CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2008-0007
NPDES NO. CA0064289

WASTE DISCHARGE REQUIREMENTS FOR EQUILON ENTERPRISES, LLC DBA SHELL OIL PRODUCTS US, SHELL SERVICE STATION #204-1944-0100 DISCHARGE TO BALLONA CREEK

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

Table 1. Discharger Information

Discharger	**Equilon Enterprises, LLC dba Shell Oil Products US**
Name of Facility	**Shell Service Station #204-1944-0100, Culver City**
Facility Address	**3801 Sepulveda Boulevard**
	Culver City, CA 90230
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by Equilon Enterprises, LLC dba Shell Oil Products US from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated groundwater	34°, 00', 47" N	118°, 24',58" W	Ballona Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**March 6, 2008**
This Order shall become effective on:	**March 6, 2008**
This Order shall expire on:	**February 10, 2013**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

December 14, 2007
Revised: February 26, 2008

I, Tracy J. Egoscue, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on March 6, 2008.

Tracy J. Egoscue, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	**Equilon Enterprises, LLC DBA Shell Oil Products US**
Name of Facility	**Shell Service Station #204-1944-0100, Culver City**
Facility Address	**3801 Sepulveda Boulevard**
	Culver City, CA 90230
	Los Angeles County
Facility Contact, Title, and Phone	**Joseph Lentini, Staff Project Manager, (310) 376-0649**
Mailing Address	**20945 S. Wilmington Avenue Carson, CA 90810**
Type of Facility	**Service Station**
Facility Design Flow	**0.576 million gallons per day**

II. FINDINGS

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

A. Background. Equilon Enterprises, LLC DBA Shell Oil Products US (hereinafter Discharger) is currently discharging pursuant to Order No. R4-2004-0144 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0064289. The Discharger submitted a Report of Waste Discharge, dated October 19, 2007, and applied for an NPDES permit to discharge up to 576,000 gallons per day of treated groundwater from Shell Service Station #204-1944-0100, hereinafter Facility. The application was deemed complete on November 2, 2007.

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

B. Facility Description. The Discharger operates Shell Service Station #204-1944-0100. The treatment system consists of soil vapor extraction and groundwater extraction and treatment prior to discharge. Wastewater is discharged from Discharge Point No. 001 (see table on cover page) to Ballona Creek, a water of the United States. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[1], require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

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

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at 2-4 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan specifically identifies beneficial uses for Ballona Creek. These beneficial uses are non-contact water recreation; wildlife habitat; municipal and domestic supply; water contact recreation (prohibited by LA County DPW); and freshwater habitat. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Ballona Creek are as follows:

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

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Ballona Creek	Existing: Non-contact water recreation (REC-2); wildlife habitat (WILD Potential: Municipal and domestic water supply (MUN); water contact recreation (WARM); freshwater habitat (FRSH).

Requirements of this Order implement the Basin Plan.

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

I. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries, and wetlands) with the Beneficial Use designations for protection of "Aquatic Life". The ammonia Basin Plan amendment was approved by the Office of Administrative Law (OAL) on September 14, 2004, and by the USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

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

waste load allocation (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the water body.

The U.S. EPA approved the State's 303(d) list of impaired water bodies on June 28, 2007. The 2006 State Board's California 303(d) List classifies Ballona Creek as impaired. The pollutants of concern, detected in the water column, in the sediment, and in the fish tissue, include cadmium (sediment), ChemA (tissue) [refers to the sum of aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene], chlordane (tissue), dissolved copper, DDT (tissue), dieldrin (tissue) enteric viruses, high coliform count, dissolved lead, PCBs (tissue), pH, sediment toxicity, total selenium, silver (sediment), toxicity, and dissolved zinc.

The Trash TMDL for the Ballona Creek and Wetland was adopted by the Regional Water Board on September 19, 2001. It designates Waste Load Allocations for permittees and co-permittees of the Los Angeles County Municipal Stormwater Permit that are located within (entirely or partially) the Ballona Creek Watershed. Waste Load allocations are based on a phased reduction from the estimated current discharge over a 10-year period until the final Waste Load Allocation (currently set at zero) is met. Because the discharge from this facility is treated groundwater, it is not likely to contribute trash to the Ballona Creek Watershed. However, because the facility discharges to the Los Angeles County municipal separate storm sewer system, Los Angeles County may invoke requirements on the facility in order to meet the waste load allocation.

The City of Los Angeles and the County of Los Angeles both filed petitions and complaints in Los Angeles Superior Court challenging the current Ballona Creek Trash TMDL. Subsequent negotiations led to a settlement agreement, which became effective on September 23, 2003. The Basin Plan amendment incorporates the negotiated language into the Ballona Creek and Wetland TMDL. On March 4, 2004, the Regional Water Board adopted Resolution No. 2004-023 revising the TMDL to incorporate the negotiated language. The TMDL was then approved by the State Water Resources Control Board, Office of Administrative Law, and US EPA.

The Toxic Pollutants TMDL for Ballona Creek Estuary was adopted by the Regional Water Board on July 7, 2005. The Regional Water Board established the TMDL to protect the aquatic life and beneficial uses of Ballona Creek Estuary and to achieve sediment quality to protect these beneficial uses. Ballona Creek and Ballona Creek Estuary (Estuary) is on the Clean Water Act Section 303(d) list of impaired water bodies for cadmium, copper, lead, silver, zinc, chlordane, DDT, PCBs, and PAHs in sediments.

The TMDL is based on pollutant loading to the sediments of Ballona Creek Estuary. The loading capacity is based on an estimate of the annual pollutants loads that can be delivered to the sediments and still meets the sediment targets. The margin of safety is provided through the use of the Effects Range-Low (ERLs). A grouped waste load allocation has been developed for the storm water permittees (MS4, Caltrans, general industrial and construction storm water permittees). Load allocations have been developed for open space and direct atmospheric deposition. Concentration-based waste

load allocations apply to all other non-storm water NPDES permittees. It is anticipated that implementation will be based on BMPs which address pollution prevention and/or a sediment monitoring program.

The Bacteria TMDL for Ballona Creek, Ballona Estuary, and Sepulveda Channel was adopted by the Regional Water Board on April 27, 2007. Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use designated for Ballona Estuary and Sepulveda Channel, limited water contact recreation (LREC) designated for Ballona Creek Reach 2, and non-contact recreation (REC-2) beneficial uses of Ballona Creek Reach 1.

The goal of this TMDL is to determine and set forth measures needed to prevent impairment of water quality due to elevated bacteria densities in Ballona Creek, Ballona Estuary, and their tributaries. The target bacteria indicators are: fecal coliform, total coliform, E. coli, and enterococcus. The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine and fresh water to protect the contact and non-contact recreation uses. These targets are the most appropriate indicators of public health risk in recreational waters.

The Metals TMDL for Ballona Creek was adopted by the Regional Water Board on July 5, 2007 by Resolution No. 2005-007. The TMDL was subsequently approved by the State Water Resources Board, Office of Administrative Law, and US EPA by January 2006. The metals subject to this TMDL are toxic pollutants, and the existing water quality objectives for the metals reflect national policy that the discharge of toxic pollutants in toxic amounts be prohibited. When one of the metals subject to this TMDL is present at levels exceeding the existing numeric objectives, then the receiving water is toxic.

On February 16, 2006, the Cities of Bellflower, Carson, Cerritos, Downey, Paramount, Santa Fe Springs, Signal Hill, and Whittier (Cities) filed a petition for a writ of mandate challenging many aspects of the Los Angeles Metals TMDLs and the Ballona Creek Metal TMDLs. On May 24, 2007, the Los Angeles County Superior Court adopted the third of three rulings with respect to the writ petition. Collectively, all challenges to the TMDLs were rejected. The Court ruled that the State and Regional Water Boards (Water Boards) should have adopted and circulated an alternative analysis that analyzed alternatives to the project. The Court issued its writ of mandate, directing the Water Boards to adopt an alternative analysis that analyzed feasible alternatives and reconsider the TMDLs accordingly.

Considering the alternative analysis, the Regional Water Board finds that the TMDL as originally proposed and adopted is appropriate. The Regional Water Board further finds that nothing in the alternative analysis, nor any of the evidence generated, presents a basis for the Regional Water Board to conclude that it would have acted differently when it adopted the TMDLs had the alternative analysis been prepared and circulated at that time. Thus, the revised Metals TMDL for Ballona Creek was adopted by the Regional Water Board September 6, 2007, however it is still pending approval from the State Water Resources Control Board, Office of Administrative Law, and US EPA.

K. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

L. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

M. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010), whichever comes first, to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Los Angeles Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedules and interim effluent limitations are included in the Fact Sheet.

On July 26, 2007, the Discharger submitted a request to extend the original time schedule period of time in which they can discharge groundwater with a concentration greater than 4 µg/L of selenium. The extended period of time would allow the Discharger to continue to develop the selenium removal technology in order for them to meet the final effluent limits specified in Order No. R4-2004-0144.

The selenium treatment technology proposed by the Discharger is comprised of a series of tasks scheduled to begin June 2008. During this extended period of time, the selenium discharge will be reduced in a series of steps that correspond with milestones which they have created. Upon completion of the final milestone, the Discharger will meet the 4 µg/L final limitation for selenium.

On September 2, 2004, the Regional Water Board adopted Order No. R4-2004-0144, which includes a final effluent limitation of 4 µg/L of selenium in treated groundwater. This Order will expire on August 10, 2009. Since the Discharger cannot immediately comply with the final effluent limitation, an interim limitation of 20 µg/L was included in the Order. The interim effluent limitation is scheduled to expire March 2, 2008.

The Regional Water Board, through Order No. R4-2004-0144, requires the Discharger to develop and implement a plan of how the levels of selenium in the discharge will be reduced to achieve the compliance limit of 4 µg/L. On February 28, 2005, the Discharger submitted a report that identified three technologies that would potentially be incorporated in the treatment of the discharge. The selenium reduction methods evaluated were: ferrous iron reduction, elemental iron reduction, and fixed-film anaerobic biological selenium reduction. The anaerobic biological reduction method was selected as the most practical for their system.

At the conclusion of the pilot program in 2006, there were several areas of uncertainty identified including:

- Optimum bioreactor design,
- The maximum practical liquid loading rate,
- The optimum flow rate, volume, and frequency of backwashing,
- Best practices management of backwash sludge, and
- The ability of the system to recover form a shutdown condition.

Additional time is required to address these issues, implement the findings and scale up the treatment system. The Discharger has requested the interim limit be extended until May 1, 2010. However, according to Section 2.1 of the SIP for Compliance Schedule, the schedule of compliance for point source discharges in an NPDES permit, shall not exceed five years from the date of permit issuance, reissuance, or modification to complete actions necessary to comply with CTR-based effluent limits. The maximum compliance schedule under the SIP is five years, or ten years from the effective date of the SIP (May 17, 2010), whichever comes first. In order for this permit to comply with the SIP, the Discharger has been given until October 21, 2009, to comply with the selenium limit. The most recent RPA resulted in a final limit of 4.5 µg/L for selenium. This is due to the new data set provided by the Discharger and the coefficient of variation used to calculate the final limit. Therefore, this permit includes the 4.5 µg/L final limit for selenium.

N. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

O. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on total suspended solids, total settleable solids, turbidity, and oil and grease. Restrictions on these pollutants listed are discussed in Section IV.B. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

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

P. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

N. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

Q. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits,

receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

R. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

S. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

T. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections V.B, and VI.C. of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

U. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

V. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that Order No. R4-2004-0144 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The daily maximum flow of treated groundwater shall not exceed 576,000 gpd.

B. The discharge of wastes from accidental spills or other sources is prohibited.

C. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Ballona Creek, or waters of the United States, are prohibited.

