



California Regional Water Quality Control Board Los Angeles Region



Matthew Rodriguez
Secretary for
Environmental Protection

320 W. 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6600 • FAX (213) 576-6640
<http://www.waterboards.ca.gov/losangeles>

Edmund G. Brown Jr.
Governor

September 14, 2011

Mr. Stephen R. Maguin
Chief Engineer and General Manager
County Sanitation Districts of Los Angeles County
P.O. Box 4998
Whittier, CA 90607-4998

Dear Mr. Maguin:

WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT – JOINT OUTFALL SYSTEM, JOINT WATER POLLUTION CONTROL PLANT (NPDES PERMIT NO. CA0053813, CI-1758)

On May 13, 2011, we sent you tentative Waste Discharge Requirements (WDRs) and NPDES Permit for the Joint Outfall System - Joint Water Pollution Control Plant. Regional Water Board staff considered all comments received by the end of comment period and, where appropriate, modified the tentative WDRs. Subsequently, the revised tentative Order was transmitted under the July 1, 2011 cover letter.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on September 1, 2011, reviewed the revised tentative requirements, considered all comments received, and adopted Order No. R4-2011-0151 for your waste discharge. Order No. R4-2011-0151 serves as your NPDES permit.

Please note the changes made by the Board during the hearing:

1. Section IV.A of the Order (page 13): The Discharger is required to submit a written report to the Regional Water Board if any single performance goal exceedance is 50% or greater.
2. Section I.G of the Fact Sheet (page E-5): This section specifies that the Santa Monica Bay Restoration Commission (SMBRC) will lead the effort to further develop the implementation plan for the Bay Comprehensive Monitoring Program. SMBRC will convene a meeting resulting in a report on progress in implementing the comprehensive monitoring program and the progress report shall be presented at a Spring Regional Water Board meeting.

In addition, the final Order contains changes proposed by staff in Change Sheet that was distributed during the hearing.

The complete final Order will be sent only to the Discharger. However, these documents are available on the Regional Water Board's website for your review. The Regional Water Board's web address is www.waterboards.ca.gov/losangeles/.

California Environmental Protection Agency



Mr. Stephen R. Maguin

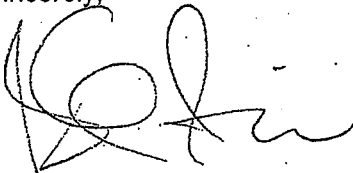
- 2 -

September 14, 2011

Order No. R4-2011-0151 shall become effective on October 1, 2011. You are required to implement the *Monitoring and Reporting Program (MRP)* on the effective date of this Order. The dates that the monitoring and annual reports must be received at the Regional Water Board Office are provided in the *MRP*. Submit all monitoring reports and annual reports to the Regional Water Board, Attn: Information Technology Unit. When submitting monitoring, technical reports, or any correspondence regarding the discharge under Order No. R4-2011-0151 to the Regional Water Board, please include a reference to our *Compliance File No. CI 1758* to assure that the reports are directed to the appropriate staff and file. Please do not combine your discharge monitoring reports with other reports. Submit each type of report as a separate document.

Should you have any questions, please contact Jau Ren Chen at (213) 576-6656.

Sincerely,



Brandi Outwin-Beals, Chief
Municipal Permitting Unit

Enclosures

cc: See attached mailing list

MAILING LIST

Environmental Protection Agency, Region IX, Clean Water Act Standards and Permits (WTR-5)
U.S. Army Corp of Engineers
NOAA, National Maritime Fisheries Service
U.S. Fish and Wildlife Service
State Water Resources Control Board, Division of Water Quality
California Department of Public Health
California Department of Fish and Game, Region 5
California Department of Parks and Recreation, Los Angeles District
California Coastal Commission, South Coast Region
California Coastal Conservancy
Santa Monica Bay Restoration Commission
Los Angeles County, Department of Public Works, Waste Management Division
Los Angeles County, Department of Health Services
Los Angeles County, Lifeguard Association
City of Los Angeles, Department of Public Works, Bureau of Engineering, Wastewater System
Engineering Division
City of Los Angeles, Department of Public Works, Bureau of Sanitation, Industrial Waste
Management
City of Los Angeles, Department of Public Works, Bureau of Sanitation, Watershed Protection
Division
Water Replenishment District of Southern California
West Basin Municipal Water District
City of Carson
City of Hermosa Beach
City of Manhattan Beach
City of Torrance
Environment Now
Heal the Bay
Natural Resources Defense Council
Santa Monica BayKeeper
Sierra Club
Surfriders Foundation
Southern California Coastal Water Research Project
Mr. Jae Kim, Tetra Tech

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

320 W. 4th Street, Suite 200, Los Angeles, California 90013
 Phone (213) 576-6600 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles>

ORDER NO. R4-2011-0151

NPDES NO. CA0053813

WASTE DISCHARGE REQUIREMENTS FOR THE JOINT OUTFALL SYSTEM, JOINT WATER POLLUTION CONTROL PLANT DISCHARGE TO THE PACIFIC OCEAN

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

Table 1. Discharger Information

Discharger	Joint Outfall System
Name of Facility	Joint Water Pollution Control Plant
Facility Address	24501 South Figueroa Street
	Carson, CA 90745
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The Joint Outfall System (ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County) was formerly referred to as the County Sanitation Districts of Los Angeles County. The discharge by the Joint Outfall System 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	Secondary treated wastewater	33 °, 41', 21" N	118 °, 19', 00" W	Pacific Ocean
002	Secondary treated wastewater	33 °, 42', 03" N	118 °, 20', 17" W	Pacific Ocean
003	Secondary treated wastewater	33 °, 42', 05" N	118 °, 20', 20" W	Pacific Ocean
004	Secondary treated wastewater	33 °, 41', 20" N	118 °, 19', 40" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	September 1, 2011
This Order shall become effective on:	October 1, 2011
This Order shall expire on	August 10, 2016
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements, no later than:	180 days prior to the Order expiration date (Title 40, Code of Federal Regulations, part 122.21(d))

IT IS HEREBY ORDERED, that Order No. R4-2006-0042 is terminated upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted pursuant thereto, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted pursuant thereto, the Discharger shall comply with the requirements in this Order.

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 1, 2011.



Samuel Unger, Executive Officer

Table of Contents

I.	Facility Information	4
II.	Findings.....	5
III.	Discharge Prohibitions.....	13
IV.	Effluent Limitations, Performance Goals, and Discharge Specifications	13
	A. Effluent Limitations and Performance Goals.....	13
V.	Receiving Water Limitations	22
	A. Surface Water Limitations	22
VI.	Provisions.....	24
	A. Standard Provisions.....	24
	B. Monitoring and Reporting Program Requirements	26
	C. Special Provisions	27
	1. Reopener Provisions.....	27
	2. Special Studies, Technical Reports and Additional Monitoring Requirements	28
	3. Best Management Practices and Pollution Prevention	28
	4. Construction, Operation and Maintenance Specification	30
	5. Special Provisions for Municipal Facilities (POTWs Only)	31
VII.	Compliance Determination	34

List of Tables

Table 1.	Discharger Information	1
Table 2.	Discharge Location	1
Table 3.	Administrative Information.....	1
Table 4.	Facility Information.....	4
Table 5.	Detailed Descriptions of NPDES Discharge Points	6
Table 6.	Basin Plan Beneficial Uses	8
Table 7.	Ocean Plan Beneficial Uses	9
Table 8.	Effluent Limitations and Performance Goals for Discharge Points 001 and 002	14
Table 9.	Effluent Limitations Discharge Points 003	17
Table 10.	Effluent Limitations Discharge Points 004	18

List of Attachments

Attachment A – Definitions.....	A-1
Attachment B – Location Map.....	B-1
Attachment C – Flow Schematic	C-1
Attachment D – Standard Provisions.....	D-1
Attachment E – Monitoring and Reporting Program (MRP).....	E-1
Attachment F – Fact Sheet.....	F-1
Attachment G – Generic Toxicity Reduction Evaluation (TRE) Workplan.....	G-1
Attachment H – Biosolids/Sludge Management.....	H-1
Attachment I – Pretreatment Reporting Requirements.....	I-1

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Joint Outfall System
Name of Facility	Joint Water Pollution Control Plant
Facility Address	24501 South Figueroa Street
	Carson, CA 90745
	Los Angeles County
Facility Contact, Title, and Phone	Ann Heil, Supervising Engineer, (562) 908-4288 x 2803
Mailing Address	1955 Workman Mill Road, Whittier, CA 90601
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	400 million gallons per day (MGD) monthly average daily dry weather design capacity for secondary treatment and 540 MGD dry weather peak design capacity

II. FINDINGS

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

- A. Background.** The Joint Outfall System (hereinafter Discharger or JOS) is currently discharging under Order No. R4-2006-0042 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0053813, which was adopted on April 6, 2006. The Discharger submitted a Report of Waste Discharge, dated November 9, 2010, and applied for a NPDES permit renewal to discharge up to 400 million gallons per day (MGD) of secondary treated wastewater from the Joint Water Pollution Control Plant, hereinafter Facility or JWPCP. The application was deemed complete on December 30, 2010.

The Joint Outfall System (ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County) was formerly referred to as the County Sanitation Districts of Los Angeles County.

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.

Compliance with Consent Decree. On June 8, 1994, the Discharger entered into a Consent Decree [No. 92 0061 RG (JRx)] with USEPA Region 9 and the Regional Water Board. The Consent Decree primarily requires the Discharger to construct additional secondary treatment facilities and achieve compliance with full secondary treatment at JWPCP by December 31, 2002. The Discharger achieved full secondary treatment on November 8, 2002. On May 29, 2008 the Discharger submitted a certification that all penalties, costs, and fees had been paid; all remedial measures and supplemental projects required by the Decree had been completed; and compliance for twelve consecutive months with the secondary treatment requirements of 40 CFR Section 133.102 was achieved as of November 8, 2003. On January 7, 2009 the Discharger filed a Notice of Termination of Consent Decree with the court and on January 21, 2009, the court acknowledged that the Consent Decree was terminated.

- B. Facility Description.** The Discharger owns and operates JWPCP. The secondary treated effluent, after traveling approximately 6 miles through tunnels, is discharged from Discharge Points 001 and 002 to the Pacific Ocean, a water of the United States, at White Point within the Palos Verdes Peninsula Sub-Watershed that is part of the Santa Monica Bay Watershed. Discharge Point 003 is used only during times of heavy rains to provide hydraulic relief and Discharge Point 004 serves as a standby outfall to provide additional hydraulic relief during the heaviest flows.

The treatment system at JWPCP consists of screening, grit removal, primary sedimentation, pure oxygen activated sludge reactors, secondary clarification, and chlorination. Effluent from the primary sedimentation tanks is biologically treated in pure oxygen activated sludge reactors. The secondary effluent is then clarified, chlorinated and pumped into the outfall manifold. JWPCP has a monthly average daily dry weather design treatment capacity of 400 MGD and a dry weather peak design capacity of 540 MGD. The wet weather peak hydraulic capacity is up to 675 MGD. For the period from September 2009 to August 2010, effluent discharge flow from JWPCP has averaged 280 MGD with a maximum daily flow of 428 MGD. JWPCP receives discharges from more than 900 significant industrial users.

Solid fractions recovered from wastewater treatment processes include grit, primary screenings, primary sludge and skimmings, thickened waste activated sludge, digested sludge screenings and digester cleaning solids. The fine solids (grit, primary screenings, digested sludge screenings, digester cleaning solids) which are primarily inorganic materials are hauled away to a landfill. The remaining solid fractions (primary sludge and skimmings, thickened waste activated sludge) are anaerobically digested on-site. The digested solids are screened, and dewatered using scroll centrifuges. The dewatered cake contains approximately 27% solids (Class B biosolids). JWPCP generates approximately 118,000 dry metric tons of Class B biosolids per year. The biosolids are hauled off-site for use in composting and land application, combined with municipal solid waste for co-disposal, or processed into a renewable fuel for cement kilns.

Methane gas generated in the anaerobic digestion process is used to produce power and digester heating steam in a total energy facility that utilizes gas turbines and waste-heat recovery steam generators. The on-site generation of electricity permits the JWPCP to produce its own electricity.

