3]. The 6-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.
- [4]. If only one sample is collected during the time period associated with the water quality objective (e.g. monthly average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.
- [5]. The mass emission rates shall be calculated using the following formula:
 Mass emission rate (lbs/day) = 0.00834 x C x Q
 where: C = the effluent concentration (µg/L), Q = average flow rate of 7.0 mgd of treated wastewater.
 The mass emission values shown in the Table are for 7 mgd. The mass limits will be based on the actual flow discharged.
- [6]. The performance goals are based upon the Ocean Plan Water Quality Objectives for 6-month median or 30-day average values with a dilution credit of 38 and are specified only as an indication of the treatment efficiency of the refinery. They are not considered as limitations or standards for the regulation of the facility. Chevron shall make best efforts to maintain, if not improve, the effluent quality at the level of these performance goals. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted.
- [7]. Expressed as Chronic Toxicity Units (TUC)

$$TUc = 100 / NOEC$$

where : NOEC (No Observed Effect Concentration) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II of the California Ocean Plan effective December 3, 2001, pages 32-34.

NOEC shall be determined based on toxicity tests having chronic endpoints.

- [8]. Sum of 2-chlorophenol, 4-chloro-3-methylphenol, 2,4-dichlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, and pentachlorophenol.
- [9]. HCH means the sum of the alpha, beta, gamma(lindane), and delta isomers of hexachlorocyclohexane.
- [10]. Sum of chlordane-alpha, chlordane-gamma, chlordan-alpha, chlordan-gamma, nonachlor-alpha, nonachlor-gamma and oxychlordane.
- [11]. Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
- [12]. Sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
- [13]. Sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
- [14]. Sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDF	0.001

3. Bacteria Compliance

Chevron shall comply with the bacteriological objectives as set forth in Chapter 3 of the Basin Plan, as amended by the Regional Board on October 25, 2001. The objectives are based on four bacterial indicators and include both geometric mean limits and single sample limits.

The Chevron discharge shall not exceed these objectives:

- a. Rolling 30-day Geometric Mean Limits
 - i. Total coliform density shall not exceed 1,000/100 ml.
 - ii. Fecal coliform density shall not exceed 200/100 ml.
 - iii. Enterococcus density shall not exceed 35/100 ml.
 - b. Single Sample Limits
 - i. Total coliform density shall not exceed 10,000/100 ml.
 - ii. Fecal coliform density shall not exceed 400/100 ml.
 - iii. Enterococcus density shall not exceed 104/100 ml.
 - iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
4. The pH of wastes discharged shall be between 6.0 to 9.0.
 5. The temperature of wastes discharged shall not exceed that necessary to assure protection of the beneficial uses of the receiving waters; but in no case shall exceed 104°F in the effluent.

C. Receiving Water Limitations

1. Floating particulates and oil and grease shall not be visible as a result of wastes discharged.
2. Wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; nor cause aesthetically undesirable discoloration of the ocean surface.
3. The transmittance of natural light shall not be significantly reduced at any point outside the initial dilution zone as a result of wastes discharged.
4. The rate of deposition and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded as a result of wastes discharged.
5. The wastes discharged shall not depress the dissolved oxygen concentration outside the zone of initial dilution at any time more than 10 percent from that which occurs naturally, excluding effects of naturally induced upwelling.
6. The wastes discharged shall not change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally outside the zone of initial dilution.

7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions as a result of wastes discharged.
8. The concentration in marine sediments of substances listed in Effluent Limitations B.1. above shall not be increased to levels in marine sediments which would degrade indigenous biota as a result of wastes discharged.
9. The concentration of organic materials in marine sediments shall not be increased above that which would degrade marine life as a result of wastes discharged.
10. Wastes discharged shall not cause objectionable aquatic growths or degrade indigenous biota.
11. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded as a result of wastes discharged.
12. The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health as a result of wastes discharged.
13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered as a result of wastes discharged.
14. The wastes discharged shall not cause objectionable odors to emanate from the receiving waters.
15. Wastes discharged shall not cause receiving waters to contain any substance in concentrations toxic to human, animal, plant, or fish life.
16. No physical evidence of wastes discharged shall be visible at any time on beaches, shores, rocks, or structures.
17. The salinity of the receiving waters shall not be changed by the wastes discharged to an extent such as to be harmful to marine biota.
18. The wastes discharged shall not contain individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses.