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

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

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

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP:

Table F-6. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Flow	gpd	--	576,000
Temperature	°F	--	86
pH[1]	S.U.	--	6.5-8.5
Oil and grease	mg/L	10	15
	lbs/day[2]	48	72
Total settleable solids	ml/L	0.1	0.3
Total suspended solids	mg/L	50	75
	lbs/day	240	721
Turbidity	NTU	50	75
Lead[3]	µg/L	9.8	31
	lbs/day	0.05	0.2
Benzene	µg/L	--	1
	lbs/day	--	0.005
Selenium[3]	µg/L	4.5	6.8
	lbs/day	0.02	0.03
1,1-Dichloroethane	µg/L	--	5
	lbs/day	--	0.02
1,1-Dichloroethylene	µg/L	3.2	6
	lbs/day	0.02	0.03
Ethylbenzene	µg/L	--	700
	lbs/day	--	3.4
Ethylene dibromide	µg/L	--	0.05
	lbs/day	--	0.0002
Methyl tertiary butyl ether	µg/L	--	13
	lbs/day	--	0.06
Naphthalene	µg/L	--	17
	lbs/day	--	0.1
Tertiary butyl alcohol	µg/L	--	12
	lbs/day	--	0.06
Tetrachloroethylene	µg/L	--	5
	lbs/day	--	0.02

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Toluene	µg/L	--	150
	lbs/day	--	0.72
Total petroleum hydrocarbons	µg/L	--	100
	lbs/day	--	0.48
1,1,1-Trichloroethane	µg/L	--	200
	lbs/day	--	1
Trichloroethylene	µg/L	--	5
	lbs/day	--	0.02
Xylene	µg/L	--	1750
	lbs/day	--	8.4
Hydrogen peroxide	mg/L	--	5
	lbs/day	--	24
Acute toxicity	% survival	--[4]	--
Chronic toxicity	TU_c	--[5]	--

[1] The pH must remain within this range at all times.
[2] Mass-based effluent limitations for pollutants are based on a maximum discharge flow rate of 576,000 gpd (0.576 mgd)
[3] Effluent limitations for lead and selenium are expressed as total recoverable.
[4] For any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival.
[5] The monthly median for chronic toxicity of 100% effluent shall not exceed 1 TU_c in a critical life stage test.

2. Interim Effluent Limitations

a. During the period beginning March 6, 2008 and ending on October 21, 2009, the Discharger shall maintain compliance with the following limitations at Discharge Point No. 001, with compliance measured at Monitoring Location 001 as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations
		Maximum Daily
Selenium	µg/L	20
	lbs/day	0.1[1]

[1] The mass-based effluent limitations are based on a flow rate of 576,000 gpd.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

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

1. Floating, suspended, or deposited macroscopic particulate matter or foam.

2. Alteration of temperature, turbidity, or apparent color beyond present natural background levels.

3. Visible, floating, suspended or deposited oil or other products of petroleum origin.

4. Bottom deposits or aquatic growths.

5. Toxic or other deleterious substances present in concentrations or quantities that cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

6. Create nuisance or adversely affect beneficial uses of the receiving water.

7. Surface water temperature rise greater than 5°F above the natural temperature of the receiving waters at any time or place.

8. Limits to be exceeded in the receiving waters at any place within the water body of the receiving waters.

9. pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

10. Dissolved oxygen shall not be less than 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

11. Dissolved sulfide shall not be greater than 0.1 mg/L.

12. The ammonia limits in the 1994 Basin Plan were revised by Regional Water Board Resolution No. 2002-011, adopted on April 28, 2002, to be consistent with the 1999 U.S. EPA update on ammonia criteria. Regional Water Board Resolution No. 2002-011 was approved by State Board, OAL and U.S.EPA on April 30, 2003. June 5, 2003, and June 19, 2003, respectively and is now in effect. Total ammonia (as N) shall not exceed concentrations specified in the Regional Water Board Resolution 2002-011.

13. Cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Board. If more stringent applicable

water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

14. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

15. Chemical substances in amounts that adversely affect any designated beneficial use.

16. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

17. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses.

18. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.

19. Substances that result in increase of BOD_5@20°C that adversely affect beneficial uses.

20. Alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.

21. Degrade surface water communities and population including vertebrate, invertebrate, and plant species.

22. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload their design capacity.

23. Cause problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

B. Groundwater Limitations

1. The Discharge shall not cause the underlying groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. The Discharger shall comply with the following provisions:

   a. This Order includes the attached Monitoring and Reporting Program (MRP) No. 8030. If there is any conflict between provisions stated in the M&RP and the Standard Provisions, those provisions stated in the former shall prevail.

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

   c. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies discharges of storm water to storm drain systems or other water courses under their jurisdiction, including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

   d. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

   e. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.

   f. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable. They do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

   g. Oil or oily material, chemicals, refuse, or other pollutionable material shall not be stored or deposited in areas where they may be picked up by rainfall and carried

off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

h. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

i. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

i. Violation of any term or condition in this Order;

ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

j. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

k. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing, or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and the appropriate filing fee.

l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

n. The Water code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

o. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

p. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the

Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the reasonable potential analysis (RPA).

c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as a update of an objective or the adoption of a TMDL for Ballona Creek.

e. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Chronic Whole Effluent Toxicity. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity (WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation

i. Toxicity Reduction Evaluation (TRE) Work Plan. Within 90 days of the effective date of this Order, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with USEPA guidance (Attachment G) and be of adequate detail to allow the Discharger to immediately initiate a TRE as required in this Provision.

ii. Accelerated Monitoring and TRE Initiation. When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

iii. Numeric Toxicity Monitoring Trigger. The numeric toxicity monitoring trigger to initiate a TRE is > 1 TUC (where TUC = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.

iv. Accelerated Monitoring Specifications. If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four (4) chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

(1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

(2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(3) A schedule for these actions.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or

ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

v. An annual status report that shall be sent to the Regional Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

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

b. 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:

i. The date and time of each spill, overflow or bypass;

ii. The location of each spill, overflow or bypass;

iii. The estimated volume of each spill, overflow or bypass including gross volume, amount recovered and amount not recovered;

iv. The cause of each spill, overflow or bypass;

v. 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;

vi. Mitigation measures implemented;

vii. Corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and

viii. Beneficial uses impacted.

5. Special Provisions for Municipal Facilities (POTWs Only)

[Not Applicable]

6. Other Special Provisions

[Not Applicable]

7. Compliance Schedules

a. Compliance Plan

i. The interim limitation stipulated in Section IV.A.2 of this Order for selenium shall be in effect until October 21, 2009. Thereafter, the Discharger shall

comply with the limitations specified for selenium in Section IV.A.1 of this Order.

ii. The Discharger has developed and submitted a compliance plan that identifies the measures that will be taken to reduce the concentrations of selenium in their discharge. This plan evaluates options to achieve compliance with the final effluent limitation for selenium.

iii. The Discharger shall submit annual reports to describe the progress of studies and/or actions undertaken to reduce selenium in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified above.

b. A Storm Water Pollution Prevention Plan (SWPPP) that describes site-specific management practices for minimizing storm water from being contaminated, and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements contained in Attachment A and submitted to the Regional Water Board within 90 days of the effective date of this Order.

c. 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 (1) that it has begun or expected to begin, to use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

VII. COMPLIANCE DETERMINATION

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

A. Compliance with single constituent effluent limitation – If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement X.B.4. of M&RP No. CI-8030), then the Discharger is out of compliance.

B. Compliance with monthly average limitations – In determining compliance with monthly average limitations, the following provisions shall apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the monthly average limit for any constituent, the Discharger has demonstrated compliance with the monthly average limit for that month.

2. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the monthly average limit for any constituent, the Discharger shall collect up to four additional samples at approximately equal

intervals during the month. All analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement X.B.5. of M&RP), the numerical average of the analytical results of these samples will be used for compliance determination.

When one of more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement X.B.4. of M&RP), the median value of these samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be lower of the two middle values.

3. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated for one month.

4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the monthly average, then the Discharger is in violation of the monthly average limit.

C. Compliance with effluent expressed as a sum of several constituents – If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

D. Compliance with effluent limitations expressed as a median – In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

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

2. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2}+ X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

E. In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with Section VII.C., 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.

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

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

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

G. Maximum daily effluent limitation (MDEL) – If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

H. Instantaneous minimum effluent limitation – If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken with a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

I. Instantaneous maximum effluent limitation – If the analytical result for a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

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

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

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

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

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

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

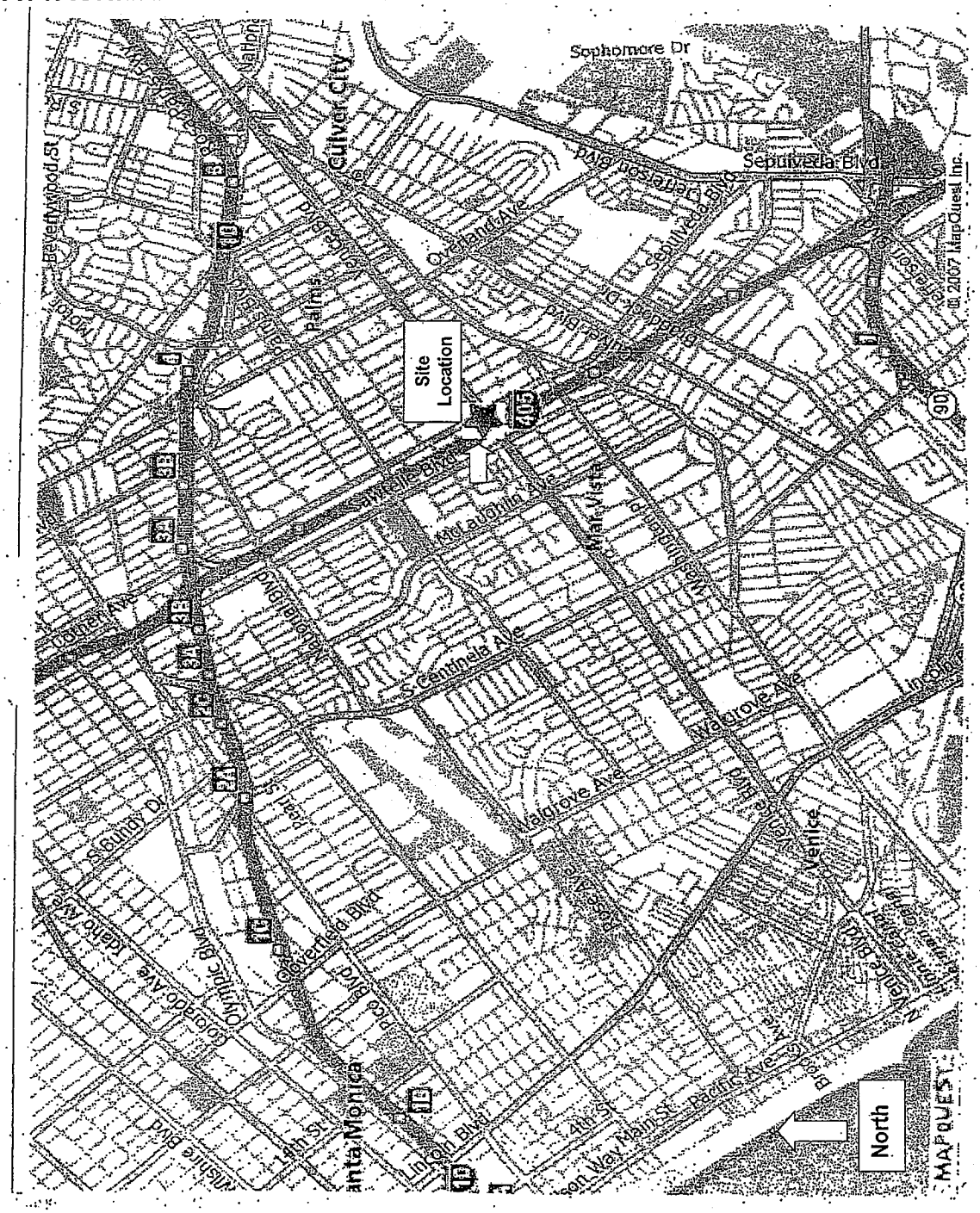
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\Sigma[(x - \mu)^2]/(n - 1))^{0.5}$$