Attachment B provides a location map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Descriptions of Discharge Points. JWPCP has fifteen discharge/bypass points (Discharge Points 001 through 015). Four outfalls (Discharge Points 001 through 004) are located at White Point, off the Palos Verdes Peninsula. Discharge Points 001 and 002 are routinely used for discharge of treated wastewater. Discharge Point 003 is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. Discharge Point 004 serves as a standby outfall to provide additional hydraulic relief during the very heaviest flows. These four outfalls are described as follows:

Table 5. Detailed Descriptions of NPDES Discharge Points

Discharge Point	Description
001	<p>White Point 120-inch diameter ocean outfall This outfall routinely discharges approximately 65% of the effluent from the JWPCP. It discharges south of the shoreline off White Point, San Pedro. The outfall is 7440 ft long to the beginning of a single L-shaped diffuser leg which is 4440 ft long. Depth at the beginning of the diffuser is 167 ft and at the end of the diffuser is 190 ft.</p>
002	<p>White Point 90-inch diameter ocean outfall This outfall routinely discharges approximately 35% of the effluent from the JWPCP. It discharges southwest of the shoreline off White Point, San Pedro. The outfall is 7982 ft long to the beginning of a y-shaped diffuser with two legs. Each leg is 1208 ft long. Depth at the beginning of the diffusers is 196 ft and at the end of the diffusers is 210 ft.</p>
003	<p>White Point 72-inch diameter ocean outfall This outfall is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. When used, it discharges off the White Point shoreline between Discharge Points 001 and 002 and about 160 ft below the ocean surface. The outfall is about 6500 ft long and connects to one of three legs of a y-shaped diffuser upstream of the y-intersection. Each leg is approximately 200 ft long.</p>
004	<p>White Point 60-inch diameter ocean outfall This outfall is used as a standby to provide additional hydraulic relief during the heaviest flow. When used, it discharges off the White Point shoreline between Discharge Points 002 and 003 and about 110 ft below the ocean surface. The outfall is about 5000 ft long and connects to a single, very short diffuser.</p>

Two discharge points (006 and 013) have been eliminated following facility modifications. The remaining nine discharge points, with seven of them being bypass points (Discharge Points 007-012 and 014) located prior to the headworks, provide for overflow, emergency bypass, and/or hydraulic relief of the JWPCP. This permit does not authorize any discharge from these nine discharge points (Discharge Points 005, 007-012, 014, and 015).

JWPCP is part of an integrated network of facilities, known as the Joint Outfall System (JOS), which incorporates JWPCP and six upstream water reclamation plants - La Cañada, Whittier Narrows, San Jose Creek, Pomona, Los Coyotes and Long Beach. It treats municipal and industrial wastewater. The six upstream plants are connected to a common sewer system, which allows for the diversion of desired flows into or around each upstream plant. The flow from the six upstream plants can be bypassed, to a limited extent, to JWPCP. The sludge generated from the upstream plants are returned to the joint outfall trunk sewers and conveyed to JWPCP for further treatment. The JOS serves an urban area of 654 square miles and includes all or part of 78 cities in addition to multiple communities and unincorporated areas. The JOS provides wastewater treatment services to much of Los Angeles County. There are approximately five million people in the JOS service area.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by 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 of the California 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 from the application, monitoring reports and other available information. The Fact Sheet (Attachments 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 I are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under California Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing regulations at part 125.3, title 40 of the Code of Federal Regulations¹ (hereinafter 40 CFR), require that NPDES permits include limitations, which meet applicable technology-based requirements, at a minimum. The discharge authorized by this Order must meet minimum federal technology-based requirements for POTWs at 40 CFR part 133. 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 40 CFR part 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve water quality standards. 40 CFR part 122.44(d)(1)(i) requires that permits include water quality-based effluent limitations (WQBELs) for all pollutants, which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated and will be abbreviated as "40 CFR part number."

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 40 CFR part 122.44(d)(1)(vi). USEPA has applied CWA section 403(c) and 40 CFR part 125, subpart M, following 40 CFR part 122.

H. Water Quality Control Plans. On June 13, 1994, the Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan), as amended, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for Pacific Ocean. 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. Basin Plan beneficial uses applicable to the Pacific Ocean are shown in Table 6:

Table 6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002, 003, and 004	Point Vicente Beach, Royal Palms Beach, and White Point Beach	<p><u>Existing:</u> Navigation (NAV), contact (REC-1) and non-contact (REC-2) water recreation, commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), and shellfish harvesting (SHELL).</p> <p><u>Potential:</u> Spawning, reproduction, and/or early development of fish (SPWN).</p>
	Nearshore Zone (The zone bounded by the shoreline and a line 1000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline)	<p><u>Existing:</u> Industrial service supply (IND), navigation (NAV), contact (REC-1) and non-contact (REC-2) water recreation, commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), preservation of biological habitats (BIOL), preservation of rare, threatened, or endangered species (RARE), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development of fish (SPWN).and shellfish harvesting (SHELL).</p>
	Offshore Zone	<p><u>Existing:</u> Industrial service supply (IND), navigation (NAV), contact (REC-1) and non-contact (REC-2) water recreation, commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), preservation of rare, threatened, or endangered species (RARE), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development of fish (SPWN).and shellfish harvesting (SHELL).</p>

Requirements of this Order implement the Basin Plan.

I. Impaired Water Bodies on CWA 303(d) List. On June 28, 2007, USEPA approved California's 2006 section 303(d) List of Water Quality Limited Segments. The list (hereinafter referred to as the 303(d) list) identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality-limited water bodies).

Santa Monica Bay (Offshore and Nearshore) is on the 303(d) list for the following pollutants/stressors, from point and non-point sources: DDT (dichlorodiphenyltrichloroethane) (tissue & sediment), debris, fish consumption advisory, PCBs (polychlorinated biphenyls) (tissue & sediment), and sediment toxicity. Both DDT (Fish consumption advisory for DDT) and PCBs (Fish consumption advisory for PCBs) are also listed as impairments for Royal Palms Beach, and White Point Beach. Total Maximum Daily Loads (TMDLs) for pollutants/stressors on the 303(d) list for Santa Monica Bay, Royal Palms Beach, and White Point Beach are scheduled for 2019.

The receiving waters in the Palos Verdes Peninsula watershed are impacted primarily because of elevated concentrations of contaminants such as PCBs and DDT. Between approximately 1950 and 1971, Montrose Chemical Corporation of California, Inc., a DDT manufacturing plant in Los Angeles County, discharged wastewater containing significant concentrations of DDT to the Joint Outfall System which were conveyed to JWPCP. The DDT was ultimately discharged to the ocean through the White Point outfalls. PCBs were also discharged from the White Point ocean outfall. Historically, PCBs entered the Joint Outfall System as the result of discharges from several sources in the greater Los Angeles area.

The highest concentrations of DDT and PCB are in a layer of low density sewage-derived sediments around the main sewer outfalls at White Point on the Palos Verdes Shelf. USEPA has designated the DDT/PCB contaminated area as a Superfund site and has been investigating the feasibility of various technologies for remediating the contaminated sediments. In 2009, USEPA signed interim Record of Decision (ROD) that selected a cleanup remedy for Palos Verdes Shelf. The selected remedy has three components: placing a cover of clean silty sand over the portion of the contaminated sediment deposit that has the highest contaminant surface concentrations and appears to be erosive; monitoring the natural recovery that is occurring in other areas of the Shelf; and continuing the Institutional Controls program that uses outreach and education, enforcement and monitoring to minimize consumption of fish that contain DDTs and PCBs.

J. California Thermal Plan. In 1972, the State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan), as amended. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order implements the Thermal Plan.

K. California Ocean Plan. In 1972, the State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan) and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005 and 2009. The latest amendment became effective on October 8, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean waters of the State. Ocean Plan beneficial uses applicable to ocean waters of the State are shown in Table 7:

Table 7. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002, 003, and 004	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Area of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

To protect the beneficial uses in ocean water, the Ocean Plan establishes water quality objectives and a program implementation. Requirements of this Order implement the Ocean Plan.

- L. Santa Monica Bay Restoration Plan.** JWPCP discharges to Santa Monica Bay, one of the most heavily used recreational areas in California. Recognizing the importance of the Bay as a national resource, the State of California and USEPA nominated and Congress included Santa Monica Bay in the National Estuary Program. This led to the formation of the Santa Monica Bay Restoration Project (currently named Santa Monica Bay Restoration Commission) that developed the Bay Restoration Plan (BRP), which serves as a blueprint for restoring and enhancing the Bay. The Regional Water Board plays a lead role in the implementation of the BRP. Three of the proposed priorities of the BRP are reduction of pollutants of concern at the source (including municipal wastewater treatment plants), attainment of full secondary treatment at the City of Los Angeles' Hyperion Treatment Plant and the County Sanitation Districts of Los Angeles County's Joint Water Pollution Control Plant, and implementation of the mass emission approach for discharges of pollutants to the Bay.
- M. Alaska Rule.** USEPA has revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR part 131.21; 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (hereinafter Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- N. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (5-day) (BOD₅), total suspended solids (TSS), and pH; and percent removal of BOD₅ and TSS, which implement the minimum applicable federal technology-based requirements for POTWs. Also, effluent limitations consisting of restrictions on oil and grease, settleable solids, and turbidity more stringent than federal technology-based requirements are necessary to implement State treatment standards in Table A of the Ocean Plan. Water quality-based effluent limitations consisting of restrictions on chlorine residual, acute toxicity, chronic toxicity, chlordane, hexachlorobenzene, DDT, PCBs, TCDD equivalents, 3,3-dichlorobenzidine, benzidine and toxaphene 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. Collectively, restrictions on individual pollutants in this Order are no more stringent than required by the CWA.
- O. Antidegradation Policy.** 40 CFR part 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. This resolution incorporates the federal antidegradation policy, where the federal policy applies under federal law. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates, by reference, both State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F), the permitted discharge is consistent with the antidegradation provision of 40 CFR part 131.12 and State Water Board Resolution 68-16.
- P. Anti-Backsliding Requirements.** CWA sections 402(o)(2)/303(d)(4) and 40 CFR part 122.44(l) prohibit backsliding and require effluent limitations, permit conditions, and standards in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet (Attachment F), this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

- Q. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 United States Code sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, 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.** 40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. California Water Code sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. This Monitoring and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.
- S. Standard and Special Provisions.** Standard Provisions that apply to all NPDES permits, in accordance with 40 CFR part 122.41 and additional provisions that apply to POTWs, in accordance with 40 CFR part 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. The rationale for the special provisions contained in this Order is provided in the Fact Sheet (Attachment F).
- T. Sanitary Sewer Overflows.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006, as amended. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The Discharger's collection system is part of the POTW that is subject to this Order. The Discharger must comply with both the General Order including its future amendments and this Order.
- U. Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR part 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This Order contains sewage sludge/biosolids requirements pursuant to 40 CFR 503 that are applicable to the Discharger.
- V. Pretreatment.** In compliance with 40 CFR part 403, the JOS developed a Pretreatment Program. In 1989, USEPA delegated the authority to administer pretreatment programs in California to the State and Regional Water Boards. Thus, this Regional Water Board became the approved authority for pretreatment programs in Los Angeles and Ventura Counties.

This Order includes the JOS's approved Pretreatment Program and requires the JOS to continue implementation and control of the Program throughout the JOS's service area, including contributing jurisdictions. The POTW, as Control Authority, may exercise its authority over the entire service area directly, as provided by State law, or may elect to enter into contracts or other multi-jurisdictional agreements with the contributing jurisdictions. In case the POTW elects to enter into inter-jurisdictional agreements, the POTW must ensure that discharges received from entities outside its political boundaries are regulated to the same extent as are the discharges from within its political boundaries.

- W. Performance Goals.** Chapter III, Section F.2, of the 2009 Ocean Plan allows the Regional Water Board to establish more restrictive water quality objectives and effluent limitations than those set forth in the Ocean Plan as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A Final Report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force, September 30, 1993*) that was adopted by the Regional Water Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order. This approach is consistent with the antidegradation policy in that it requires the Discharger to maintain its treatment level and effluent quality, recognizing normal variations in treatment efficiency and sampling and analytical techniques. However, this approach does not address substantial changes in treatment plant operations that could significantly affect the quality of the treated effluent.

The performance goals are based upon the actual performance of JWPCP and are specified only as an indication of the treatment efficiency of the Facility. Performance goals are intended to minimize pollutant loading (primarily for toxics) while maintaining the incentive for future voluntary improvement of water quality, whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered as limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted. The methodology for calculating performance goals is described in the Fact Sheet (Attachment F).

- X. Mass Emission Benchmarks.** To address the uncertainty due to potential increases in toxic pollutant loadings from the JWPCP discharge to the marine environment during the five-year permit term, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with State and federal antidegradation policies at the time of permit reissuance, 12-month average mass emission benchmarks have been established for effluent discharged through Discharge Points 001 and 002. These mass emission benchmarks are not enforceable water quality based effluent limitations. They may be re-evaluated and revised during the five-year permit term. The methodology for calculating mass emission benchmarks is described in the Fact Sheet (Attachment F).
- Y. 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.
- Z. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R4-2006-0042, except for enforcement purposes, and in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act, and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Ocean Plan Discharge Prohibitions

1. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
2. Waste shall not be discharged to designated Areas of Special Biological Significance (ASBS).
3. Pipeline discharge of sludge to the ocean is prohibited by federal law; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited by the Ocean Plan. Discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.