II. OTHER REQUIREMENTS

A. Preparation of Initial Investigation TRE Workplan

1. The Discharger shall submit a detailed copy of the initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance, or most current versions. At minimum, the TRE work plan must contain the provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:
 - a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;
 - b. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,
 - c. If a toxicity identification evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
2. If the effluent exceeds an acute objective or chronic toxicity limitation for three consecutive toxicity tests, the TRE shall be conducted by the Discharger. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is(are) identified, the Discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

B. Best Management Practices and Spill Contingency Plans

1. The Discharger shall develop, update, and implement, within 90 days of the effective date of this Order, a Best Management Practices Plan (BMPP). If necessary, the plan shall be updated to address any changes in operation and/or management of the facility. Updated plans shall be submitted to the Regional Board within 30 days of revision.
2. A BMPP that entails site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the United States. The BMPP shall be consistent with the general guidance contained in the EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed to

determine the potential for hazardous or toxic waste/material discharge to surface waters.

3. The plan shall cover all areas of the facility and shall include an updated drainage map for the facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of the storm water. The plans shall be reviewed annually and at the same time.
4. The Discharger shall submit within 180 days of the effective date of this Order an updated Spill Contingency Plan. The Contingency Plan shall be site-specific and shall cover all areas of the facility. The Contingency Plan shall be reviewed at the same time as the BMPP. Updated information shall be submitted within 30 days of revision.
5. The Discharger shall implement or require the implementation of the most effective combination of BMPs for storm water pollution control. When implemented, BMPs are intended to result in the reduction of pollutants in storm water to the maximum extent practicable.
6. Oil or oily materials, chemicals, refuse, or other materials that may cause pollution in storm water and/or urban runoff shall not be stored or deposited in areas where they may be picked up by rainfall/urban runoff and discharged to surface waters. Any spill of such materials shall be contained, removed, and cleaned immediately.

C. Spill Reporting Requirements

1. The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated wastewater from its collection system or treatment plant. This record shall be made available to the Regional Water Board and USEPA upon request. On the first day of February, May, August and November (one month after the end of the fiscal quarter) of each year, the Discharger shall submit to the Regional Water Board and USEPA a report listing all spills, overflows or bypasses occurring during the previous quarter. The reports shall provide:
 - the date and time of each spill, overflow or bypass;
 - the location of each spill, overflow or bypass;
 - the estimated volume of each spill, overflow or bypass including gross volume, amount recovered and amount not recovered;
 - the cause of each spill, overflow or bypass;

- whether each spill, overflow or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;
 - mitigation measures implemented; and
 - corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.
 - beneficial uses impacted
2. For certain spills, overflows and bypasses of untreated or partially treated wastewater caused by a failure in the collection or treatment system, the Discharger shall make reports and conduct monitoring as required below:
- a. For any spills or overflows of any volume discharged where they are, or will probably be, discharged to waters of the State, the Discharger shall immediately notify the local health agency in accordance with California Health and Safety Code section 5411.5, and if feasible the appropriate Regional Water Board staff within 2 hours of the spill reaching receiving water.
 - b. For spills, overflows or bypasses of any volume that flowed to receiving waters or entered a shallow ground water aquifer or has public exposure, the Discharger shall report such spills to the Regional Water Board, by telephone or electronically as soon as possible but not later than 24 hours of knowledge of the incident. The following information shall be included in the report: location; date and time of spill; volume and nature of the spill; cause(s) of the spill; mitigation measures implemented; and corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.
 - c. For any spills or overflows of 1000 gallons or more discharged where they are, or probably will be discharged to waters of the State, the Discharger shall immediately notify the State Office of Emergency Services pursuant to Water Code section 13271.
 - d. For spills, overflows or bypasses of any volume that reach receiving waters, the Discharger shall obtain and analyze sufficient grab samples for total and fecal coliforms or E. coli, and enterococcus, and relevant pollutants of concern, upstream and downstream, or upcoast and/or downcoast, of the point of entry of the spill (if feasible, accessible and safe) in order to define the geographical extent of impact of the spill. The first set of samples shall be collected as soon as possible if feasible, accessible and safe. This monitoring shall be at least on a daily basis from time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or cessation of monitoring is

authorized by the County Department of Health Services.

- e. For spills, overflows or bypasses of any volume that reach receiving waters or have the potential to enter a shallow ground water aquifer, and all spills, overflows and bypasses of 1,000 gallons or more, the Discharger shall analyze a grab sample of the spill or overflow for total and fecal coliforms or *E. coli*, and enterococcus, and relevant pollutants of concern depending on the area and nature of spills or overflows if feasible, accessible and safe.
- f. The Regional Water Board notification shall be followed by a written preliminary report five working days after verbal notification of the incident. Within 30 days after submitting preliminary report, the Discharger shall submit the final written report to this Regional Water Board. The written report shall document the information required in subparagraphs (b) and (d) above, monitoring results and any other information required in Provision V.E.1 of the Standard Provisions (Attachment D). An extension for submittal of the final written report can be granted by the Executive Officer for just cause. Submission of information required pursuant to California Water Code Section 13193 or pursuant to a Statewide General Waste Discharge Requirements for Wastewater Collection System Agencies shall satisfy this requirement.