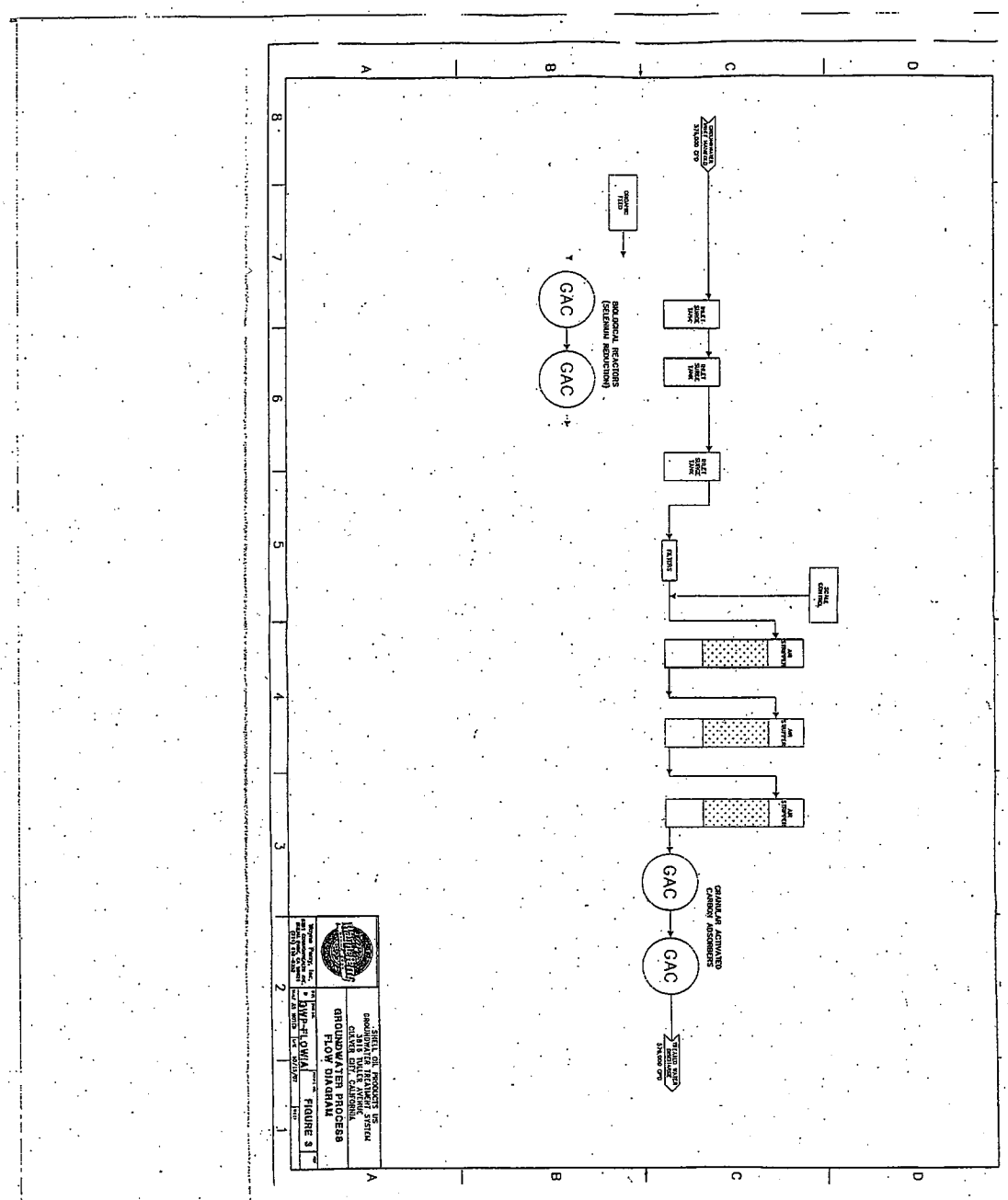
where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions

   s. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

   t. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative

may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

2. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

3. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

   a. 100 micrograms per liter (μg/L) (40 C.F.R. § 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. An effluent sampling location shall be established for the point of discharge (Discharge Point 001 [Latitude 34°00'47"N, Longitude 118°24'58"W]) and shall be located where representative samples of that effluent can be obtained.

B. The Regional Water Board shall be notified in writing of any change in the sampling stations once established.

C. Pollutants shall be analyzed using the analytical methods described in Sections 136.3, 136.4, and 136.5 (revised March 12, 2007); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

D. For all analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

E. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Public Health or approved by the Executive Officer and in accordance with current USEPA guideline procedures or a specified in this MRP".

F. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or

2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or

3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs (Attachment I) are those published by the State Water Board in the Policy for the implementation of Toxics Standards of Inland Surface Waters, Enclosed Bays, and Estuaries of California, February 24, 2005.

G. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment I to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment I;

2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 CFR Part 136 (revised March 12, 2007);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment I;

4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment I, and proposes an appropriate ML for their matrix; or

5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

H. Water/wastewater samples must be analyzed within allowable holding time limits as specified in Section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports.

Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

I. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

J. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments to ensure accuracy of measurements; or the Discharger shall ensure that both equipment activities will be conducted.

K. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in Section X.D shall also summarize the QA activities for the previous year. Duplicate chemical analysis must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.

L. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

M. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide a program to ensure future compliance with the average monthly limit for the approval by the Executive Officer.

N. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:

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

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

O. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Sample Type
001	M-001	Effluent: Prior to discharge to Ballona Creek (Latitude 34°00'47"N, Longitude 118°24'58"W)

III. INFLUENT MONITORING REQUIREMENTS

[Not Applicable]

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location 001

1. The Discharger shall monitor treated groundwater at M-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	gpd	Metered	Daily	[3]
Temperature	°F	Grab	Weekly	[3]
BOD_5@20°C	mg/L	Grab	Monthly[2]	[3]
pH	--	Grab	Weekly	[3]
Oil and grease	mg/L	Grab	Monthly[2]	[3]
Total settleable solids	ml/L	Grab	Monthly[2]	[3]
Total suspended solids	mg/L	Grab	Monthly[2]	[3]
Turbidity	NTU	Grab	Monthly[2]	[3]
Lead[3]	µg/L	Grab	Monthly[2]	[3]
Selenium[3]	µg/L	Grab	Monthly[2]	[3]
General minerals	mg/L	Grab	Monthly[2]	[3]
Hydrogen peroxide	mg/L	Grab	Monthly[2]	[3]
Nitrate+Nitrite (Nitrogen)	mg/L	Grab	Monthly[2]	[3]
Sulfides	mg/L	Grab	Monthly[2]	[3]
Ethlylene dibromide	µg/L	Grab	Monthly[2]	[3]
Methanol	µg/L	Grab	Monthly[2]	[3]
Methyl tertiary butyl ether	µg/L	Grab	Monthly[2]	[3]
Napthalene	µg/L	Grab	Monthly[2]	[3]
Tertiary butyl alcohol	µg/L	Grab	Monthly[2]	[3]
Tetrachloroethylene	µg/L	Grab	Monthly[2]	[3]
Total petroleum hydrocarbons	µg/L	Grab	Monthly[2]	[3]
Xylene	µg/L	Grab	Monthly[2]	[3]
Benzene	µg/L	Grab	Semiannually	[3]
1,1-Dichloroethane	µg/L	Grab	Semiannually	[3]
1,1-Dichloroethylene	µg/L	Grab	Semiannually	[3]
Ethylbenzene	µg/L	Grab	Semiannually	[3]
1,1,1-Trichloroethane	µg/L	Grab	Semiannually	[3]
Trichloroethylene	µg/L	Grab	Semiannually	[3]
Toluene	µg/L	Grab	Semiannually	[3]
Priority pollutants (Attachment D)	µg/L	Grab	Annually	[3]
Acute toxicity	µg/L	Grab	Annually	[3]
Chronic toxicity	µg/L	Grab	Quarterly[4]	[3]

[1] The mass emission (in lb/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$m = 8.34\ C_1 Q$$

where : m = mass discharge for a pollutant, lbs/day
c_1 = limitation concentration for a pollutant, mg/L
Q = actual discharge flow rate, mgd

[2] If results of analysis of any of these constituents exceed the effluent limitations, the frequency shall be increased to weekly. After four consecutive samples show compliance with the discharge limitations, the frequency shall revert to monthly.

[3] Discharge limitations for lead and selenium are expressed as total recoverable.

[4] Quarterly for one year, if all results indicate compliance with the 1 TU_c trigger, the monitoring frequency may decrease to annually.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Definition of Toxicity

1. Acute Toxicity

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

   a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

   b. No single test shall produce less than 70% survival.

B. Acute Toxicity Effluent Monitoring Program

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

2. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in Part 136 which cites USEPA's *Methods of Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,* Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821-R-02-012) or a more recent edition to ensure compliance in 100% effluent.

3. The fathead minnow, *Pimpephales promelas,* shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis,* shall be used as the test species for brackish effluent. The method for topsmelt is found in USEPA's *Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,* Third Edition, October 2002 (EPA/821/R-02/014).

4. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 48 hours of the chronic toxicity test as the results of the acute toxicity test.

C. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.

3. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

D. Accelerated Monitoring and Initial Investigation TRE Trigger

1. Special Provision VI.C.2.a of the Order requires the Discharger to develop and submit for approval an Initial Investigation TRE Workplan.

2. If the results of a toxicity test exceed the acute or chronic toxicity effluent limitations (as defined below):

   Acute Toxicity:

   a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

   b. No single test shall produce less than 70% survival.

   then, the Discharger shall begin the investigation and evaluation as specified in the Discharger's Initial Investigation TRE Workplan and begin accelerated monitoring by conducting six additional tests, in as close of a time frame as possible (however limited to one monitoring event per discharge event). The samples shall be collected and the tests initiated no less than 7 days apart. The Discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result.

3. If implementation of the Initial Investigation TRE Workplan indicates the source of toxicity (e.g., a temporary plant upset, etc), then the Discharger may discontinue the Initial Investigation Toxicity Reduction Evaluation and resume routine testing frequency.

4. The first step in the Initial Investigation TRE Workplan for downstream receiving water toxicity can be a toxicity test protocol designed to determine if the effluent from Discharge Point No. 001 causes or contributes to the measured downstream chronic or acute toxicity. If this first step TRE testing shows that the Discharge Point No. 001 effluent does not cause or contribute to downstream chronic or acute toxicity, using USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821/R-02-013), or USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,* Third Edition, October 2002, (EPA/821/R-02-014) then a report on this testing shall be submitted to the Regional Water Board and the Initial Investigation TRE will be considered to be completed. Routine testing is accordance with the MRP shall be continued thereafter.

E. TRE/TIE Trigger

1. If the accelerated testing shows consistent toxicity as defined below:

   a. Acute Toxicity:

      i. If the results of any two of the six accelerated tests are less than 90% survival, or

      ii. If the initial test and any of the additional six acute toxicity bioassay tests result in less than 70% survival.