It is the policy of the SWRCB that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment.

Therefore, if federal law is amended to permit such discharge, which could affect California waters, the SWRCB may consider requests for exceptions to this section under Chapter III of the Ocean Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project

4. The bypassing of untreated waste containing concentrations of pollutants in excess of those of Table A or Table B of the Ocean Plan to the ocean is prohibited.
- B. The bypassing of untreated or partially treated wastes to the ocean is prohibited except as allowed in Standard Provisions I.G of Attachment D.

IV. EFFLUENT LIMITATIONS, PERFORMANCE GOALS, AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals

Effluent limitations for Discharge Points 001, 002, 003 and 004 are given below. The discharge of an effluent with constituents in excess of effluent limitations is prohibited.

The performance goals for Discharge Points 001 and 002 are prescribed below. The listed performance goals are not enforceable effluent limitations or standards. However, the Discharger shall maintain, if not improve, its treatment efficiency. Any exceedance of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance is 50% greater than the performance goal or occurs three times or more in five successive monitoring periods or any single exceedance occurs for aldrin and heptachlor epoxide, the Discharger shall submit a written report to the Regional Water Board on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation, if necessary.

1. Final Effluent Limitations and Performance Goals - Discharge Points 001 and 002
(Initial dilution ratio = 166:1)

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001 and 002 when Discharge Points 001 and 002 are solely used as outfalls, with compliance measured at Monitoring Location EFF-001 and Manifold Stations (EFF-002A and 002B) as described in the attached MRP (Attachment E).

Table 8. Effluent Limitations and Performance Goals for Discharge Points 001 and 002
(Footnotes are specified on pages 18 through 21 of this Order.)

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
pH ^{5,6,7}	standard units	--	--	--	6.0	9.0	--
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	--	75	--
	lbs/day	48,200	72,200	144,500	--	--	--
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	--	3.0	--
Turbidity ⁷	NTU	75	100	--	--	225	--
Marine Aquatic Life Toxicants⁹							
Arsenic ^{10,11}	µg/L	--	--	--	--	--	2.5 ^a
Cadmium ^{10,11}	µg/L	--	--	--	--	--	0.1 ^b
Chromium (VI) ^{10,11}	µg/L	--	--	--	--	--	1.5 ^b
Copper ^{10,11,12}	µg/L	--	--	--	--	--	4.9 ^a
Lead ^{10,11,12}	µg/L	--	--	--	--	--	0.4 ^a
Mercury ^{10,11}	µg/L	--	--	--	--	--	0.04 ^c
Nickel ^{10,11}	µg/L	--	--	--	--	--	13 ^c
Selenium ^{10,11}	µg/L	--	--	--	--	--	7.6 ^c
Silver ^{10,11,12}	µg/L	--	--	--	--	--	0.2 ^b
Zinc ^{10,11,12}	µg/L	--	--	--	--	--	37 ^a
Cyanide ¹¹	µg/L	--	--	--	--	--	19 ^a
Chlorine Residual ¹³ (at Manifold Stations)	µg/L	330	--	1,300	--	10,000	196 ^a
	lbs/day	1,060	--	4,170	--	--	--
Ammonia as N ¹¹	mg/L	--	--	--	--	--	40 ^c
Phenolic compounds (non-chlorinated) ^{11,14}	µg/L	--	--	--	--	--	3.6 ^c

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
Phenolic compounds (chlorinated) ^{11, 15}	µg/L	--	--	--	--	--	1.9 ^b
Endosulfan ^{11, 16}	µg/L	--	--	--	--	--	0.015 ^b
HCH ^{11, 17}	µg/L	--	--	--	--	--	0.015 ^b
Endrin ¹¹	µg/L	--	--	--	--	--	0.01 ^b
Acute toxicity ¹⁸	TUa	--	--	5.3	--	--	--
Chronic toxicity ¹⁹	TUc	--	--	167	--	--	--
Radioactivity							
Gross alpha	pCi/L	--	--	--	--	--	6.3 ^a
Gross beta	pCi/L	--	--	--	--	--	29 ^a
Human Health Toxicants – Non Carcinogens⁹							
Acrolein ¹¹	µg/L	--	--	--	--	--	5.2 ^b
Antimony ^{10,11}	µg/L	--	--	--	--	--	9.8 ^c
Bis(2-chloroethoxy) methane ¹¹	µg/L	--	--	--	--	--	1.3 ^b
Bis(2-chloroisopropyl) ether ¹¹	µg/L	--	--	--	--	--	1.6 ^b
Chlorobenzene ¹¹	µg/L	--	--	--	--	--	1.2 ^b
Chromium (III) ^{10,11}	µg/L	--	--	--	--	--	3.3 ^a
Di-n-butyl-phthalate ¹¹	µg/L	--	--	--	--	--	4.4 ^c
Dichlorobenzenes ^{11, 20}	µg/L	--	--	--	--	--	0.5 ^c
Diethyl phthalate ¹¹	µg/L	--	--	--	--	--	2.1 ^b
Dimethyl phthalate ¹¹	µg/L	--	--	--	--	--	1.9 ^b
2-Methyl-4,6-dinitrophenol ¹¹	µg/L	--	--	--	--	--	13 ^b
2,4-Dinitrophenol ¹¹	µg/L	--	--	--	--	--	17 ^b
Ethyl benzene ¹¹	µg/L	--	--	--	--	--	1.9 ^b
Fluoranthene ¹¹	µg/L	--	--	--	--	--	1.9 ^b
Hexachlorocyclopentadiene ¹¹	µg/L	--	--	--	--	--	7.5 ^b
Nitrobenzene ¹¹	µg/L	--	--	--	--	--	2.2 ^b
Thallium ^{10, 11}	µg/L	--	--	--	--	--	0.6 ^b
Toluene ¹¹	µg/L	--	--	--	--	--	0.5 ^c
Tributyltin ¹¹	µg/L	--	--	--	--	--	0.01 ^b
1,1,1-Trichloroethane ¹¹	µg/L	--	--	--	--	--	1.8 ^b
Human Health Toxicants – Carcinogens⁹							
Acrylonitrile ¹¹	µg/L	--	--	--	--	--	2.7 ^b
Aldrin ¹¹	µg/L	--	--	--	--	--	0.0037 ^d
Benzene ¹¹	µg/L	--	--	--	--	--	0.75 ^b
Benzidine	µg/L	0.012	--	--	--	--	^e
	lbs/day	0.039	--	--	--	--	--
Beryllium ^{10, 11}	µg/L	--	--	--	--	--	0.15 ^b
Bis(2-chloroethyl) ether ¹¹	µg/L	--	--	--	--	--	0.95 ^b

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
Bis(2-ethylhexyl) phthalate ¹¹	µg/L	--	--	--	--	--	17 ^c
Carbon tetrachloride ¹¹	µg/L	--	--	--	--	--	1 ^b
Chlordane ²¹	µg/L	0.0038	--	--	--	--	e
	lbs/day	0.012	--	--	--	--	--
Chlorodibromomethane ¹¹	µg/L	--	--	--	--	--	0.6 ^c
Chloroform ¹¹	µg/L	--	--	--	--	--	30 ^c
DDT ²²	µg/L	0.028	--	--	--	--	0.015 ^b
	lbs/day	0.090	--	--	--	--	--
1,4-Dichlorobenzene ¹¹	µg/L	--	--	--	--	--	1 ^c
3,3'-Dichlorobenzidine	µg/L	1.4	--	--	--	--	e
	lbs/day	4.5	--	--	--	--	--
1,2-Dichloroethane ¹¹	µg/L	--	--	--	--	--	0.6 ^c
1,1-Dichloroethylene ¹¹	µg/L	--	--	--	--	--	1.1 ^b
Bromodichloromethane ¹¹	µg/L	--	--	--	--	--	2 ^c
Dichloromethane ¹¹	µg/L	--	--	--	--	--	3 ^c
1,3-Dichloropropene ¹¹	µg/L	--	--	--	--	--	0.65 ^b
Dieldrin ¹¹	µg/L	--	--	--	--	--	0.005 ^b
2,4-Dinitrotoluene ¹¹	µg/L	--	--	--	--	--	1 ^b
1,2-Diphenylhydrazine ¹¹	µg/L	--	--	--	--	--	0.65 ^b
Halomethanes ^{11, 23}	µg/L	--	--	--	--	--	1 ^c
Heptachlor ¹¹	µg/L	--	--	--	--	--	0.005 ^b
Heptachlor epoxide ¹¹	µg/L	--	--	--	--	--	0.0033 ^d
Hexachlorobenzene	µg/L	0.035	--	--	--	--	e
	lbs/day	0.11	--	--	--	--	--
Hexachlorobutadiene ¹¹	µg/L	--	--	--	--	--	0.7 ^b
Hexachloroethane ¹¹	µg/L	--	--	--	--	--	0.7 ^b
Isophorone ¹¹	µg/L	--	--	--	--	--	0.65 ^b
N-Nitrosodimethylamine ¹¹	µg/L	--	--	--	--	--	0.7 ^b
N-Nitrosodi-N-propylamine ¹¹	µg/L	--	--	--	--	--	0.6 ^b
N-Nitrosodiphenylamine ¹¹	µg/L	--	--	--	--	--	0.75 ^b
PAHs ^{11, 24}	µg/L	--	--	--	--	--	0.95 ^b
PCBs ²⁵	µg/L	0.0032	--	--	--	--	e
	lbs/day	0.010	--	--	--	--	--
TCDD equivalents ²⁶	pg/L	0.65	--	--	--	--	e
	lbs/day	2.1x 10 ⁻⁶	--	--	--	--	--
1,1,2,2-Tetrachloroethane ¹¹	µg/L	--	--	--	--	--	0.4 ^b
Tetrachloroethylene ¹¹	µg/L	--	--	--	--	--	20 ^a
Toxaphene	µg/L	0.035	--	--	--	--	e
	lbs/day	0.11	--	--	--	--	--
Trichloroethylene ¹¹	µg/L	--	--	--	--	--	0.85 ^b
1,1,2-Trichloroethane ¹¹	µg/L	--	--	--	--	--	0.45 ^b

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
2,4,6-Trichlorophenol ¹¹	µg/L	--	--	--	--	--	0.6 ^b
Vinyl chloride ¹¹	µg/L	--	--	--	--	--	1.3 ^b

2. Final Effluent Limitations – Discharge Point 003 (Initial dilution ratio = 150:1)

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 003 when Discharge Point 003 is also used as an outfall, with compliance measured at Monitoring Location EFF-001 and Manifold station EFF-002A as described in the attached MRP.

Table 9. Effluent Limitations for Discharge Point 003

(Footnotes are specified on pages 18 through 21 of this Order.)

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
pH ^{5,6,7}	standard units	--	--	--	6.0	9.0	--
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	--	75	--
	lbs/day	48,200	72,200	144,500	--	--	--
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	--	3.0	--
Turbidity ⁷	NTU	75	100	--	--	225	--
Marine Aquatic Life Toxicants⁹							
Chlorine Residual ¹³	µg/L	300	--	1,200	--	9,100	--
Acute toxicity ¹⁸	TUa	--	--	4.8	--	--	--
Chronic toxicity ¹⁹	TUc	--	--	151	--	--	--
Human Health Toxicants – Carcinogens⁹							
Benzidine	µg/L	0.010	--	--	--	--	--
Chlordane ²¹	µg/L	0.0034	--	--	--	--	--
DDT ²²	µg/L	0.026	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	1.2	--	--	--	--	--
Hexachlorobenzene	µg/L	0.032	--	--	--	--	--
PCBs ²⁵	µg/L	0.0029	--	--	--	--	--
TCDD equivalents ²⁶	pg/L	0.59	--	--	--	--	--
Toxaphene	µg/L	0.032	--	--	--	--	--

3. Final Effluent Limitations – Discharge Point 004 (Initial dilution ratio = 115:1)

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 004 when Discharge Point 004 is also used as an outfall, with compliance measured at Monitoring Location EFF-001 and Manifold station EFF-002B as described in the attached MRP.

Table 10. Effluent Limitations for Discharge Point 004
(Footnotes are specified on pages 18 through 21 of this Order.)