D. Compliance Determination

1. If the concentration of a single pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement II.E. of *M&RP* No. CI-1603), then the Discharger is out of compliance.
2. If the sum of concentration of several pollutants is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, constituents reported as "Not Detected" (ND) or "Detected, but Not Quantified" (DNQ) are considered to have concentrations equal to zero, provided that the applicable ML is used.
3. In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and
 - a. If the number of measurements (n) is odd, then the median will be calculated as $= X_{(n+1)/2}$, or
 - b. If the number of measurements (n) is even, then the median will be calculated as $= [X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the $n/2$ and $n/2+1$ data points.

4. In calculating mass emission rates from the monthly average concentrations, the Discharger shall use one half of the method detection limit for ND and the estimated concentration for DNQ for the calculation of the monthly average concentration. If all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.
5. In the determination of compliance with the monthly average limitations, the following provisions shall apply to all constituents:
 - a. If the analytical result of a single sample, monitored monthly or at a lesser frequency, does not exceed the monthly average limit for that constituent, the Discharger will have demonstrated compliance with the monthly average limit for that month.
 - b. If the analytical result of a single sample obtained during the month exceeds the monthly average limit for any constituent, the Discharger shall collect five additional samples at approximately equal intervals during the month and on different days of the week. All six analytical results shall be reported in the monitoring report for that month, or 45 days after the sample was obtained, whichever is later.
 - c. If the numerical average of the analytical result of these six samples does not exceed the monthly average limit for that constituent, compliance with the monthly average limit has been demonstrated for that month. Otherwise, the monthly average limit has been violated.
 - d. If the result of one sample exceeds the monthly average, then the Discharger is in violation of the monthly average limit.
 - e. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to a minimum of six times per month and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated.
 - f. Any single reported value which exceeds a daily or instantaneous maximum effluent concentration or mass discharge limitation of the waste discharge requirements (including the provisions of Sections I.B.3., I.B.4., and I.B.5.) shall be considered a violation of said limit.
6. Pursuant to the requirements of 40 CFR 122.42(a), the Discharger must notify the Board as soon as it knows, or has reason to believe:
 - a. that it has begun or expected to begin, to use or manufacture a toxic

pollutant not reported in the permit application, or

- b. a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limitations in 40 CFR 122.42(a).
7. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.
 8. The Discharger shall comply with the waste load allocations that will be developed from the TMDL process for the 303 (d)-listed pollutants.
 9. The Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit.
 10. The Discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
 11. The Discharger shall notify the Executive Officer in writing no later than six months prior to planned discharge of any chemical, or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
 - a. Name and general composition of the chemical,
 - b. Frequency of use,
 - c. Quantities to be used,
 - d. Proposed discharge concentrations, and
 - e. USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to the Executive Officer's approval.

12. The Regional Board and USEPA shall be notified immediately by telephone, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharged; written confirmation shall follow as soon as possible but not later than five working days after occurrence.
13. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated waste does not occur.

14. The Discharger shall protect the facility from inundation which could occur as a result of a flood having a predicted frequency of once in 100 years.

III. PROVISIONS

- A. This Order includes the attached *Standard Provisions and General Monitoring and Reporting Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated herein and the attached Standard Provisions, those provisions stated herein shall prevail.
- B. This Order includes the attached Monitoring and Reporting Program. If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the former shall prevail.
- C. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
- D. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Board to local agencies.
- E. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.
- F. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 423 of the Federal Clean Water Act and amendments thereto.

IV. REOPENERS

- A. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.
- B. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new minimum levels (MLs).

- C. This Order may be reopened and modified, to revise effluent limitations as a result of future Basin Plan Amendments, or the adoption of a TMDL for the Santa Monica Bay Watershed Management Area.
- D. This Order may be reopened to modify final effluent limits, if at the conclusion of necessary studies conducted by the Discharger, the Regional Board determines that additional dilution studies, attenuation factors, or metal translators are warranted.
- E. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity.

V. EXPIRATION DATE

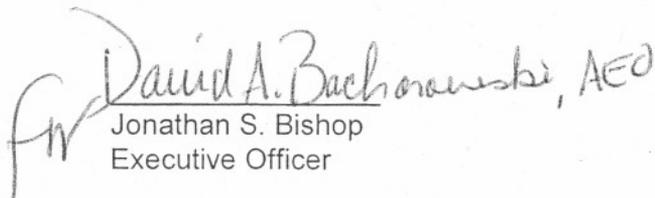
This Order expires on November 10, 2011.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

VI. RESCISSION

Order No. 97-112, adopted by this Regional Board on August 25, 1997, is hereby rescinded except for enforcement purposes.

I, Jonathan S. Bishop, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 14, 2006.

 *Jonathan S. Bishop, AEO*
Jonathan S. Bishop
Executive Officer