F. Steps in TRE and TIE Procedure

1. Following a TRE Trigger, the Discharger shall initial a TRE in accordance with the facility's Initial Investigation TRE Workplan. At a minimum, the Discharger shall use USPEA manual EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will include, but not be limited to:

   a. Further actions to investigate and identify the cause of toxicity;

   b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;

   c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,

   d. A schedule for these actions.

2. The following is a stepwise approach in conducting the TRE:

   a. Step 1 – Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;

   b. Step 2 – Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;

   c. Step 3 – If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE by employing all reasonable efforts and using currently available TIE methodologies. The Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;

d. Step 4 – Assuming successful identification or characterization of the toxicants(s), Step 4 evaluates final effluent treatment options;

e. Step 5 – Evaluates in-plant treatment options; and

f. Step 6 – Consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerate testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there is no longer toxicity (or six consecutive acute toxicity test results are greater than 90% survival).

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

4. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.

5. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

G. Reporting

1. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival for acute toxicity test results and as TU_c for chronic toxicity test results with the self monitoring reports (SMR) for the month in which the test is conducted.

2. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the SMR for the period in which the investigation occurred.

a. The full report shall be submitted on or before the end of the month in which the SMR is submitted.

b. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger and (4) printout of the ToxCalc or CETIS (Comprehensive Environmental Toxicity Information System) program results.

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test:

a. Sample date(s);

b. Test initiation date;

c. Test species;

d. End point values for each dilution (e.g., number of young, growth rate, percent survival);

e. NOEC value(s) in percent effluent;

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

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

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

i. NOEC and LOEC values for reference toxicant test(s);

j. C_{25} value for reference toxicant test(s);

k. Any applicable charts; and

l. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

The Discharger shall notify by telephone or electronically, this Regional Water Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

[Not Applicable]

VII. RECLAMATION MONITORING REQUIREMENTS

[Not Applicable]

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

The receiving water monitoring program shall consist of periodic surveys of the receiving water at the location where the discharge enters the storm drain on Venice Boulevard receiving water that may be impacted by the discharge.

A. Receiving Water Observations. General observations of the receiving water shall be made at the location where the discharge enters the storm drain on Venice Boulevard on a monthly basis and shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be reported.

B. Observations shall be descriptive where applicable, such as colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

1. Tidal stage, time, and date of monitoring
2. Weather conditions
3. Color of water
4. Appearance of oil films or grease, or floatable materials
5. Extent of visible turbidity or color patches
6. Direction of tidal flow
7. Description of odor, if any, of the receiving water
8. Presence and activity of California Least Tern and California Brown Pelican.

IX. OTHER MONITORING REQUIREMENTS

A. Storm Water Monitoring

1. Rainfall Monitoring. The Discharger shall measure and record the rainfall on each day of the month. This information shall be included in the monitoring report for that month.
2. Visual Observation. The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a

significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

B. SWPPP and Spill Contingency Plan Status and Effectiveness Report

1. As required under Special Provision VI.C. of this Order, the Discharger shall submit an updated Storm Water Pollution Prevention Plan (SWPPP) (Attachment H) and Spill Contingency Plan to the Executive Officer of the Regional Water Board for approval within 180 days of the effective date of this permit.

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

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. If there is no discharge during any reporting period, the report shall so state.

3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

5. The Discharger shall report the results of acute toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section V.D.

B. Self Monitoring Reports (SMRs)

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-3. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Quarterly	March 6, 2008	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Annually	March 6, 2008	January 1 through December 31	February 1
Once per discharge event	First day of discharge after March 6, 2008	Once per discharger	February 1 May 1 August 1 November 1

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

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

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

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

5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

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

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

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

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

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

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

   c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

      California Regional Water Quality Control Board
      Los Angeles Region
      320 W. 4th Street, Suite 200
      Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs)

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

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

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

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

D. Other Reports

1. The Discharger shall report the results of any acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C. of this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VI.C.7 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on the report due date in compliance with SMR reporting requirements described in subsection X.B.5 above.

2. By March 1 of each year, the Discharger shall submit an annual report to the Regional Water Board. The report shall contain the following:

   a. Both tabular and graphical summaries of the monitoring data obtained during the previous year,

   b. A discussion on the compliance record and the corrective actions taken or planned to bring the discharge into full compliance with the waste discharge requirements,

   c. A report discussing the following: 1) operation/maintenance problems; 2) changes to the facility operations and activities; 3) potential discharge of the pollutants associated with the changes and how these changes are addressed in the BMPP; 4) calibration of flow meters or other equipment/device used to demonstrate compliance with effluent limitations of this Order.

   d. A report summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.

   e. A report on the status of the implementation and the effectiveness of the SWPPP, BMPP, and Spill Contingency Plan.

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

4. If the Discharger wishes to participate in a coordinated receiving water, biomonitoring, and sediment monitoring program with other dischargers to Ballona Creek, the Discharger shall submit a report seeking approval of the Regional Water Board.

5. This Regional Water Board requires the Discharger to file with the Regional Water Board, within 180 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental dischargers, and for minimizing the effect of such events. The technical report should:

   a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage area, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.

   b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

   c. Describe facilities and procedures needed for effective preventive and contingency plans.

   d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

This Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of this Order, upon notice to the Discharger.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B191312001
Discharger	Equilon Enterprises, LLC DBA Shell Oil Products US
Name of Facility	Shell Service Station #204-1944-0100, Culver City
Facility Address	3801 Sepulveda Boulevard Culver City, CA 90230 Los Angeles County
Facility Contact, Title and Phone	Joseph Lentini, Staff Project Manager, (310) 376-0649
Authorized Person to Sign and Submit Reports	David Potts, Senior Engineer, (714) 826-0352
Mailing Address	20945 South Wilmington Avenue Carson, CA 90810
Billing Address	SAME
Type of Facility	Service Station
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	A
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	0.576 million gallons per day (MGD)
Facility Design Flow	0.576 million gallons per day (MGD)
Watershed	Ballona Creek Watershed
Receiving Water	Ballona Creek
Receiving Water Type	Estuary

A. Equilon Enterprises, LLC DBA Shell Oil Products US (hereinafter Discharger) is the operator of Shell Service Station #204-1944-0100 (hereinafter Facility), a service station.

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

B. The Facility discharges wastewater to Ballona Creek, a water of the United States, and is currently regulated by Order No. R4-2004-0144 which was adopted on September 2, 2004 and expires on August 10, 2009.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on October 19, 2007.

II. FACILITY DESCRIPTION

Shell Oil Company was the operator of the Shell Service Station #204-1944-0100 when the release occurred. Equilon Enterprises, LLC, was originally formed as a joint venture between Shell Oil Company and Texaco Refining and Marketing. During late 2001, Texaco merged with Chevron Corporation. As that time, Texaco's interest in Equilon was purchased by Shell. As of March 1, 2002, Equilon Enterprises, LLC is a legally viable, operating entity doing business as Shell Oil Products US. Shell Service Station #204-1944-0100 is located at 3801 Sepulveda Boulevard, Culver City, California.

Shell Service Station #204-1944-0100 is located near the City of Santa Monica's Charnock Wellfield and the Southern California Water Company Wellfield . The Charnock Wellfields draw water from the Charnock Sub-Basin consisting of the Shallow Unnamed Aquifer, and the Upper Silverado Aquifer, prior to their shut down in 1996 due to methyl tertiary butyl ether (MTBE) pollution. Groundwater pumped from the Charnock Wellfields was used for public distribution as municipal supply water. The Regional Water Board has identified Shell Service Station #204-1944-0100 as a potential source site contributing to the MTBE pollution of the Charnock Sub-Basin. The service station operations reportedly began in January 1940. Historically, station operations consisted of retail gasoline sales and automobile repair and maintenance. The site is currently an active service station with five 12,000-gallon double wall fiberglass underground storage tanks used to store gasoline, diesel, and methanol, four dispenser islands, and a kiosk.

Investigations performed in the past at the site and in the vicinity of the site have indicated that the soil and groundwater are contaminated with total petroleum hydrocarbons (as gasoline), benzene, toluene, ethylbenzene, xylene, MTBE, tertiary butyl alcohol (TBA), and other associated petroleum constituents.

The soil and groundwater cleanup plans for the site were approved by the Regional Water Board and United States Environmental Protection Agency (U.S. EPA) on June 21, 1999. The remediation systems have been operational since 1999.

On July 26, 2007, Wayne Perry, Inc. acting on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) submitted a request for an NPDES permit modification and extended

compliance schedule for the development of the technology to treat selenium in the discharge. The letter provided the basis for the request for a time schedule through May 1, 2010 with a work plan enumerating task to reach full compliance by that date.

A. Description of Wastewater and Biosolids Treatment or Controls

Shell remediates the contaminated soil and local groundwater using soil vapor extraction and groundwater extraction and treatment prior to discharge. The purpose of these remediation methods is to clean up the Shallow Unnamed Aquifer and the Upper Silverado Aquifer in close proximity of the site and to contain the migration of polluted groundwater. Since groundwater pumping commenced in November 1999, wells historically used for groundwater pumping have included at various times, nine extraction wells used to extract water from the Shallow Unnamed Aquifer and five extraction wells used to extract water from the Upper Silverado Aquifer. The current active pumping array consists of seven extraction wells used to extract water from the Shallow Unnamed Aquifer and eleven extraction wells used to extract water from the Upper Silverado Aquifer. In the future, wells may be added to or removed from the active pumping array as necessary to optimize groundwater remediation. The maximum combined groundwater pump rate will not exceed 400 gallons per minute (576,000 gallons per day).

Shell treats the groundwater using a combination of treatment technologies. Groundwater flows into the first of three (4,500-gallon) inlet surge tanks. From this surge tank, a portion of the water flows through two (5,000-pound) granular activated carbon vessels for selenium removal. Groundwater from the first surge tank and from the selenium treatment vessels flows into the second and third (4,500-gallon) inlet surge tanks. Next, groundwater is filtered and then treated with scale control and scale inhibitor/dispersant aids for control of iron and manganese. Groundwater is then pumped through either one, two, or three air stripping columns for removal of total petroleum hydrocarbons (as gasoline), benzene, toluene, ethylbenzene, xylene, and MTBE (with an air stripper off-gas control system) and then through two (5,000-pound) granular activated carbon adsorbers for polishing and TBA removal. Finally, the discharge is treated for pH (if necessary) prior to discharge.

B. Discharge Points and Receiving Waters

The Discharge Point No. 001 is a storm drain located on Venice Boulevard near the intersection of Venice Boulevard and Sepulveda Boulevard (Latitude 34°00'47", Longitude 118°24'58"). The treated groundwater flows approximately one mile to Ballona Creek, a water of the United States.