Parameter	Units	Effluent Limitations ^{1,3}					Performance Goals ²
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Minimum ⁵	Instantaneous Maximum ⁵	Average Monthly
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	--
	lbs/day	96,300	144,500	--	--	--	--
pH ^{5, 67}	standard units	--	--	--	6.0	9.0	--
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	--	75	--
	lbs/day	48,200	72,200	144,500	--	--	--
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	--	3.0	--
Turbidity ⁷	NTU	75	100	--	--	225	--
Marine Aquatic Life Toxicants⁹							
Chlorine Residual ¹³	µg/L	230	--	930	--	7,000	--
Acute toxicity ¹⁸	TUa	--	--	3.8	--	--	--
Chronic toxicity ¹⁹	TUc	--	--	116	--	--	--
Human Health Toxicants – Carcinogens⁹							
Benzidine	µg/L	0.008	--	--	--	--	--
Chlordane ²¹	µg/L	0.0027	--	--	--	--	--
DDT ²²	µg/L	0.020	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	0.93	--	--	--	--	--
Hexachlorobenzene	µg/L	0.024	--	--	--	--	--
PCBs ²⁵	µg/L	0.0022	--	--	--	--	--
TCDD equivalents ²⁶	pg/L	0.45	--	--	--	--	--
Toxaphene	µg/L	0.024	--	--	--	--	--

Footnotes for Effluent Limitations and Performance Goals (Tables 8, 9 and 10)

¹ Effluent limitations for conventional, nonconventional, and toxic pollutants were calculated based on effluent limitations in *Table A* and water quality objectives in *Table B* of the Ocean Plan. The minimum dilution ratios used to calculate effluent limitations for nonconventional and toxic pollutants based on water quality objectives in *Table B* of the Ocean Plan are 166:1 (i.e., 166 parts seawater to one part effluent) for Discharge Points 001 and 002, 150:1 for Discharge Point 003, and 115:1 for Discharge Point 004, respectively.

The daily mass emission calculations are based on the average design flow rate of 385 million gallons per day (mgd) specified in the 1997 Joint Water Pollution Control Plant (JWPCP) permit according to the Ocean Plan equation: $\text{lbs/day} = 0.00834 \times C_e$ (effluent concentration, $\mu\text{g/L}$) $\times Q$ (flow rate, MGD). During storm events when flow exceeds the dry weather design capacity, the mass emission rate limits shall not apply. Only the concentration limits shall apply.

2. The performance goals are based upon the actual performance data (May 2006 to August 2010) of the JWPCP and are specified only as an indication of the treatment efficiency of the plant. They are not considered effluent limitations or standards for the treatment plant. JWPCP shall make best efforts to maintain, if not improve, the effluent quality at the level of these performance goals. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted. Please refer to Fact Sheet for procedures.
3. See Section VII of this Order and Attachment A for definition of terms.
4. The maximum daily effluent concentration limitation shall apply to flow-weighted 24-hour composite samples. It may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of the instability of the constituents.
5. The instantaneous maximum/minimum effluent limitations shall apply to grab sample results.
6. The effluent limitations are based on secondary treatment standards, 40 CFR part 133.102.
7. Based on Ocean Plan Table A effluent limitations.
8. Effluent limitation is the same as that in Order No. R4-2006-0042 and is more stringent than the limitation specified in the Ocean Plan (Antibacksliding Policy).
9. Effluent limitations for these constituents are based on Ocean Plan Table B objectives using initial dilution ratios of 166:1 (i.e., 166 parts of seawater to 1 part effluent) for Discharge Points 001 and 002, 150:1 for Discharge Point 003, and 115:1 for Discharge Point 004, respectively. However, for the calculation of the acute toxicity limitation, only 10% of the initial dilution ratio is used.
10. Represents total recoverable metal value.
11. These constituents did not show reasonable potential to exceed Ocean Plan Table B objectives; therefore, no numerical water quality-based effluent limits are prescribed.
12. These constituents are pollutants of concern identified by the Santa Monica Bay Restoration Plan that are causing or could cause deterioration of designated beneficial uses in Santa Monica Bay. Mass emission performance caps were set in Order No. 97-090. In this Order, 12-month average mass emission benchmarks have been established in the MRP (Attachment E) for these pollutants of concern to serve same purpose.
13. These total chlorine residual limits shall only apply to continuous discharge exceeding two hours.

For intermittent discharges not exceeding two hours, water quality objectives for total chlorine residual shall be determined through the use of the following equation:

$$\log y = -0.43(\log x) + 1.8$$

where: y = the water quality objective (in $\mu\text{g/L}$) to apply when chlorine is being discharged;
 x = the duration of uninterrupted chlorine discharge in minutes.

For intermittent discharges not exceeding two hours, the applicable total chlorine residual limit (daily maximum) shall then be calculated using the above calculated water quality objective according to procedures outlined in Section III.C.4.a of the 2009 Ocean Plan. The minimum dilution ratios shall be 166:1 for Discharge Points 001 and 002, 150:1 for Discharge Point 003, and 115:1 for Discharge Point 004.

14. Nonchlorinated phenolic compounds shall mean the sum of Phenol, 2,4-Dimethylphenol, 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol and 2-Methyl-4,6-dinitrophenol.
15. Chlorinated phenolic compounds mean the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-Methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.
16. Endosulfan shall mean the sum of endosulfan-alpha, endosulfan-beta, and endosulfan sulfate.
17. HCH shall mean the sum of alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.
18. Expressed as Acute Toxicity Units (TUa)

$$TUa = 100/LC50$$

Where:

Lethal Concentration, 50 Percent (LC50) is expressed as the estimate of the percent effluent concentration that causes death in 50% of the test population, in the time period prescribed by the toxicity test, as required by this permit.

When it is not possible to measure the LC50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \log (100-S)/1.7$$

Where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

19. Expressed as Chronic Toxicity Units (TUc)

$$TUc = 100/NOEC$$

Where:

NOEC (No Observed Effect Concentration) is expressed as the maximum percent effluent that causes no observable effect on a test organism as determined by the result of a critical life stage toxicity test, as required by this permit.

20. Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.
21. Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma and oxychlordane.
22. DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
23. Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).
24. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1, 2-benzanthracene, 3, 4-benzofluoranthene, benzo[k]-fluoranthene, 1, 12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1, 2, 3-cd]pyrene, phenanthrene and pyrene.
25. PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
26. TCDD equivalents shall mean the sum of the concentration of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0

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

- a. Numerical effluent quality performance goals are derived statistically using data reported by the Discharger from May 2006 to August 2010. Please refer to Fact Sheet (Attachment F) for calculation procedures.
- b. More than 80 percent of the monitoring data for these constituents were not detected. Performance goals are set at five times (for carcinogens and marine aquatic life toxicants) or ten times (for noncarcinogens) the method detection limits in the 2010 monitoring reports.
- c. For this pollutant, the maximum detected effluent concentration (MDEC) from May 2006 to August 2010 is prescribed as the performance goal. Please refer to Fact Sheet (Attachment F) for procedures.
- d. These constituents were determined to have no reasonable potential to exceed the respective water quality objectives. However, the calculated performance goals are greater than the respective calculated Ocean Plan effluent limitations. Therefore, calculated effluent limitations are prescribed as the performance goals.
- e. These constituents were determined to have reasonable potential to exceed the respective water quality objectives. Therefore, effluent limitations are prescribed for these constituents. Since the calculated performance goals are greater than the respective effluent limitations, no performance goals are prescribed.

- 4. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
- 5. The temperature of wastes discharged shall not exceed 100°F, which takes into account the very large dilution credit based upon BPJ.
- 6. The Discharger shall ensure that bacterial concentrations in the effluent discharge do not result in an exceedance of the JWPCP waste load allocation of zero (0) days exceedance of single sample numeric limits or geometric mean limits (based on Basin Plan bacteria objectives for marine waters designated REC-1, see section V.A.1.a. below) at shoreline compliance points, as specified in Regional Water Board Resolution Nos. 2002-004 and 2002-022.
- 7. Waste discharged to the ocean must be essentially free of:
 - a. Material that is floatable or will become floatable upon discharge.
 - b. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.
 - c. Substances that will accumulate to toxic levels in marine waters, sediments or biota.

- d. Substances that significantly decrease the natural light to benthic communities and other marine life.
- e. Materials that result in aesthetically undesirable discoloration of the ocean surface.

V. RECEIVING WATER LIMITATIONS

The Discharger shall not cause a violation of the water quality objectives discussed below. Compliance with these water quality objectives shall be determined by samples collected at stations representative of the area within the waste field where the initial dilution is completed.

A. Surface Water Limitations

1. Bacterial Characteristics

a. State/Regional Water Board Water Contact Standards

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Water Board (i.e., waters designated as REC-1), but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column:

30-day Geometric Mean Limits

- i. Total coliform density shall not exceed 1,000/100 ml.
- ii. Fecal coliform density shall not exceed 200/100 ml.
- iii. Enterococcus density shall not exceed 35/100 ml.

Single Sample Maximum (SSM)

- i. Total coliform density shall not exceed 10,000/100 ml.
- ii. Fecal coliform density shall not exceed 400/100 ml.
- iii. Enterococcus density shall not exceed 104/100 ml.
- iv. Total coliform density shall not exceed 1,000/100 ml, when the fecal coliform/total coliform ratio exceeds 0.1.

If any of the single sample limits are exceeded, the Regional Water Board may require repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance. When repeat sampling is required because of an exceedance of any single sample limit, values from all samples collected during that 30-day period will be used to calculate the geometric mean.

During a wet-weather event, stormwater runoff will impact shoreline, inshore and offshore stations. The day of rain (0.1 inch and greater) plus three following days worth of bacteriology data should be excluded from Single Sample and Geometric mean limits.

- b. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

c. California Department of Public Health (CDPH) Standards

CDPH has established minimum protective bacteriological standards for coastal waters adjacent to public beaches and for public water-contact sports areas in ocean waters. These standards are found in the California Code of Regulations, title 17, section 7958, and they are identical to the objectives contained in subsection a, above. When a public beach or public water-contact sports area fails to meet these standards, CDPH or the local public health officer may post with warning signs or otherwise restrict use of the public beach or public water-contact sports area until the standards are met. The CDPH regulations impose more frequent monitoring and more stringent posting and closure requirements on certain high-use public beaches that are located adjacent to a storm drain that flows in the summer.

For beaches not covered under AB 411 regulations (this incorporation by reference is prospective including future changes to the incorporated provisions as changes take effect), CDPH imposes the same standards as contained in title 17, California Code of Regulations, and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

d. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacterial objectives shall be maintained throughout the water column:

The median total coliform density for any 6-month period shall not exceed 70 per 100 ml, and not more than 10 percent of the samples for any 6-month period shall exceed 230 per 100 ml.

2. Physical Characteristics

The waste discharged shall not:

- a. Cause floating particulates and oil and grease to be visible;
- b. Cause aesthetically undesirable discoloration of the ocean surface;
- c. Significantly reduce the transmittance of natural light at any point outside the initial dilution zone; or,
- d. Change the rate of deposition of inert solids and the characteristics of inert solids in ocean sediments such that benthic communities are degraded.

3. Chemical Characteristics

The waste discharged shall not:

- a. Cause the dissolved oxygen concentration at any time to be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste materials;
- b. Change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally;

- c. Cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions;
 - d. Cause the concentration of substances set forth in Chapter II, Table B of the Ocean Plan, in marine sediments to be increased to levels that would degrade indigenous biota;
 - e. Cause the concentration of organic materials in marine sediments to be increased to levels that would degrade marine life; or,
 - f. Contain nutrients at levels that will cause objectionable aquatic growths or degrade indigenous biota.
4. Biological Characteristics

The waste discharged shall not:

- a. Degrade marine communities, including vertebrate, invertebrate, and plant species;
 - b. Alter the natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption; or,
 - c. Cause the concentration of organic materials in fish, shellfish or other marine resources used for human consumption to bioaccumulate to levels that are harmful to human health.
5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

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 Regional Water Board provisions:
 - a. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
 - b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities, as determined by the Regional Water Board, are prohibited.
 - c. All facilities used for collection, transport, treatment, or disposal of wastes shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a recurrence interval of once in 100 years.
 - d. Collection, treatment, and disposal systems shall be operated in a manner that precludes public contact with wastewater.

- e. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Regional Water Board.
- f. The provisions of this order are severable. If any provision of this order is found invalid, the remainder of this Order shall not be affected.
- g. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the CWA.
- h. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties to which the Discharger is or may be subject to under Section 311 of the CWA.
- i. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in the municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.
- j. Discharge of wastes to any point other than specifically described in this Order is prohibited, and constitutes a violation thereof.
- k. 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, 403, and 405 of the federal CWA and amendments thereto.
- l. 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.
- m. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
- n. 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.
- o. 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.
- p. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

- q. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.
- r. The CWC provides that any person who violates a waste discharge requirement or a provision of the CWC 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.