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

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

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From Jul 04 – To Jun 07)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Oil and grease	mg/L	10	15	2.5	--
	lbs/day	48	72	12	--
Total settable solids	ml/L	0.1	0.3	<0.1	--
Total suspended solids	mg/L	50	150	3.4	--
	lbs/day	240	721	1.6	--
Turbidity	NTU	50	150	0.960	--
	lbs/day	--	--	--	--
Lead[2]	µg/L	15.2	30.5	10.1	--
	lbs/day	0.07	0.15	0.05	--
Selenium[2,3]	µg/L	4.0	8.2	19.4	--
	lbs/day	0.02	0.04	0.09	--
Benzene	µg/L	--	1	<0.5	--
	lbs/day	--	0.005	--	--
1,1-Dichloroethane	µg/L	--	5	<1	--
	lbs/day	--	0.02	--	--
1,1-Dichloroethylene	µg/L	--	6	<1	--
	lbs/day	--	0.03	--	--
Ethylbenzene	µg/L	--	700	<1	--
	lbs/day	--	3.4	--	--
Ethylene dibromide	µg/L	--	0.05	<0.02	--
	lbs/day	--	0.0002	--	--
Methyl tertiary butyl ether	µg/L	--	13	3.1	--
	lbs/day	--	0.06	0.0149	--
Napthalene	µg/L	--	50	1.1	--
	lbs/day	--	0.24	0.005	--
Tertiary butyl alcohol	µg/L	--	1750	6	--
	lbs/day	--	8.4	0.03	--
Tetrachloroethylene	µg/L	--	5	<1	--
	lbs/day	--	0.02	--	--
Toluene	µg/L	--	150	<1	--
	lbs/day	--	0.72	--	--
Total petroleum hydrocarbons	µg/L	--	100	<100	--
	lbs/day	--	0.48	--	--
1,1,1-Trichloroethane	µg/L	--	200	<1	--
	lbs/day	--	1.0	--	--
Trichloroethylene	µg/L	--	5	<1	--
	lbs/day	--	0.02	--	--
Xylene	µg/L	--	1750	<1	--
	lbs/day	--	8.4	--	--
Hydrogen peroxide	mg/L	--	5	<0.2	--
	lbs/day	--	24	--	--

[1] The mass emission (in lb/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$m = 8.34\ C_1 Q$$

where : m = mass discharge for a pollutant, lbs/day
c_1 = limitation concentration for a pollutant, mg/L
Q = actual discharge flow rate, mgd

Mass-based effluent limitations for pollutants are based on a maximum discharge flow rate of 576,000 gpd (0.576 mgd)

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

3 The interim limits specified in this permit are applicable from the date of adoption of the Order through October 21, 2009.

D. Compliance Summary

Data submitted to the Regional Water Board indicate that the Discharger has exceeded existing permit limitations as outlined in the table below:

Table F-3. Summary of Effluent Limit Exceedance- Discharge Point 001

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
07/07/04	3rd Qtr 2004	Maximum Daily	Selenium	9.6	4	µg/L
08/19/04	3rd Qtr 2004	Maximum Daily	Selenium	9.56	4	µg/L
08/30/04	3rd Qtr 2004	Maximum Daily	Selenium	9.09	4	µg/L
09/08/04	3rd Qtr 2004	Maximum Daily	Selenium	16.2	4	µg/L
10/06/04	4th Qtr 2004	Maximum Daily	Selenium	12.3	4	µg/L

The available effluent data indicates that the Discharger exceeded final effluent limitations contained in Order No. R4-2004-0144 for selenium, however the existing Order contains an interim limit of 20 µg/L. The Discharger has been able to comply with the interim limit for selenium from October 2004 through June 2007.

E. Planned Changes

The Discharger is currently developing and evaluating treatment technologies to address the elevated selenium concentrations. Once the system is operational, it will be implemented at the site.

A selenium pilot program was carried out by the Discharger in 2005 and 2006 in which they determined the feasibility of using the anaerobic biological reduction method to meet the 4 µg/L limit of selenium. In 2006, the Discharger discovered that such a method of selenium removal is inadequate in several areas including:

- Optimum bioreactor design,
- The maximum practical liquid loading rate,
- The optimum flow rate, volume, and frequency of backwashing,
- Best practices for management of backwash sludge, and

The ability for the system to recover from a shutdown condition.

On July 26, 2007, the Discharger submitted a letter to request an extension of the compliance schedule and interim discharge limitations for selenium. During this extension, the Discharger will continue development of technology that will remove selenium to 4 µg/L.

The proposal includes a series of completion dates (milestones) for selenium technology removal, beginning June 2008. Throughout the term of the compliance schedule, upon the completion of each milestone, the amount of selenium discharged will be reduced, to meet the final effluent limitation.

The Discharger is requesting an extension of the interim limit to allow them additional time to develop a biological system that will be suitable for their system. A timeline with proposed milestones, with completion dates have been submitted to detail how the Discharger will achieve the 4 µg/L limit for selenium. The milestones are described as five tasks:

- Completion of a Biological System Design, Construction, and Testing.
  Start Date: March 2, 2008, Completion Date: June 1, 2008
  Selenium Treatment Discharge Goal: 15 µg/L.
- Initial Testing (Low Flow)
  Start Date June 1, 2008, Completion Date: December 31, 2008
  Selenium Treatment Discharge Goal: 16 µg/L
- Process Verification (Medium Flow)
  Start Date: December 31, 2008, Completion Date: August 10, 2009
  Selenium Treatment Discharge Goal: 13 µg/L
- High Flow Capacity Demonstration
  Start Date: August 10, 2009, Completion Date: December 31, 2009
  Selenium Treatment Discharge Goal: 9 µg/L
- Final Optimization
  Start Date: December 31, 2009, Completion Date: May 1, 2010
  Selenium Treatment Discharge Goal: 3 µg/L

The Discharger has set up a series of tasks that by the May 1, 2010, they will be in compliance with the 4 µg/L limit for selenium. However, according to Section 2.1 of the SIP for Compliance Schedule, the schedule of compliance for point sources discharges in an NPDES permit, shall not exceed five years from the date of permit issuance, reissuance, or modification to complete actions necessary to comply with CTR-based effluent limits. The maximum compliance schedule under the SIP is five years, or ten years from the effective date of the SIP (May 17, 2010), whichever comes first. In order for this permit to comply with the SIP, the Discharger has been given until October 21, 2009 to comply with the selenium limit. The most recent RPA resulted in a final limit of 4.5 µg/L for selenium. This was due to the new data set provided by the Discharger and the coefficient of variation used to calculate the final limit. Therefore, this permit includes the 4.5 µg/L final limit for selenium.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

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

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Ballona Creek	Existing: Non-contact water recreation (REC-2); wildlife habitat (WILD Potential: Municipal and domestic water supply (MUN); water contact recreation (WARM); freshwater habitat (FRSH).

Requirements of this Order implement the Basin Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

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

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[1] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the

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

Regional Water Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved the State's 303(d) list of impaired water bodies on June 28, 2007. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2006 303(d) list and have been scheduled for TMDL development.

The 2006 State Board's California 303(d) List classifies Ballona Creek as impaired. The pollutants of concern include cadmium (sediment), ChemA (tissue) [refers to the sum of aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene], chlordane (tissue), dissolved copper, DDT (tissue), dieldrin (tissue) enteric viruses, high coliform count, dissolved lead, PCBs (tissue), pH, sediment toxicity, total selenium, silver (sediment), toxicity, and dissolved zinc. The Trash TMDL for the Ballona Creek and Wetland was adopted by the Regional Water Board on September 19, 2001. It designates Waste Load Allocations for Permittees and Co-Permittees of the Los Angeles County Municipal Stormwater Permit that are located within (entirely or partially) the Ballona Creek Watershed. Waste Load allocations are based on a phased reduction from the estimated current discharge over a 10-year period until the final Waste Load Allocation (currently set at zero) is met. Because the discharge from this facility is treated groundwater, it is not likely to contribute trash to the Ballona Creek Watershed. However, because the facility discharges to the Los Angeles County municipal separate storm sewer system, Los Angeles County may invoke requirements on the facility in order to meet the waste load allocation.

The City of Los Angeles and the County of Los Angeles both filed petitions and complaints in Los Angeles Superior Court challenging the current Ballona Creek Trash TMDL. Subsequent negotiations led to a settlement agreement, which became effective on September 23, 2003. The Basin Plan amendment incorporates the negotiated language into the Ballona Creek and Wetland TMDL. On March 4, 2004, the Regional Water Board adopted Resolution No. 2004-023 revising the TMDL to incorporate the negotiated language. The TMDL was then approved by the State Water Resources Control Board, Office of Administrative Law, and US EPA.

The Toxic Pollutants TMDL for Ballona Creek Estuary was adopted by the Regional Water Board on July 7, 2005. The Regional Water Board established the TMDL to protect the aquatic life and beneficial uses of Ballona Creek Estuary and to achieve sediment quality to protect these beneficial uses. Ballona Creek and Ballona Creek Estuary (Estuary) is on the Clean Water Act Section 303(d) list of impaired waterbodies for cadmium, copper, lead, silver, zinc, chlordane, DDT, PCBs, and PAHs in sediments.

The TMDL is based on pollutant loading to the sediments of Ballona Creek Estuary. The loading capacity is based on an estimate of the annual pollutants loads that can be delivered to the sediments and still meets the sediment targets. The margin of safety is provided through the use of ERLs. A grouped waste load allocation has been developed for the storm

water permittees (MS4, Caltrans, general industrial and construction storm water permittees). Load allocations have been developed for open space and direct atmospheric deposition. Concentration-based waste load allocations apply to all other non-storm water NPDES permittees. It is anticipated that implementation will be based on BMPs which address pollution prevention and/or sediment monitoring program.

The Bacteria TMDL for Ballona Creek, Ballona Estuary, and Sepulveda Channel was adopted by the Regional Water Board on April 27, 2007. Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use designated for Ballona Estuary and Sepulveda Channel, limited water contact recreation (LREC) designated for Ballona Creek Reach 2, and non-contact recreation (REC-2) beneficial uses of Ballona Creek Reach 1.

The goal of this TMDL is to determine and set forth measures needed to prevent impairment of water quality due to elevated bacteria densities in Ballona Creek, Ballona Estuary, and their tributaries. The target bacteria indicators address are fecal coliform, total coliform, E. coli, and enterococcus. The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine and fresh water to protect the contact and non-contact recreation uses. These targets are the most appropriate indicators of public health risk in recreational waters.

The Metals TMDL for Ballona Creek was adopted by the Regional Water Board on July 5, 2007 by Resolution No. 2005-007. The TMDL was subsequently approved by the State Water Resources Board, Office of Administrative Law, and US EPA by January 2006.

On February 16, 2006, the Cities of Bellflower, Carson, Cerritos, Downey, Paramount, Santa Fe Springs, Signal Hill, and Whittier (Cities) filed a petition for a writ of mandate challenging many aspects of the Los Angeles Metals TMDLs and the Ballona Creek Metal TMDLs. On May 24, 2007, the Los Angeles County Superior Court adopted the third of three rulings with respect to the writ petition. Collectively, all challenges to the TMDLs were rejected. The Court ruled that the State and Regional Water Boards (Water Boards) should have adopted and circulated an alternative analysis that analyzed alternatives to the project. The Court issued its writ of mandate, directing the Water Boards to adopt an alternative analysis that analyzed feasible alternatives to the TMDLs and reconsider the TMDLs accordingly.

Considering the alternative analysis, the Regional Water Board finds that the TMDL as originally proposed and adopted is appropriate. The Regional Water Board further finds that nothing in the alternative analysis, nor any of the evidence generated, presents a basis for the Regional Water Board to conclude that it would have acted differently when it adopted the TMDLs had the alternative analysis been prepared and circulated at that time. Thus, the revised Metals TMDL for Ballona Creek was adopted by the Regional Water Board September 6, 2007, however it is still pending approval from the State Water Resources Control Board, Office of Administrative Law, and US EPA.

The metals subject to this TMDL are toxic pollutants, and the existing water quality objectives for the metals reflect national policy that the discharge of toxic pollutants in toxic amounts be prohibited. When one of the metals subject to this TMDL is present at levels exceeding the existing numeric objectives, then the receiving water is toxic.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges regulated by NPDES permit to Ballona Creek.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

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

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

There are currently no national ELGs for groundwater treatment systems. It should be noted that the previous permit stated that the current treatment system is considered to be the best available technology (BAT) economically achievable for the extracted groundwater.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in Section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to Ballona Creek are summarized in Section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

The CTR criteria for the protection of aquatic freshwater organisms or human health for consumption of organisms, whichever is most stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of Ballona Creek.