- s. Under CWC 13387, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this order, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order and is subject to a fine of not more than \$25,000 or imprisonment of not more than two years, or both. For a second conviction, such a person shall be punished by a fine of not more than \$25,000 per day of violation, or by imprisonment of not more than four years, or by both.
- t. 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 Order.
- u. 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.

B. Monitoring and Reporting Program Requirements

- 1. The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.
- 2. Hardcopy reports required to be submitted to the Regional Water Board shall be sent to:

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

Notifications and report required to be provided to the Regional Water Board shall be made to:

Telephone – (213) 576-6616

Facsimile – (213) 576-6660

3. After notification by the State or Regional Water Board the Discharger may be required to electronically submit self-monitoring reports (SMRs) and discharge monitoring reports (DMRs). Until such a time as electronic submissions are required, the Discharger shall submit SMRs and DMRs in accordance with the requirements in this Order.

Hardcopy DMRs must be signed and certified as required by the Standard Provisions of this Order (Attachment D). The Discharger shall submit the original hardcopy DMR to:

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, 15 th Floor Sacramento, CA 95814

All hardcopy discharge monitoring results should be reported on the official USEPA pre-printed DMR forms (USEPA Form 3320-1). Forms that are self-generated must be approved by USEPA.

C. Special Provisions

1. Reopener Provisions

- a. This Order may be reopened and modified to incorporate new limits based on future reasonable potential analyses to be conducted based on on-going monitoring data collected by the Discharger and evaluated by the Regional Water Board.
- b. This Order may be reopened and modified, to incorporate new mass emission limitations based on the current JWPCP's design capacity of 400 MGD provided that the Discharger requests and conducts an antidegradation analysis to demonstrate that the change is warranted.
- c. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to incorporate requirements for the implementation of the watershed protection management approach.
- d. This Order may be modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to include new Minimum Levels (ML).
- e. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments or the adoption of a TMDL for Santa Monica Bay Watershed Management Areas.
- f. The Regional Water Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the

potential to cause, or will contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.

- g. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, 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 and issuance. 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 noncompliances does not stay any condition of this Order.
- h. This Order may be reopened and modified by the Regional Water Board to incorporate conforming monitoring requirements and schedule dates for implementation of the Comprehensive Monitoring Program for Santa Monica Bay (Santa Monica Bay Restoration Commission, January 2007).

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer of the Regional Water Board within 90 days after the "30-day (monthly) average" daily dry-weather flow equals or exceeds 75 percent of the design capacity (i.e., 400 MGD) of waste treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter, which transmits that report and certifies that the Discharger's policy-making body is adequately informed of the report's contents. The report shall include the following:

- i. The average daily flow for the month, the date on which the maximum daily flow (peak flow) occurred, and the rate of that maximum flow;
- ii. The Discharger's best estimate of when the monthly average daily dry-weather flow will equal or exceed the design capacity of the POTW; and
- iii. The Discharger's plans to provide additional capacity for waste treatment and/or disposal facilities before the waste flow exceeds the capacity of the POTW. This requirement can be satisfied by referencing and attaching to the report relevant portions of the wastewater planning documents developed in response to this requirement that provide a roadmap for infrastructure and program upgrades and strategies to meet projected increases in the Discharger's wastewater treatment capacity.

This requirement is applicable to those facilities which have not reached 75 percent of capacity as of the effective date of this Order. For those facilities that have reached 75 percent of capacity by that date, such report or an updated report shall be filed within 90 days of the issuance of this Order.

3. Best Management Practices and Pollution Prevention

- a. **Storm Water Pollution Prevention Plan (SWPPP)** - The JWPCP is regulated under the State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001

(General Permit), WDRs for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities.

b. Spill Clean-Up Contingency Plan (SCCP)

The Discharger shall maintain a SCCP for JWPCP and its sanitary sewage collection system in an up-to-date condition and shall amend the SCCP whenever there is a change (e.g. in the design, construction, operation, or maintenance of the sewage system or sewage facilities) which materially affects the potential for spills. The Discharger shall review and amend the SCCP as appropriate after each spill from JWPCP or in the service area of the Facility. Upon request of the Regional Water Board, the Discharger shall submit the SCCP and any amendments to the Regional Water Board. The Discharger shall ensure that the up-to-date SCCP is readily available to the sewage system personnel at all times and that the sewage system personnel are familiar with it.

Within six months of the adoption of this Order, the Discharger should submit an updated SCCP, which provides the most applicable containment, cleanup and monitoring of sewer spills or overflows that reach water bodies, including dry channels and beach sands, that considers the information developed by the Sanitation Districts of Los Angeles County's efforts to develop a statewide approach, to the Executive Officer of the Regional Board.

The updated SCCP shall include a conceptual monitoring protocol for spills greater than 10,000 gallons to beach sands to (1) define the extent of waste discharged to beach sands and adjacent surface waters and (2) to confirm the conclusion and effectiveness of the clean-up and/or mitigation measures. The plan shall include a protocol for coordination with the local Health Department during such an event. This component of the plan shall be posted on the website for stakeholder review and comment for 30 days prior to EO approval.

c. Pollutant Minimization Program (PMP)

Reporting protocols in the Monitoring and Reporting Program, Attachment E, describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A. These reporting protocols and definitions are used in determining the need to conduct a Pollution Minimization Program (PMP) as follows.

The Discharger shall be required to develop and conduct a 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 pollutant is present in the effluent above an effluent limitation and either:

- i. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML; or
- ii. The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL.

The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to

maintain the effluent concentration at or below the 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 CWC Section 13263.3(d), shall be considered to fulfill the PMP requirements.

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 pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- ii. Quarterly monitoring for the reportable 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 pollutant(s) in the effluent at or below the effluent limitation;
- iv. Implementation of appropriate cost-effective control measures for the reportable 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 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 Specification

- a. Wastewater treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Chapter 3, Subchapter 14, Title 23 of the California Code of Regulations (Section 13625 of the California Water Code).
- b. The Discharger shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the discharger shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.
- c. Emergency Power Facilities

The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Biosolids Requirements** – Refer to Attachment H
- b. **Pretreatment Requirements** – Refer to Attachment I
- c. **Spill Reporting Requirements for POTWs**

- i. **Initial Notification**

This requirement is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. For spills, overflows, and bypasses from its POTW, the Discharger shall make notifications as required below:

- a). In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the State as soon as possible, but not later than two (2) hours after becoming aware of the release.
 - b). In accordance with the requirements of Water Code section 13271, the Discharger shall provide notification to the California Emergency Management Agency (Cal EMA) of the release of reportable amounts of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the State as soon as possible, but not later than two (2) hours after becoming aware of the release. The California Code of Regulations, Title 23, section 2250, defines a reportable amount of sewage as being 1,000 gallons. The phone number for reporting releases to Cal EMA is (800) 852-7550.
 - c). The Discharger shall notify the Regional Water Board of any unauthorized release of sewage from its POTW that causes, or probably will cause, a discharge to any waters of the State as soon as possible, but not later than *two (2)* hours after becoming aware of the release. This initial notification does not need to be made if the Discharger has notified Cal EMA and the local health officer or the director of environmental health with jurisdiction over the affected water body. The phone number for reporting releases of sewage to the Regional Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

At a minimum the following information shall be provided to the Regional Water Board:

- 1). The location, date and time of the release.
- 2). The waters of the State that received or will receive the discharge.
- 3). An estimate of the amount of sewage or other waste released and the amount that reached waters of the State at the time of notification.
- 4). If ongoing, the estimated flow rate of the release at the time of the notification.

- 5). The name, organization, phone number, and email address of the reporting representative.

- ii. Monitoring

For spills, overflows, and bypasses reported under section VI.C.5.c.i, the Discharger shall monitor as required below.

To define the geographical extent of the impact, the Discharger shall obtain grab samples (if feasible, accessible, and safe): (1) for all spills, overflows, or bypasses of any volume that reach any waters of the State; and (2) for all spills, overflows, or bypasses of 1,000 gallons or more. The Discharger shall analyze the samples for total and fecal coliforms or *E. coli*, *Enterococcus*, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). This monitoring shall be done on a daily basis from time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

- iii. Twenty-four (24) Hour Reporting

The Regional Water Board initial notification required under section VI.C.5.c.i above shall be followed by:

- a). As soon as possible, but not later than twenty-four (24) hours, after becoming aware of an unauthorized discharge of sewage or other waste from its POTW to any waters of the State or of 1,000 gallons or more, the Discharger shall submit a report to the Regional Water Board by email at aanijielo@waterboards.ca.gov. If the discharge is 1,000 gallons or more, this report shall certify that the Cal EMA has been notified of the discharge in accordance with Water Code section 13271 and section VI.C.5.c.i. This report shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water body has been notified of the discharge in accordance with Health and Safety Code section 5411.5 and section VI.C.5.c.i. This report shall also include at a minimum the following information:
 - 1). Agency, NPDES No., Order No., and MRP CI No., if applicable;
 - 2). The location, date and time of the discharge;
 - 3). The waters of the State that received the discharge;
 - 4). A description of the level of treatment of the sewage or other waste discharged;
 - 5). An initial estimate of the amount of sewage or other waste released and the amount that reached waters of the State;
 - 6). The Cal EMA control number and the date and time that notification of the incident was provided to the Cal EMA; and,

- 7). The name of the local health officer or director of environmental health notified (if contacted directly), the date and time of notification, and the method of notification (e.g., phone, fax, email).
 - b). A preliminary written report is due five (5) working days after disclosure of the incident reported under section VI.C.5.c.iii.a) (submission to the Regional Water Board of the log number of the SSO Database entry shall satisfy this requirement for a preliminary written report). Within 30 days after submitting this preliminary written report, the Discharger shall submit the final written report to the Regional Water Board. The final written report shall document the information required in section VI.C.5.c.iv, below, and in the Standard Provisions of this Order. The Executive Officer for just cause can grant an extension for submittal of the final written report to the Regional Water Board.
 - c). The Discharger shall include a certification in the annual summary report (due according to the schedule in the Monitoring and Reporting Program) stating that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components are maintained and tested in accordance with the Discharger's Preventative Maintenance Plan (PMP). Any deviations from or modifications to the PMP shall be discussed.
- iv. Records

The Discharger shall develop and maintain a record of all spills, overflows, or bypasses of raw or partially treated sewage from its POTW. This record shall be made available to the Regional Water Board upon request and a summary shall be included in the annual summary report. The records shall contain:

- a). The date and time of each spill, overflow, or bypass;
- b). The location of each spill, overflow, or bypass (including latitude and longitude);
- c). The estimated volume of each spill, overflow, or bypass including gross volume, amount recovered and not recovered, and monitoring results required by section VI.C.5.c.ii;
- d). The cause of each spill, overflow, or bypass;
- e). Whether each spill, overflow, or bypass entered a waters of the State and, if so, the name of the water body and whether it entered via a storm drain or other man-made conveyance;
- f). Mitigation measures implemented;
- g). Corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and
- h). The mandatory information included in SSO online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSO WDR.

v. Activities Coordination

In addition, the Regional Water Board expects that the POTW will coordinate its compliance activities for consistency and efficiency with other entities that have responsibilities under this NPDES permit, including the Pretreatment Program; an MS4 NPDES permit that may contain spill prevention, sewer maintenance and reporting requirements; or, the SSO WDR.

vi. Consistency with Statewide General Waste Discharge Requirements For Sanitary Sewer Systems (SSO WDR)

The Clean Water Act prohibits the discharge of pollutants from a point source to waters of the United States unless authorized under a NPDES permit. (33 U.S.C. §§1311, 1342.). The State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, (Order No. 2006-0003-DWQ) on May 2, 2006, to provide a consistent, Statewide regulatory approach to address Sanitary Sewer Overflows (SSOs). The SSO WDR requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO Database.

The requirements contained in this Order in Sections VI.C.3.b (Spill Clean-Up Contingency Plan), VI.C.4 (Construction, Operation and Maintenance Specifications), and VI.C.5.c (Spill Reporting Requirements for POTWs) are intended to be consistent with the requirements of the SSO WDR and as outlined in the State Water Board letter dated September 9, 2008 (Modification to Monitoring and Reporting Program). The Regional Water Board recognizes that there may be some overlap between the provisions of this Order and SSO WDR requirements. The requirements of the SSO WDR are considered the minimum thresholds (see Finding 11 of Order No. 2006-0003-DWQ). The Regional Water Board will accept the documentation prepared by the Discharger under the SSO WDR for compliance purposes as satisfying the requirements in sections VI.C.3.b, VI.C.4, and VI.C.5.c provided that any additional or more stringent provisions enumerated in this Order are addressed.

Regardless of the coverage obtained under the SSO WDR, the Discharger's collection system is part of the Publicly Owned Treatment Works that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system (40 CFR 122.41(e)), report any non-compliance (40 CFR 122.41(l)(6) and (7)), and mitigate any discharge from the collection system in violation of this Order (40 CFR 122.41(d)).