Some water quality criteria are hardness dependent. The Discharger provided hardness data for the receiving water (Ballona Creek) as part of their CTR monitoring. The immediate receiving water is a storm drain, and is typically dry; the effluent water makes up most of the flow in the channel. The storm drain enters the receiving water approximately one mile from the facility, therefore, the sampling of receiving water was not feasible. Thus, hardness measurements were taken of the effluent. The hardness value reported April 2002 was 560 mg/L as $CaCO_3$. This value exceeds the maximum recommended value of 400 mg/L as $CaCO_3$, hence the 400 mg/L value is used for determining reasonable potential to exceed hardness-dependent criteria for certain metals.

Table F-5 and F-6 summarize the applicable water quality criteria/objectives for both the priority pollutants and non-priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the reasonable potential analysis (RPA) for this Order.

Table F-5. Applicable Water Quality Criteria (Priority Pollutants)

CTR No.	Constituent	Selected Criteria (µg/L)	Basin Plan	CTR/NTR Water Quality Criteria			
				Freshwater		Human Health For Consumption of:	
			Title 22 GWR	Acute	Chronic	Water & Organisms	Organisms Only
7	Lead	18.58	--	476.82	18.58	--	--
10	Selenium	5	50	--	5	--	--
19	Benzene	1.2	1	--	--	1.2	71
28	1,1-Dichloroethane	5	5	--	--	--	--
30	1,1-Dichloroethylene	0.057	0.057	--	--	0.057	3.2
33	Ethylbenzene	700	700	--	--	3100	29,000
38	Tetrachloroethylene	0.8	0.8	--	--	0.8	8.85
39	Toluene	150	150	--	--	6800	200,000
41	1,1,1-Trichloroethane	200	200	--	--	--	--
43	Trichloroethylene	5	5	--	--	2.7	81
94	Napthalene	--	--	--	--	--	--

Table F-6. Applicable Water Quality Criteria (Non-Priority Pollutants)

Constituent	Units	Water Quality Criteria (C)
Calcium	mg/L	--
Magnesium	mg/L	--
Total Suspended Solids	mg/L	50
Total Settleable Solids	ml/L	0.3
Total Dissolved Solids	mg/L	--
Sulfide	mg/L	--
Nitrate (as N)	mg/L	45
Turbidity	NTU	50
Oil and Grease	mg/L	10
Sodium	mg/L	--
Chronic Toxicity	mg/L	1
Chloride	mg/L	--
Potassium	mg/L	--
Sulfate	mg/L	--
Nitrite (as N)	mg/L	1
Total Petroleum Hydrocarbons	ug/L	100
Methyl Tertiary Butyl Ether (MTBE)	ug/L	13
Tertiary Butyl Alcohol (TBA)	ug/L	12
Xylene	ug/L	1750
Ethylene Dibromide	ug/L	0.05
Methanol	mg/L	--
BOD_5 20C	mg/L	20
1,2-Dibromomethane	ug/L	--
Hydrogen peroxide	mg/L	5
Nitrite + Nitrate (as N)	mg/L	10

3. Determining the Need for WQBELs

The Regional Water Board conducts a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzed 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 Water Board has identified the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA and determine that a WQBEL is needed:

1) Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

2) Trigger 2 – If MEC<C and background water quality (B) > C, a limit is needed.

3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit is reopened for appropriate modification.

The RPA was performed for the priority pollutants for which effluent data were available. Effluent and receiving water data were provided pursuant to a letter dated February 28, 2002 from the Regional Water Board addressed to Shell requiring quarterly monitoring for priority pollutants regulated in the CTR. A correspondence dated March 14, 2002 from the Regional Water Board to the Discharger indicated that the Discharger would only be required to collect one sample for priority pollutants regulated in the CTR. Data collected from September 2004 through June 2007, was used in the RPA.

Based on the RPA, there is reasonable potential to exceed water quality criteria at Discharge Serial No. 001 for selenium. Thus, effluent limitations and effluent monitoring requirements for selenium have been established. In addition, this Order carries over the effluent limits established in the previous Order for benzene, 1,1-dichloroethane, 1,1-dichloroethene, ethylbenzene, tetrachloroethylene, toluene, 1,1,1-trichloroethane, and trichloroethene, based on Trigger 3 above. The reason for including these limits is Best Professional Judgment (BPJ). Further, the existing Order limitations for lead have

been replaced with CTR-based WQBELs to ensure the protection of water quality and BPJ. The limit for naphthalene has been replaced based on the State of California notification level for drinking water (Department of Public Health).

The RPA was also performed for the non-priority pollutants for which effluent data was available. These constituents have been identified by the Regional Water Board as pollutants that have been detected in groundwater contamination plume or targeted by the cleanup operation, therefore are included in this permit.

Table F-7. Summary Reasonable Potential Analysis (Priority Pollutants)

CTR No.	Constituent	Applicable Water Quality Criteria (C) (µg/L)	Max. Effluent Conc. (MEC) (µg/L)	RPA Result-Need Limit?	Reason
7	Lead	18.58	10.0	Yes	BPJ
10	Selenium	5	19.4	Yes	MEC>C
19	Benzene	1.2	<0.26	Yes	BPJ
28	1,1-Dichloroethane	5	<0.26	Yes	BPJ
30	1,1-Dichloroethylene	0.057	<0.53	Yes	BPJ
33	Ethylbenzene	700	<0.17	Yes	BPJ
38	Tetrachloroethylene	0.8	0.34	Yes	BPJ
39	Toluene	150	<0.34	Yes	BPJ
41	1,1,1-Trichloroethane	200	<0.32	Yes	BPJ
43	Trichloroethylene	5	<0.30	Yes	BPJ
94	Napthalene	--	1.1	Yes	BPJ

Table F-8. Summary Reasonable Potential Analysis (Non-Priority Pollutants)

Constituent	Units	Applicable Water Quality Criteria (C)	Max. Effluent Conc. (MEC)	RPA Result-Need Limit?	Reason
Calcium	mg/L	--	141	No	--
Magnesium	mg/L	--	57.8	No	--
Total Suspended Solids	mg/L	50	3.4	No	--
Total Settleable Solids	ml/L	0.3	0.1	No	--
Total Dissolved Solids	mg/L	--	1200	No	--
Sulfide	mg/L	--	0.05	No	--
Nitrate (as N)	mg/L	45	1.7	No	--
Turbidity	NTU	50	0.96	No	--
Oil and Grease	mg/L	10	2.5	No	--
Sodium	mg/L	--	122	No	--
Chronic Toxicity	mg/L	1	1	No	--
Chloride	mg/L	--	240	No	--
Potassium	mg/L	--	4.98	No	--
Sulfate	mg/L	--	470	No	--
Nitrite (as N)	mg/L	1	0.1	No	--
Total Petroleum Hydrocarbons	ug/L	100	50	Yes	BPJ
Methyl Tertiary Butyl Ether (MTBE)	ug/L	13	3.1	Yes	BPJ
Tertiary Butyl Alcohol (TBA)	ug/L	12	6	Yes	BPJ
Xylene	ug/L	1750	0.59	Yes	BPJ

Constituent	Units	Applicable Water Quality Criteria (C)	Max. Effluent Conc. (MEC)	RPA Result-Need Limit?	Reason
Ethylene Dibromide	ug/L	0.05	0.02	Yes	--
Methanol	mg/L	--	0.1	--	--
BOD_5 20C	mg/L	20	2	No	--
1,2-Dibromomethane	ug/L	--	0.02	No	--
Hydrogen peroxide	mg/L	5	0.2	Yes	BPJ
Nitrite + Nitrate (as N)	mg/L	10	1.6	No	--

4. WQBEL Calculations

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

i. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Water Board.

b. Water quality-based effluent limits (final) for these pollutants are established following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

c. WQBELs Calculation Example:

Using lead as an example, the following demonstrates how WQBELs were established for this Order.

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

Calculation of aquatic life AMEL and MDEL:

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

ECA = C + D(C-B) when C > B, and
ECA = C when C < B,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. In this Order, a hardness of 400 mg/L of $CaCO_3$ was used for hardness dependent criteria.
D = The dilution credit, and
B = The ambient background concentration

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

ECA = C

For lead, the applicable water quality criteria are (Reference Table F-4):

ECA_{acute} = 476.82 µg/L
$ECA_{chronic}$ = 18.58 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

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

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For lead, the following data was used to develop the acute and chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier$_{acute\ 99}$	ECA Multiplier$_{chronic\ 99}$
4	2.44	0.104	0.174

LTA_{acute} = 476.82 µg/L x 0.104 = 49.59 µg/L
$LTA_{chronic}$ = 18.58 µg/L x 0.174 = 3.23 µg/L

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

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

For lead, the most limiting LTA was the $LTA_{chronic}$

LTA = 3.23 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as an Average Monthly Effluent Limitation (AMEL) and Maximum Daily Effluent Limitation (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$
$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$

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

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

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 99}$
4	2.44	9.58	3.03

$AMEL_{aquatic\ life}$ = 3.23 µg/L x 3.03 = 9.79 µg/L
$MDEL_{aquatic\ life}$ = 3.23 µg/L x 9.58 = 30.94 µg/L

Calculation of human health AMEL and MDEL:

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

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

However, for lead:

The $ECA_{human\ health}$ for human health is listed as narrative. The EPA has not promulgated human health criteria for this constituent. However, a constituent such as lead is regulated according to the State's existing narrative criteria for toxics.

Step 6: A lead $MDEL_{human\ health}$ could not be calculated because a lead $AMEL_{human\ health}$ was not available. However, for illustrative purposes, if a $AMEL_{human\ health}$ was available, the following data and equation would have been used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 99}$	Ratio
4	2.44	9.58	3.03	3.16

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

For lead:

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
9.79 µg/L	30.94 µg/L	Not Applicable	Not Applicable

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For lead, there is no human health criteria, therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. These limits will be protective of aquatic life.

5. WQBELs based on Basin Plan Objectives

The Basin Plan states that the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge. Based on the requirements of the Basin Plan an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 of pH are included in the proposed permit. The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements of the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region,* a maximum effluent temperature limitation of 86°F is included in the proposed permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limit is reflective of new information available that indicates that the 100°F 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 states that "in waters designated for water contact recreation, the fecal coliform concentration shall not exceed a log mean of 200/100 mL (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 mL".

Ammonia exists in two forms: un-ionized ammonia (NH_3) and the ammonium ion (NH_4). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors.

Table F-9. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Oil and grease	mg/L	10	15
	lbs/day	48	72
Total settleable solids	ml/L	0.1	0.3
Total suspended solids	mg/L	50	75
	lbs/day	240	721
Turbidity	NTU	50	75
Lead	µg/L	9.8	31
	lbs/day	0.05	0.2
Benzene	µg/L	--	1
	lbs/day	--	0.005
Selenium	µg/L	4.5	6.8
	lbs/day	0.02	0.03
1,1-Dichloroethane	µg/L	--	5
	lbs/day	--	0.02
1,1-Dichloroethylene	µg/L	3.2	6
	lbs/day	0.02	0.03
Ethylbenzene	µg/L	--	700
	lbs/day	--	3.4
Ethylene dibromide	µg/L	--	0.05
	lbs/day	--	0.0002
Methyl tertiary butyl ether	µg/L	--	13
	lbs/day	--	0.06
Napthalene	µg/L	--	17
	lbs/day	--	0.1
Tertiary butyl alcohol	µg/L	--	12
	lbs/day	--	0.06
Tetrachloroethylene	µg/L	--	5
	lbs/day	--	0.02
Toluene	µg/L	--	150
	lbs/day	--	0.72

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Total petroleum hydrocarbons	µg/L	--	100
	lbs/day	--	0.48
1,1,1-Trichloroethane	µg/L	--	200
	lbs/day	--	1
Trichloroethylene	µg/L	--	5
	lbs/day	--	0.02
Xylene	µg/L	--	1750
	lbs/day	--	8.4
Hydrogen peroxide	mg/L	--	5
	lbs/day	--	24

6. Whole Effluent Toxicity (WET)

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

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90 percent, with no single test having less than 70 percent survival. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The discharges at the Shell facility occur continuously and, due to the types of pollutants present in the groundwater treated at the site, could contribute to long-term toxic effects. Chronic toxicity data available shows that the effluent does not exceed 1.0 toxic units chronic (TU_c). The discharger is still required to conduct chronic toxicity testing in order to

continue to determine reasonable potential and establish WQBELs as necessary. The Order still contains a chronic testing trigger defined as the monthly median exceeding 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger will be required to immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program, Item V.D. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a toxicity identification evaluation (TIE).

D. Final Effluent Limitations

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in re-issued permits are at least as stringent as in the existing permit. Therefore, existing effluent limitations for many of the regulated pollutants are carried over to this permit. Furthermore, the requirements in the proposed Order for conventional, non-conventional, and toxic pollutants (total settleable solids, oil and grease, total petroleum hydrocarbons, xylene, MTBE, ethylene dibromide, tetrachloroethylene, and hydrogen peroxide) are based on limits specified in Shell's existing permit. However, the limits for total suspended solids, and turbidity were replaced to reflect levels that have been established in other recently adopted permits by the Regional Water Board, and the limit for tertiary butyl alcohol has been replaced based on the State of California notification level for drinking water (Department of Public Health). The effluent limitations for pH and temperature are based on the Regional Water Board's interpretation of the Basin Plan.

In addition to these limitations, the Regional Water Board is implementing the CTR and SIP, and additional effluent limitations are required for those regulated pollutants that show reasonable potential to exceed water quality standards. CTR-based WQBELs are established for selenium because it shows reasonable potential to exceed state water quality standards. However, since the CTR-based effluent limits for selenium continue to be infeasible for the Discharger to achieve at this time, an extension of the interim limits for selenium are contained in this Order.

1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

2. Satisfaction of Antidegradation Policy

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on benzene, 1,1-dichloroethane, 1,1-dichloroethene, ethylbenzene, naphthalene, tetrachloroethylene, toluene, 1,1,1-trichloroethane, and trichloroethylene. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, these limitations are not more stringent than required by the CWA.

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

Table F-10 Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Flow	gpd	--	576,000
Temperature	°F	--	86
pH[1]	S.U.	--	6.5-8.5
Oil and grease	mg/L	10	15
	lbs/day[2]	48	72
Total settleable solids	ml/L	0.1	0.3
Total suspended solids	mg/L	50	75
	lbs/day	240	721
Turbidity	NTU	50	75
Lead[3]	µg/L	9.8	31
	lbs/day	0.05	0.2
Benzene	µg/L	--	1
	lbs/day	--	0.005
Selenium[3]	µg/L	4.5	6.8
	lbs/day	0.02	0.03

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
1,1-Dichloroethane	µg/L	--	5
	lbs/day	--	0.02
1,1-Dichloroethylene	µg/L	3.2	6
	lbs/day	0.02	0.03
Ethylbenzene	µg/L	--	700
	lbs/day	--	3.4
Ethylene dibromide	µg/L	--	0.05
	lbs/day	--	0.0002
Methyl tertiary butyl ether	µg/L	--	13
	lbs/day	--	0.06
Napthalene	µg/L	--	17
	lbs/day	--	0.1
Tertiary butyl alcohol	µg/L	--	12
	lbs/day	--	0.06
Tetrachloroethylene	µg/L	--	5
	lbs/day	--	0.02
Toluene	µg/L	--	150
	lbs/day	--	0.72
Total petroleum hydrocarbons	µg/L	--	100
	lbs/day	--	0.48
1,1,1-Trichloroethane	µg/L	--	200
	lbs/day	--	1
Trichloroethylene	µg/L	--	5
	lbs/day	--	0.02
Xylene	µg/L	--	1750
	lbs/day	--	8.4
Hydrogen peroxide	mg/L	--	5
	lbs/day	--	24
Acute toxicity	% survival	--[4]	--
Chronic toxicity	TU_c	--[5]	--

[1] The pH must remain within this range at all times.
[2] Mass-based effluent limitations for pollutants are based on a maximum discharge flow rate of 576,000 gpd (0.576 mgd)
[3] Effluent limitations for lead are expressed as total recoverable.
[4] For any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival
[5] The monthly median for chronic toxicity of 100% effluent shall not exceed 1 TU_c in a critical life stage test.

E. Interim Effluent Limitations

An interim effluent limitation for selenium was included in the previous Order. The Discharger was required to comply by March 2, 2008, with the final WQBELs for selenium. On July 26, 2007, the Discharger sent a Request for Extension of Interim Effluent

Limitations to the Regional Water Board. The extension was requested until May 1, 2010. During the requested additional interim period, the Discharger will continue the development of selenium removal technology including construction and operation of a full-scale biological treatment system. A series of tasks with expected completion dates (milestones) for selenium technology development has been presented, beginning June 2008 and ending May 2010. For each milestone, an estimate has been made of the degree of selenium removal that can be achieved. It has been proposed that, during this extended interim period, the selenium discharge limit be reduced in steps corresponding to each milestone. It is expected that upon completion of the final milestone, at the end of the interim period, full compliance with the 4 µg/L limit will be achieved. As a result, the proposed Order contains an extension to the compliance schedule that allows the Discharger until October 21, 2009. to comply with the revised effluent limitation. The most recent RPA resulted in a final limit of 4.5 µg/L for selenium. This was due to the new data set provided by the Discharger and the coefficient of variation used to calculate the final effluent limit. Therefore, this permit includes the 4.5 µg/L final limit for selenium.

40 CFR §131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. The SIP allows 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. Because the CTR-based effluent limits for selenium appear infeasible for the Discharger to achieve at this time, interim limits for selenium are contained in this Order.

The SIP requires that the Regional Water Board 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 the final effluent limitation. This interim limitation shall be effective until October 21, 2009, after which, the Discharger shall demonstrate compliance with the final effluent limitation.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance or existing permit limitations, whichever is more stringent, to maintain existing water quality. Order No. R4-2004-0144 contains effluent limitations for selenium. It should be noted that the Regional Water Board may take appropriate enforcement actions if interim limitations and requirements are not met.

From the effective date of this Order until October 21, 2009, the discharge of effluent from Discharge Serial No. 001 in excess of the following is prohibited:

Constituent (units)	Daily Maximum Concentration	Mass[1] (lbs/day)
Selenium (µg/L)	20	0.10

[1] The mass-based effluent limitations are based on a flow rate of 576,000 gpd.

F. Land Discharge Specifications

[Not Applicable]

G. Reclamation Specifications

[Not Applicable]

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (Section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

B. Groundwater

[Not Applicable]

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

[Not Applicable]

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the discharge from Discharge Point No. 001, as monitored at Monitoring Location M-001, will be required as shown in the MPR (Attachment E of this Order). To determine compliance with effluent limitations established in the permit, and to assess the impact of the discharge on the beneficial uses of the receiving waters, this Order carries over the existing monitoring requirements for all parameters. Monitoring daily for flow and weekly for pH and temperature are required to ensure compliance with effluent limitations. Monthly monitoring requirements for total suspended solids, total settleable solids, total dissolved solids, turbidity, oil and grease, lead, general minerals, chloride, sulfate, sulfides, nitrite+nitrate as nitrogen, total petroleum

hydrocarbons, xylene, MTBE, TBA, ethylene dibromide, methanol, tetrachloroethylene, hydrogen peroxide and BOD_5@20°C are carried over from the previous Order to ensure compliance with effluent limitations. Semiannual monitoring requirements for benzene, 1,1-dichloroethane, 1,1-dichloroethene, ethylbenzene, toluene, 1,1,1-trichloroethane, and trichloroethylene have also been carried over from the previous Order.

Monitoring data during the previous permit term suggest that the Discharger has the potential to exceed the CTR-based effluent limitations for selenium. The proposed Order has carried over a monthly monitoring requirement for selenium, to demonstrate compliance with the CTR-based effluent limits.

In addition, this Order carries over the annual monitoring requirement for acute toxicity, and a quarterly monitoring requirement for chronic toxicity for one year. If the results indicate compliance, the monitoring frequency may be reduced to annually thereafter.

Because the characteristics of the wastewater being treated by the Discharger are not expected to vary significantly over time, grab samples are required for all limited pollutants. This Order also requires the Discharger to collect the effluent sample prior to the effluent entering the storm drain.

The effluent monitoring program for the discharge of treated groundwater through Discharge Serial No. 001 (Latitude 34°00'47" and Longitude 118°24'58") is specified in the Monitoring and Reporting Program.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, Section IV.A.1.a.

D. Receiving Water Monitoring

1. Surface Water

The receiving water monitoring program shall consist of periodic surveys of the receiving water at the location where the effluent enters the storm drain and shall include observations of those physical-chemical characteristics of the receiving water that may be impacted by the discharge.

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. The Discharger is required to perform general observations of

the receiving water when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of: floating or suspended matter, discoloration, visible film or grease, and other observations detailed in the MRP.

2. Groundwater

[Not Applicable]

E. Other Monitoring Requirements

1. Storm Water Monitoring Requirements

Storm water runoff discharges from the facility are subject to requirements stipulated in this NPDES permit and the Discharger is required to comply with all applicable provisions of the Storm Water Pollution Prevention Plan (Attachment A of the Order). This plan includes requirements to develop, implement, and when appropriate update a Storm Water Pollution Prevention Plan (SWPPP) along with Best Management Practices (BMPs) with the intent of preventing all pollutants from contacting storm water and with the intent of keeping all contaminants of concern from moving into receiving waters.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR Part 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification

in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

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

3. Best Management Practices and Pollution Prevention

This provision is based on Section 122.44(k) which includes the requirement to continue updating a SWPPP.

4. Construction, Operation, and Maintenance Specifications

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

5. Special Provisions for Municipal Facilities (POTWs Only)

[Not Applicable]

6. Other Special Provisions

[Not Applicable]

7. Compliance Schedules

a. The interim limitation stipulated in Section IV.A.2 of this Order for selenium shall be in effect for a period not to extend beyond October 21, 2009. Thereafter, the Discharger shall comply with the final effluent limitations specified in Section IV.A.1 of this Order.

b. The Discharger has developed and submitted a compliance plan which identifies the measures that will be taken to reduce the concentrations of selenium in their discharge. The plan has evaluated options that achieve compliance with the final limitation within the deadline specified above.

c. The Discharger shall submit annual reports to describe the progress of studies and/or actions undertaken to reduce contaminant concentrations in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified above.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Equilon Enterprises,

LLC dba Shell Oil Products US. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on January 18, 2008

C. Public Hearing

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

Date:	March 6, 2008
Time:	9 A.M.
Location:	City of Simi Valley, Council Chambers 2929 Tapo Canyon Road Simi Valley, CA 93603

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

Please be aware that dates and venues may change. Our Web address is www.swrcb.ca.gov/rwqcb4 where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Stephanie Turcios at (213) 576-6793.