VII. COMPLIANCE DETERMINATION

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

A. General.

Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined in the MRP.

1. Compliance with Effluent Limitations expressed as Single Constituent

Dischargers are deemed out of compliance with an 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 (ML).

2. Compliance with Effluent Limitations expressed as Sum of Several Constituents

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as "Not Detected" (ND) or "Detected, but Not Quantified" (DNQ).

B. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported Minimum Level). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples, where DNQ is lower than a quantified value and ND is lower than DNQ. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

C. Sufficient sampling and analysis shall be required to determine compliance with the effluent limitation. If the analytical result of any single sample (daily discharge) monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL, the Discharger shall increase sampling frequency to weekly until compliance with the AMEL is demonstrated. All analytical results shall be reported as specified in the MRP.

D. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by section B above for multiple sample data reduction) of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). However, an alleged violation of the AMEL will be considered one violation for the purpose of assessing mandatory minimum penalties. The average of daily discharges over a calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample (daily discharge) is taken over a calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that month. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

E. Average Weekly Effluent Limitation (AWEL).

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter (e.g., resulting in seven days of non-compliance). However, an alleged violation of the AWEL will be considered one violation for the purpose of assessing mandatory minimum penalties. The average of daily discharges over a calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample (daily discharge) is taken over a calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be

considered out of compliance for that week. If no sample (daily discharge) is taken over a calendar week, no compliance determination can be made for that week with respect to effluent violation determination, but compliance determination can be made for that week with respect to reporting violation determination.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of the calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

F. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

G. Instantaneous Minimum Effluent Limitation.

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

H. Instantaneous Maximum Effluent Limitation.

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

I. Six-month Median Effluent Limitation.

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

J. Percent Removal.

A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

Daily discharge percent removal is calculated using the following equation: Percent Removal (%) = $[1 - (C_{\text{Effluent}} \div C_{\text{Influent}})] \times 100\%$

K. Mass and Concentration Limitations.

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration for a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

L. Mass Emission Rate.

The daily discharge mass emission rate for any calendar day is calculated using the following equations:

$$\text{Daily Discharge mass emission rate (lb/day)} = \frac{8.337}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Daily Discharge mass emission rate (kg/day)} = \frac{3.785}{N} \sum_{i=1}^N Q_i C_i$$

in which "N" is the number of samples taken over any calendar day. If grab samples are taken, "C_i" is the constituent concentration (mg/L) and "Q_i" is the flow rate (MGD) associated with each "N" grab sample. If composite samples are taken, "C_i" is the constituent concentration (mg/L) in each composite sample and "Q_i" is the average flow rate (MGD) during the period over which sample compositing occurs.

The daily discharge concentration of a constituent shall be determined from the flow-weighted average of the same constituent in the combined waste stream using the following equations:

$$\text{Daily concentration} = \frac{1}{Q_t} \sum_{i=1}^N Q_i C_i$$

in which "N" is the number of component waste streams. "C_i" is the constituent concentration (mg/L) and "Q_i" is the flow rate (MGD) associated with each "N" component waste stream. "Q_t" is the total flow rate of the combined waste stream.

M. Bacterial Standards and Analysis.

1. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

2. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with either the multiple tube fermentation method or membrane filtration

method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses.

3. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 CFR 136 (revised July 1, 2009), unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136 or improved methods have been determined by the Executive Officer and/or USEPA.

N. Single Operational Upset.

A single operational upset (SOU) that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

1. A single operational upset is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.
2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in Attachment D – Standard Provisions.
3. For purpose outside of CWC section 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).
4. For purpose of CWC section 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC Section 13385(f)(2).

ATTACHMENT A – DEFINITIONS

Acute Toxicity:

a Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

$$TUa = \frac{100}{96\text{-hr LC } 50\%}$$

b Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Appendix III of the 2009 Ocean Plan. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log(100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Areas of Special Biological Significance (ASBS): are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

Average Monthly Effluent Limitation (AMEL) means 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. (40 CFR 122.2.)

Average Weekly Effluent Limitation (AWEL) means 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. (40 CFR 122.2.)

Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma and oxychlordane.

Chlorinated Phenolic Compounds shall mean, at a minimum, the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.

Chronic Toxicity: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

b No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix III of the Ocean Plan.

Composite Sample, for flow rate measurements, means the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.

Composite sample, for other than flow rate measurement, means:

- a. No fewer than eight individual sample portions taken at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual sample portion shall be directly proportional to the discharge flow rate at the time of sampling; or,
- b. No fewer than eight individual sample portions taken of equal time volume taken over a 24 hour period. The time interval between each individual sample portion shall vary such that the volume of the discharge between each individual sample portion remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

For a composite sample, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted individual sample portions shall be taken during the duration of the discharge and composited. For a discharge duration of 8 hours or less, eight individual "grab samples" may be substituted and composited.

The composite sample result shall be reported for the calendar day during which composite sampling ends.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. 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 average measurement of the pollutant over the day. (40 CFR 122.2.)

DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.

Degrade (Degredation). Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Detected, but Not Quantified (DNQ) means sample results less than the reported Minimum Level, but greater than or equal to the laboratory's MDL.

Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Downstream Ocean Waters shall mean waters downstream with respect to ocean currents.

Dredged Material: Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil".

Enclosed Bays are indentations along the coast, which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan shall mean the sum of endosulfan-alpha, endosulfan-beta, and endosulfan sulfate.

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Grab Sample means an individual sample collected during a period of time not to exceed 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not occur during hydraulic peaks.

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH shall mean the sum of alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

Initial Dilution is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

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):

Kelp Beds, for purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacteriological standards.

Local Limits means conditional discharge limits imposed by municipalities upon industrial or commercial facilities that discharge to the municipal sewage treatment system.

Mariculture is the culture of plants and animals in marine waters independent of any pollution source.

Material: (a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the California Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL) is the maximum allowable discharge of a pollutant during a calendar day. Where MDELs are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where MDELs are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day. For pollutant measurements, unless otherwise specified, the results to be compared to the MDEL are usually based on composite samples. However, it may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of instability of the constituents.

Method Detection Limit (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 and is determined from analysis of a sample in a given matrix containing the analyte, as defined in 40 CFR 136 Appendix B.

Minimum Level (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.

Natural Light is used in this order to mean the transmittance and total irradiance of sunlight. Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

Nonchlorinated Phenolic Compounds shall mean, at a minimum, the sum of Phenol, 2, 4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol.

Nonconventional Pollutants. All pollutants that are not included in the list of conventional or toxic pollutants in 40 CFR 401. Includes pollutants such as chemical oxygen demand (COD); total organic carbon (TOC), nitrogen, and phosphorus.

Not Detected (ND) means those sample results less than the laboratory's MDL.

Ocean Waters are 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. If a discharge outside the territorial waters of the

State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the California Ocean Plan will occur in ocean waters.

Overflow means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1, 2-benzanthracene, 3, 4-benzofluoranthene, benzo[k]-fluoranthene, 1, 12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1, 2, 3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Pollutant Minimization Program (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 pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, in order to maintain the effluent concentration at or below the 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 California Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements in Ocean Plan section III.C.9.

Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment works [40 CFR 403.3(q)].

Priority Pollutants are those constituents referred to in 40 CFR 401.15; a list of these pollutants is provided as Appendix A to 40 CFR 423.

Publicly Owned Treatment Works (POTW). The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the Clean Water Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality which has jurisdiction over the Indirect Discharges to and the discharges from such treatment works. (40 CFR 403.3(q).)

Reported Minimum Level is derived from the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in their permit. The MLs included in this permit correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board in accordance with Ocean Plan section III.C.5. The ML is based on the proper application of method-specific analytical procedures 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 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 reported ML. (See Ocean Plan section III.C.6.)

Sanitary Sewer Overflows (SSO). Untreated or partially treated sewage overflows from a sanitary sewer collection system.

Secondary Treatment Standards. Technology-based requirements for direct discharging municipal sewage treatment facilities. Standards are based on a combination of physical and biological processes typical for the treatment of pollutants in municipal sewage. Standards are expressed as a minimum level of effluent quality in terms of: BOD₅, total suspended solids (TSS), and pH (except as provided for special considerations and treatment equivalent to secondary treatment).

Shellfish are organisms identified by the California Department of Public Health as shellfish for public health purposes (i.e., mussels, clams, and oysters).

Significant Difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

Sludge means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.

State Water Quality Protection Areas (SWQPAs) are nonterrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now classified as a subset of State Water Quality Protection Areas and require special protections afforded by the California Ocean Plan.

TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

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

Technology-Based Effluent Limit. A permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

Total Maximum Daily Load (TMDL). The amount of pollutant, or property of a pollutant, from point, nonpoint, and natural background sources, that may be discharged to a water quality-limited receiving water. Any pollutant loading above the TMDL results in violation of applicable water quality standards.

Toxicity Reduction Evaluation (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.)

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with the permit because of factors beyond the reasonable control of the permittee. It does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation, or those problems the Discharger should have foreseen.

Waste. As used in the California Ocean Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

Wasteload Allocation (WLA). The proportion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

Water Quality-Based Effluent Limit (WQBEL). A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

Water Quality Criteria. Comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by USEPA or States for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

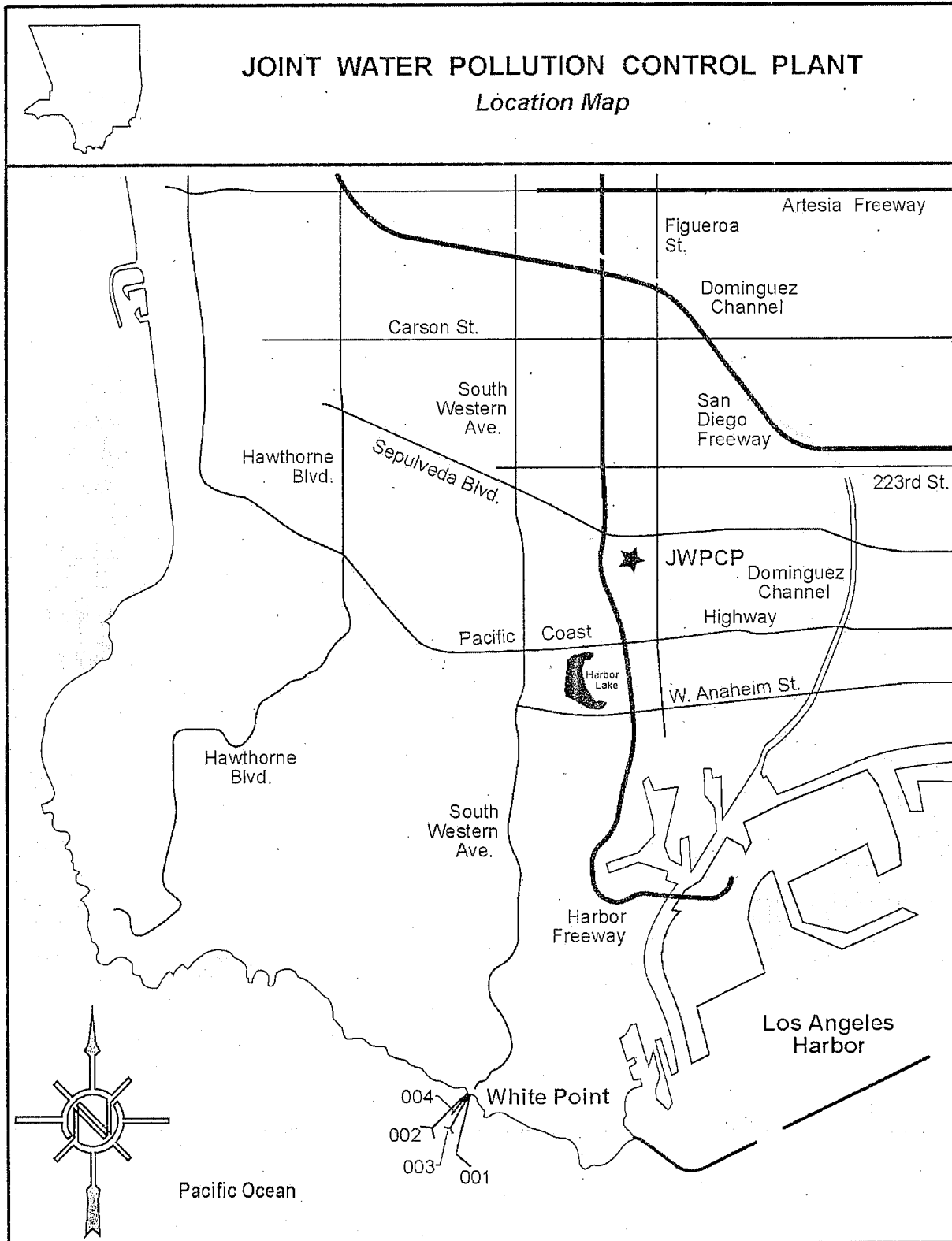
Water Quality Standard. A law or regulation that consists of the beneficial use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

Water Reclamation: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

Whole Effluent Toxicity (WET). The total toxic effect of an effluent measured directly with a toxicity test.

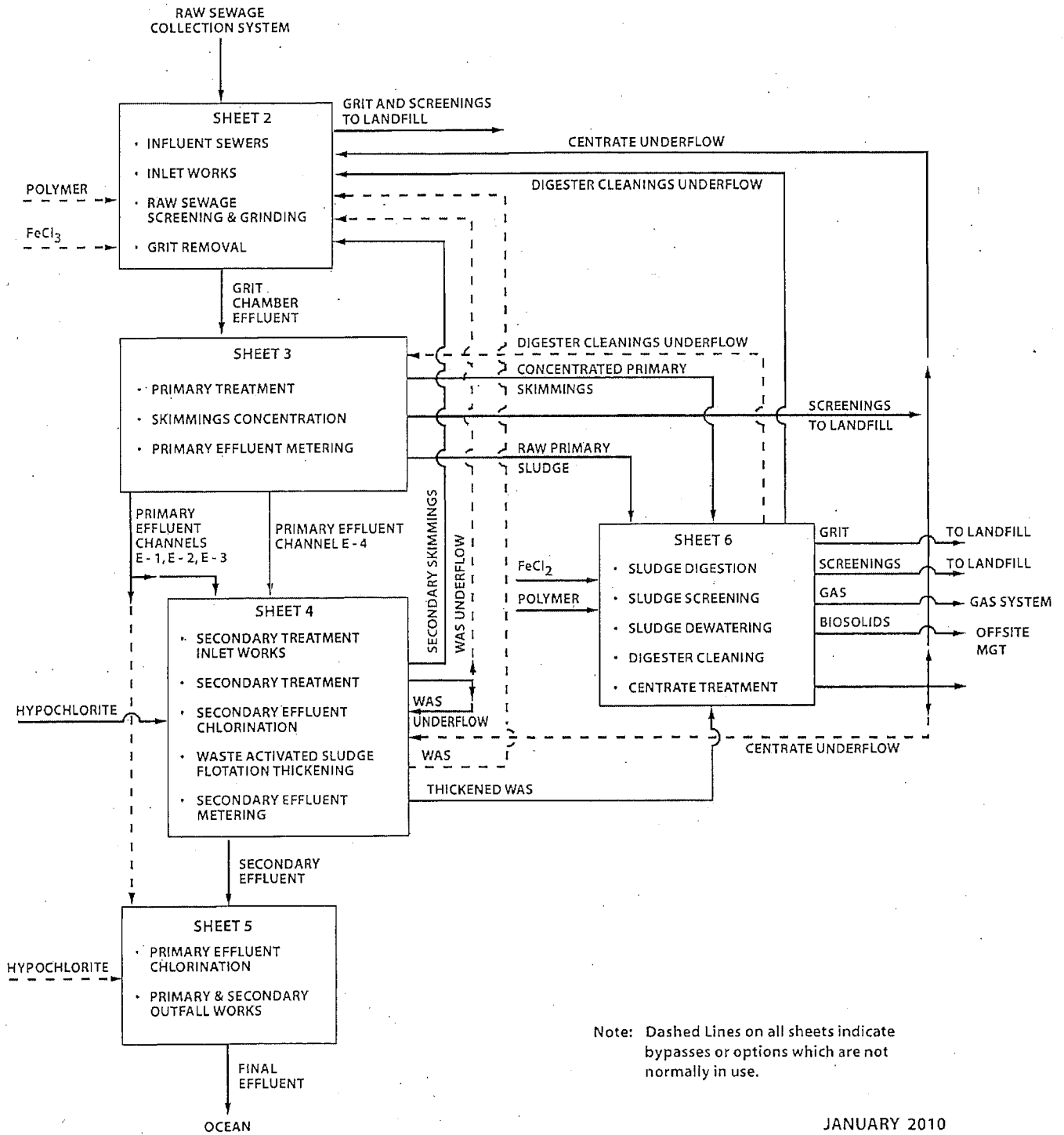
Zone of Initial Dilution (ZID) means, for purposes of designating monitoring stations, the region within a horizontal distance equal to a specified water depth (usually depth of outfall or average depth of diffuser) from any point of the diffuser or end of the outfall and the water column above and below that region, including the underlying seabed.

ATTACHMENT B – LOCATION MAP



ATTACHMENT C – FLOW SCHEMATIC

JOINT WATER POLLUTION CONTROL PLANT
PROCESS SCHEMATIC - SHEET 1 of 6

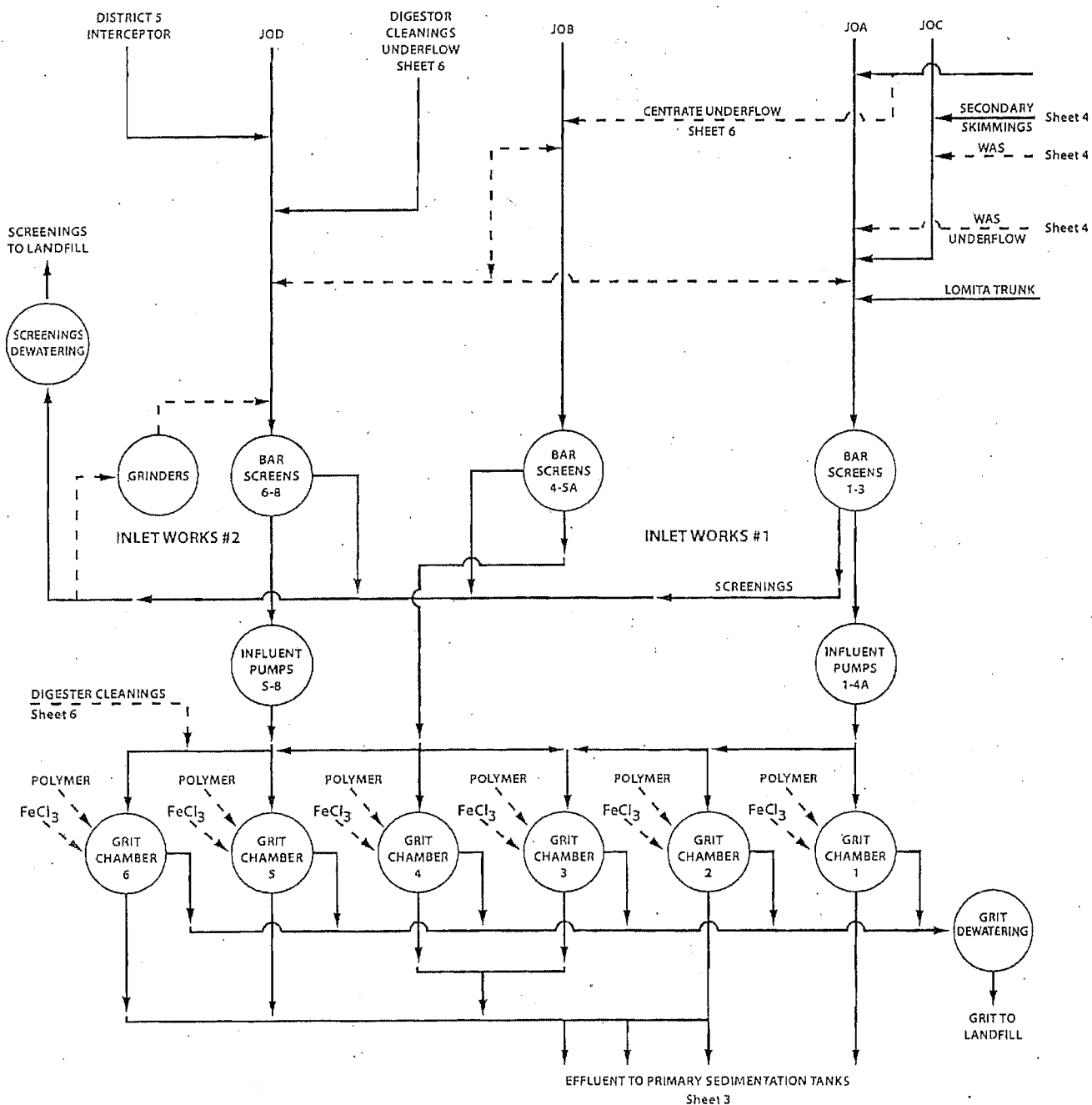


Note: Dashed Lines on all sheets indicate bypasses or options which are not normally in use.

JANUARY 2010

ATTACHMENT C – FLOW SCHEMATIC (Contd.)

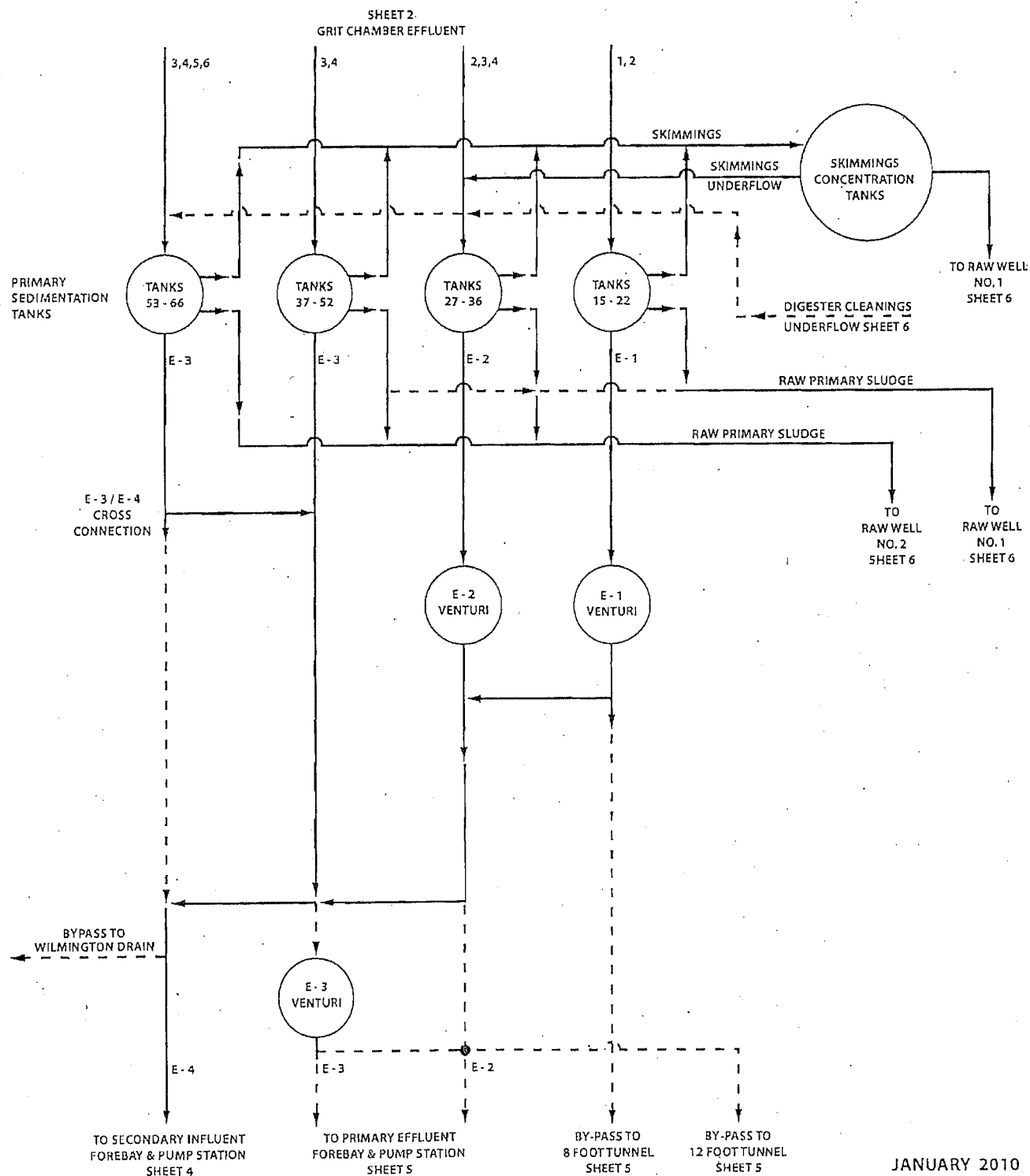
JOINT WATER POLLUTION CONTROL PLANT
 PROCESS SCHEMATIC - INFLUENT PROCESSES - SHEET 2 of 6



JANUARY 2010

ATTACHMENT C – FLOW SCHEMATIC (Contd.)