GENERIC TOXICITY REDUCTION EVALUATION WORKPLAN (TRE) INDUSTRIAL

1. Information and Data Acquisition
   - a. Regulatory Information
     - i. NPDES permit limits
     - ii. Trigger
   - b. Facility Monitoring Data
     - i. In-house monitoring data
     - ii. State agency monitoring data
   - c. Plant and Process Description
     - i. Process and treatment plant description
       - (1) numbers and types of streams
       - (2) their size
       - (3) scheduled changes or events in process stream operation
       - (4) types and configurations of equipment
       - (5) flow equalization facilities
       - (6) records of treatment plant upsets
     - ii. Physical/chemical monitoring data
       - (1) chemical analysis of process streams
       - (2) physical/chemical analyses of treatment streams

2. Houskeeping
   - a. Initiation of housekeeping study
     - i. Identify areas which may contribute to toxicity
     - ii. Reduce these contributions through best management practices (BMPs), administrative, and procedural controls
   - b. Evaluation of housekeeping practices
     - i. Review of plant policies
     - ii. "Walk-through" inspection
   - c. Identification of potential problem areas
     - i. Probability of release of toxic material
     - ii. Type and frequency of release which may occur
     - iii. Quantity of toxic substance involved
     - iii. Toxicity of substances released
     - iv. Potential downstream impact of the substances released
     - v. Effect of release on final effluent
   - d. Identification of corrective measures
     - i. Area cleanup
     - ii. Process or operational changes
     - iii. Material loss collection and recovery
     - iv. Chemical and biological testing of contained waters prior to release from diked storage areas
     - v. Increased storage capacity for contained waters
     - vi. Equipment modifications or changes
   - e. Selection of corrective measures
   - f. Implementation of corrective measures

3. Treatment Plant Optimization
   a. Evaluation of influent wastestreams
      i. Raw chemicals or materials used in the process
      ii. Byproducts or reaction products produced during the process
      iii. Reaction vessels, valves, piping systems, overflow points, and other mechanical aspects of the system
      iv. Wastestreams produced, volumes, and routing paths
      v. Non-point sources
   b. Description and evaluation of the treatment system
      i. Design basis for each constituent, including variability in flow conditions and concentrations
      ii. Treatment sequence
      iii. Performance projections by constituents
      iv. Operational flexibility of each process
      v. Treatment objectives and projected effluent standards
   c. Analysis of treatment system operation
      i. Flow loading
      ii. Mass loading
      iii. Frequency and impact of shock loadings
         (1) normal cleaning and maintenance
         (2) spills and upsets
      iv. Changes in operating procedures

4. Chemical Optimization
   a. Information gathering
      i. Examination of wastestreams produced by specific production processes
      ii. Chemicals and raw materials and their contaminants and by-products used in the process
      iii. Chemicals used in treatment
      iv. Chemicals and material use rates
      v. Percentage of chemical in final product
      vi. Chemical reuse and waste recycling activities
   b. Process chemical review
      i. List all chemicals used
      ii. List all quantities
      iii. Determine pounds per product
      iv. Determine pounds per gallon of wastewater discharged
   c. MSDS Information Review
      i. Obtain MSDS for all process chemicals discharged
      ii. Highlight MSDS sections on aquatic toxicity
      iii. Examine Hazardous Ingredient section and note "hazardous substances" listed
      iv. Categorize all chemicals by hazard and irritation potential and use standard reference to obtain aquatic toxicity information, if possible
   d. Chemical composition screen of incoming raw materials
   e. Outcome of chemical optimization phase
      i. List of all chemicals used in processing and manufacturing the product
      ii. MSDS and literature reviews will be on file when needed
      iii. List of all chemicals and raw material purchased on a monthly basis and a record of production volumes during the same time period

ATTACHMENT H – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site- specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

2. Planning and Organization

a. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in the Monitoring and Reporting Program (Attachment E). The SWPPP shall clearly identify the related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this Order. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the

requirements of this Order. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

3. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION
Form Pollution Prevention Team Review other plans

ASSESSMENT PHASE
Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant Risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

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

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

4. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

5. Description of Potential Pollutant Sources

a. The SWPPP shall include a narrative description of the facility's industrial activities associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal,

or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water. The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Order.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources not authorized by this Order. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All unauthorized non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the unauthorized non-storm water discharges and associated drainage area.

The SWPPP must include BMPs to prevent or reduce contact of unauthorized non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section 7. below.

6. Assessment of Potential Pollutant Sources

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 7 below.

7. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections 5. and 6. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

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

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery.	Fuel oil	Use spill and overflow protection.
		Spills caused by topping off fuel tanks.		Minimize run-on of storm water into the fueling area. Cover fueling area.
		Hosing or washing down fuel oil fuel area.		Use dry cleanup methods rather than hosing down area.
		Leaking storage tanks.		Implement proper spill prevention control program.
		Rainfall running off fuel oil, and rainfall running onto and off fueling area.		Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

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

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all

possible non-structural BMPs options before considering additional structural BMPs (see Section 7.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section 7.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

8. SWPPP General Requirements

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Order.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in thjs Order due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

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

ATTACHMENT I – STATE WATER BOARD MINIMUM LEVELS (ML)

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

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

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		

2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

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

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

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

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

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5

PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

ATTACHMENT J – PRIORITY POLLUTANTS

CTR Number[1]	Parameter	CAS Number	Suggested Analytical Methods
	Metals		
1	Antimony	7440360	[4]
2	Arsenic	7440382	[4]
3	Beryllium	7440417	[4]
4	Cadmium	7440439	[4]
5a	Chromium (III)	16065831	[4]
5a	Chromium (VI)	18540299	[4]
6	Copper	7440508	[4]
7	Lead	7439921	[4]
8	Mercury	7439976	[4]
9	Nickel	7440020	[4]
10	Selenium	7782492	[4]
11	Silver	7440224	[4]
12	Thallium	7440280	[4]
13	Zinc	7440666	[4]
	Miscellaneous		
14	Cyanide	57125	[4]
15	Asbestos	1332214	[4]
16	2,3,7,8-TCDD	1746016	[4]
	Volatile Organics		
17	Acrolein	107028	[4]
18	Acrylonitrile	107131	[4]
19	Benzene	71432	[4]
20	Bromoform	75252	[4]
21	Carbon Tetrachloride	56235	[4]
22	Chlorobenzene	108907	[4]
23	Chlorodibromomethane	124481	[4]
24	Chloroethane	75003	[4]
25	2-Chloroethylvinyl Ether	110758	[4]
26	Chloroform	67663	[4]
27	Dichlorobromomethane	75274	[4]
28	1,1-Dichloroethane	75343	[4]
29	1,2-Dichloroethane	107062	[4]
30	1,1-Dichloroethylene	75354	[4]
31	1,2-Dichloropropane	78875	[4]
32	1,3-Dichloropropylene	542756	[4]
33	Ethylbenzene	100414	[4]
34	Methyl Bromide	74839	[4]
35	Methyl Chloride	74873	[4]

36	Methylene Chloride	75092	[4]
37	1,1,2,2-Tetrachloroethane	79345	[4]
38	Tetrachloroethylene	127184	[4]
39	Toluene	108883	[4]
40	1,2-Trans-Dichloroethylene	156605	[4]
41	1,1,1-Trichloroethane	71556	[4]
42	1,12-Trichloroethane	79005	[4]
43	Trichloroethylene	79016	[4]
44	Vinyl Chloride	75014	[4]
	Xylenes [2]		[4]
	Acid Extractables		
45	2-Chlorophenol	95578	[4]
46	2,4-Dichlorophenol	120832	[4]
47	2,4-Dimethylphenol	105679	[4]
48	2-Methyl-4,6-Dinitrophenol	534521	[4]
	(4,6-dinitro-o-cresol) [3]		[4]
49	2,4-Dinitrophenol	51285	[4]
50	2-Nitrophenol	88755	[4]
51	4-Nitrophenol	100027	[4]
52	3-Methyl-4-Chlorophenol	59507	[4]
	(P-chloro-m-cresol) [3]		[4]
53	Pentachlorophenol	87865	[4]
54	Phenol	108952	[4]
55	2,4,6-Trichlorophenol	88062	[4]
	Base/Neutral Extractables		
56	Acenaphthene	83329	[4]
57	Acenaphthylene	208968	[4]
58	Anthracene	120127	[4]
59	Benzidine	92875	[4]
60	Benzo(a)Anthracene	56553	[4]
61	Benzo(a)Pyrene	50328	[4]
62	Benzo(b)Fluoranthene	205992	[4]
63	Benzo(ghi)Perylene	191242	[4]
	(1,12-Benzoperylene) [3]		[4]
64	Benzo(k)Fluoranthene	207089	[4]
65	Bis(2-Chloroethoxy)Methane	111911	[4]
66	Bis(2-Chloroethyl)Ether	111444	[4]
67	Bis(2-Chloroisopropyl)Ether	108601	[4]
68	Bis(2-Ethylhexyl)Phthalate	117817	[4]
69	4-Bromophenyl Phenyl Ether	101553	[4]
70	Butylbenzyl Phthalate	85687	[4]
71	2-Chloronaphthalene	91587	[4]
72	4-Chlorophenyl Phenyl Ether	7005723	[4]
73	Chrysene	218019	[4]
74	Dibenzo(a,h)Anthracene	53703	[4]

	(1,2,5,6-Dibenzanthracene)[3]		[4]
75	1,2-Dichlorobenzene	95501	[4]
76	1,3-Dichlorobenzene	541731	[4]
77	1,4-Dichlorobenzene	106467	[4]
78	3,3'-Dichlorobenzidine	91941	[4]
79	Diethyl Phthalate	84662	[4]
80	Dimethyl Phthalate	131113	[4]
81	Di-n-Butyl Phthalate	84742	[4]
82	2,4-Dinitrotoluene	121142	[4]
83	2,6-Dinitrotoluene	606202	[4]
84	Di-n-Octyl Phthalate	117840	[4]
85	1,2-Diphenylhydrazine	122667	[4]
86	Fluoranthene	206440	[4]
87	Fluorene	86737	[4]
88	Hexachlorobenzene	118741	[4]
89	Hexachlorobutadiene	87863	[4]
90	Hexachlorocyclopentadiene	77474	[4]
91	Hexachloroethane	67721	[4]
92	Indeno(1,2,3-cd)Pyrene	193395	[4]
93	Isophorone	78591	[4]
94	Naphthalene	91203	[4]
95	Nitrobenzene	98953	[4]
96	N-Nitrosodimethylamine	62759	[4]
97	N-Nitrosodi-n-Propylamine	621647	[4]
98	N-Nitrosodiphenylamine	86306	[4]
99	Phenanthrene	85018	[4]
100	Pyrene	129000	[4]
101	1,2,4-Trichlorobenzene	120821	[4]
	Pesticides & PCBs		
102	Aldrin	309002	[4]
103	alpha-BHC	319846	[4]
104	beta-BHC	319857	[4]
105	gamma-BHC	58899	[4]
106	delta-BHC	319868	[4]
107	Chlordane	57749	[4]
108	4,4'-DDT	50293	[4]
109	4,4'-DDE	72559	[4]
110	4,4'-DDD	72548	[4]
111	Dieldrin	60571	[4]
112	alpha-Endosulfan	959988	[4]
113	beta-Endosulfan	33213659	[4]
114	Endosulfan Sulfate	1031078	[4]
115	Endrin	72208	[4]
116	Endrin Aldehyde	7421934	[4]
117	Heptachlor	76448	[4]
118	Heptachlor Epoxide	1024573	[4]

119	PCB-1016	12674112	[4]
120	PCB-1221	11104282	[4]
121	PCB-1232	11141165	[4]
122	PCB-1242	53469219	[4]
123	PCB-1248	12672296	[4]
124	PCB-1254	11097691	[4]
125	PCB-1260	11096825	[4]
126	Toxaphene	8001352	[4]

1. 40 CFR 131.38(b)(1) number
2. Xylenes are to be analyzed in addition to the priority pollutants
3. Synonym
4. Pollutants shall be analyzed using methods described in 40 CFR Part 136