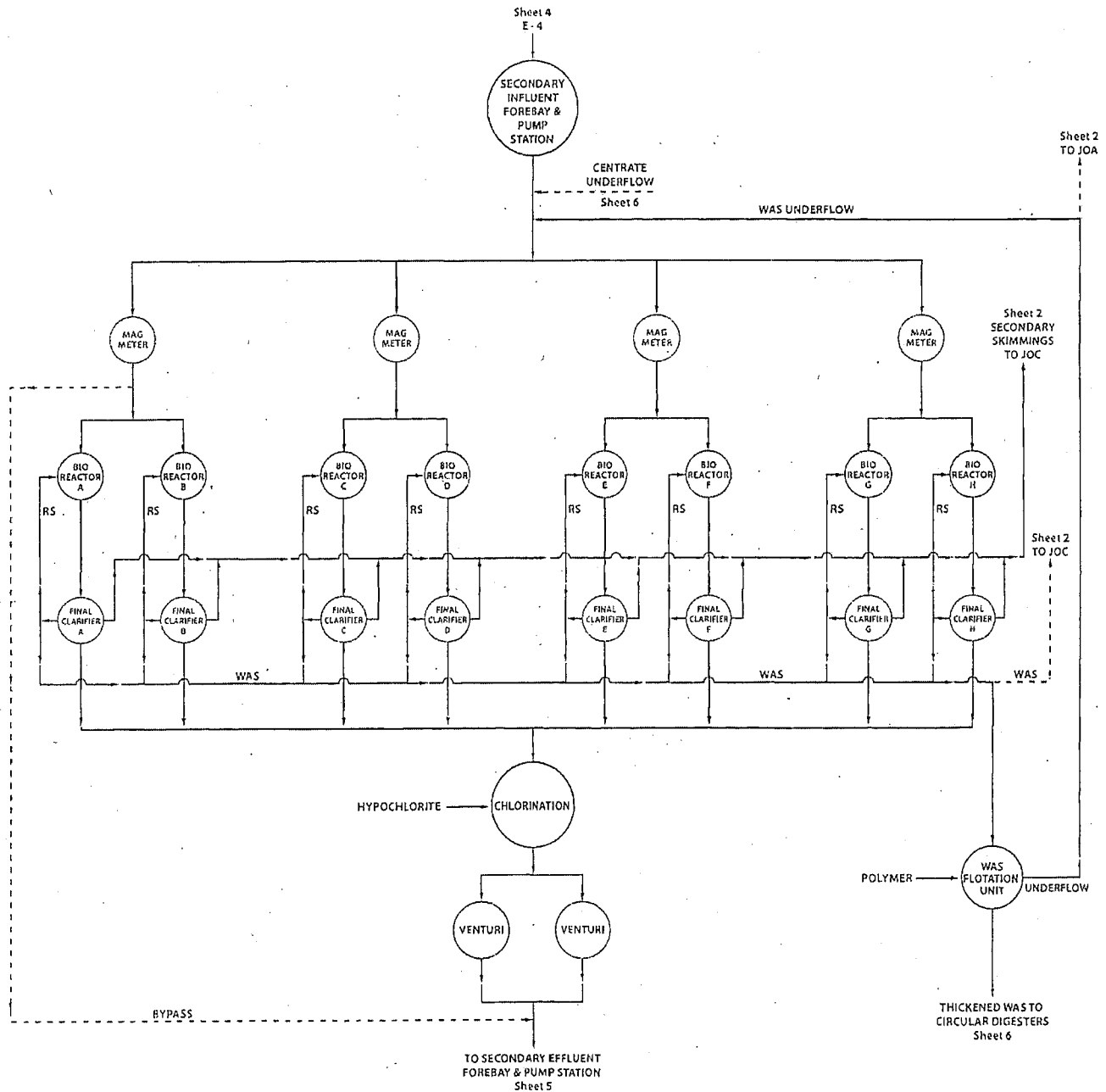
JOINT WATER POLLUTION CONTROL PLANT
 PROCESS SCHEMATIC - PRIMARY PROCESSES - SHEET 3 OF 6



JANUARY 2010

ATTACHMENT C – FLOW SCHEMATIC (Contd.)

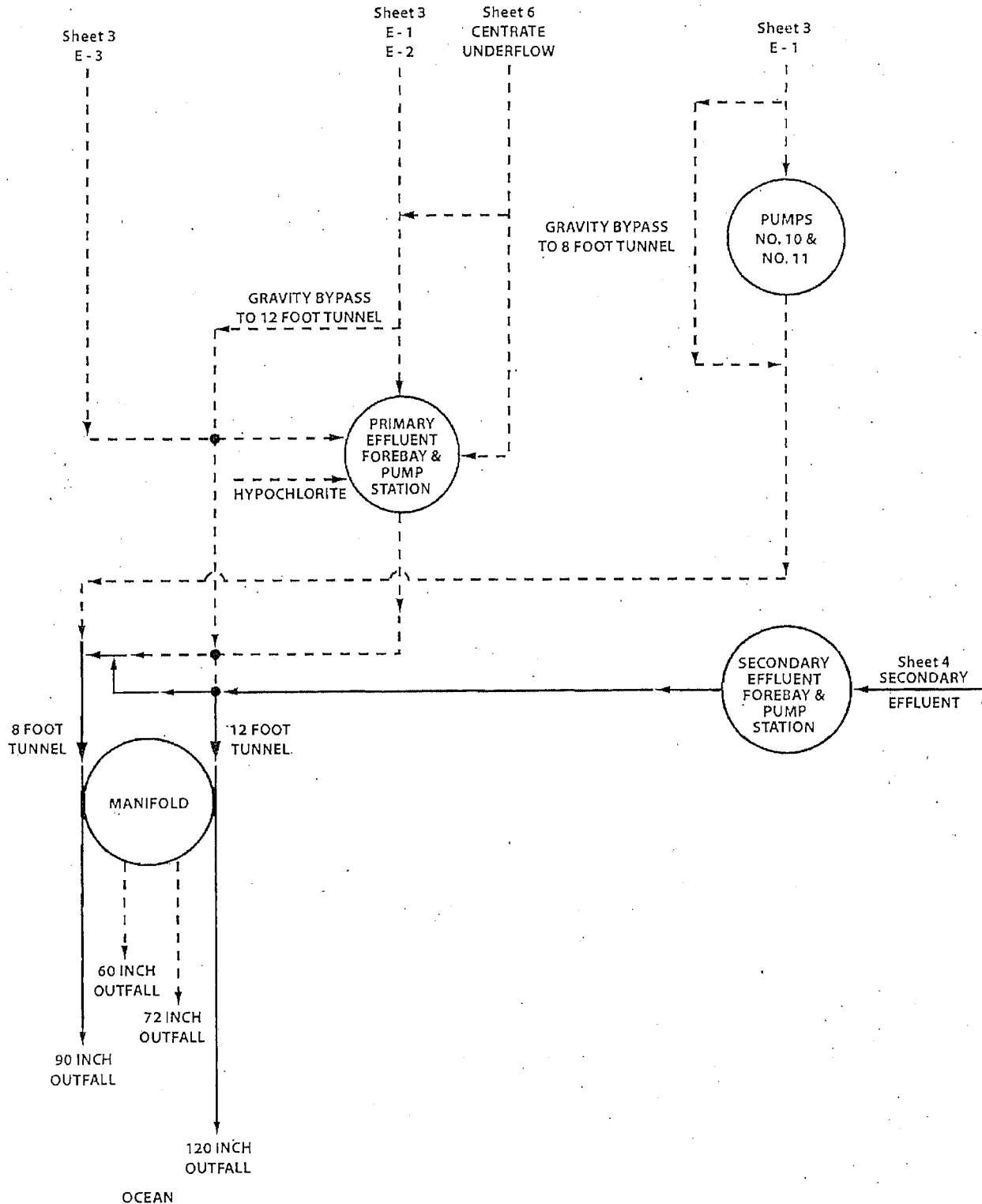
JOINT WATER POLLUTION CONTROL PLANT
PROCESS SCHEMATIC - SECONDARY PROCESSES - SHEET 4 OF 6



JANUARY 2010

ATTACHMENT C – FLOW SCHEMATIC (Contd.)

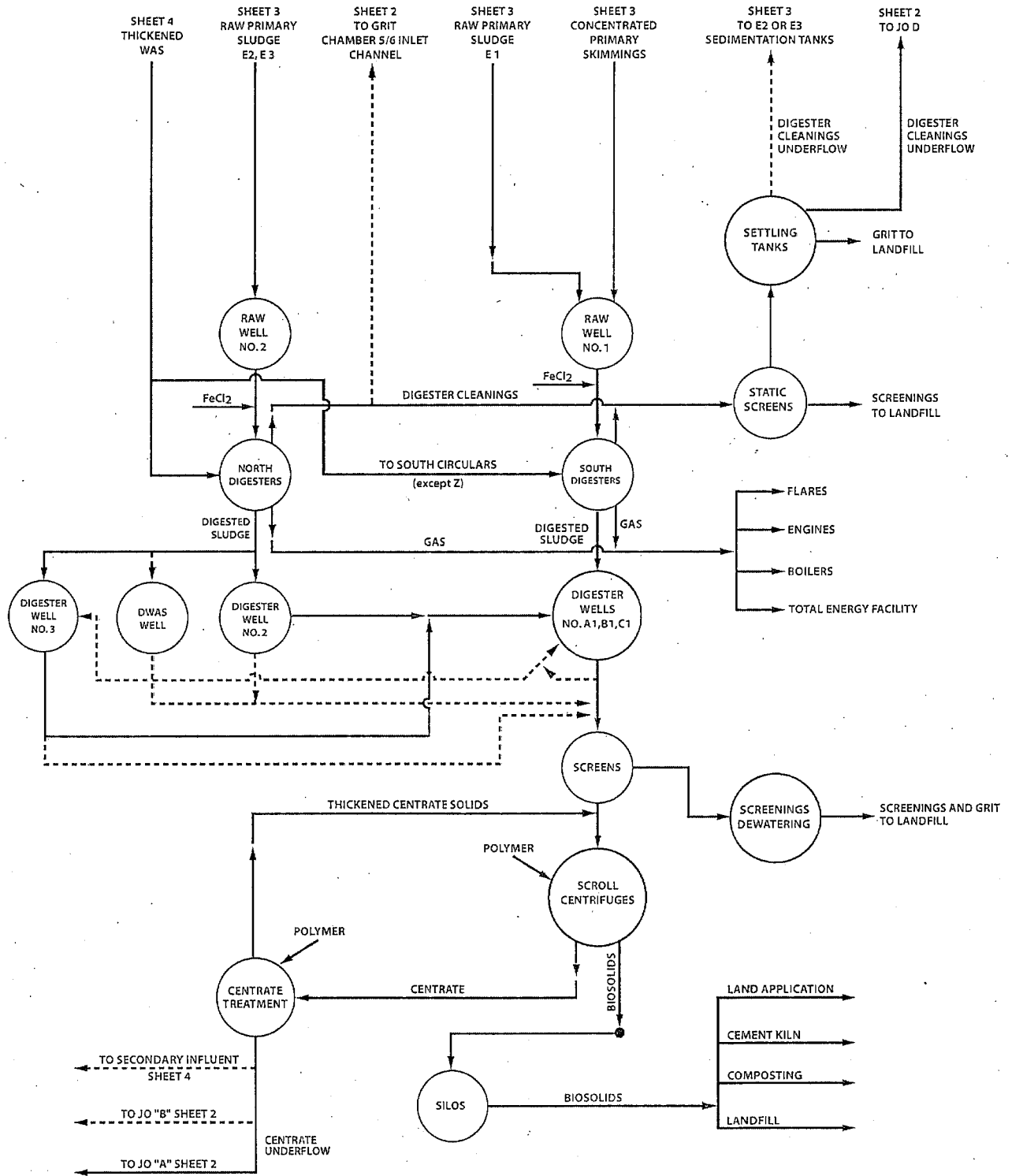
JOINT WATER POLLUTION CONTROL PLANT
PROCESS SCHEMATIC - EFFLUENT PROCESSES - SHEET 5 of 6



JANUARY 2010

ATTACHMENT C – FLOW SCHEMATIC (Contd.)

JOINT WATER POLLUTION CONTROL PLANT
 PROCESS SCHEMATIC - SOLIDS PROCESSES - SHEET 6 OF 6



MAY 2011

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 (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 CFR 122.41(a)].
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act 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 been modified to incorporate the requirement [40 CFR 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 CFR 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 CFR 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 CFR 122.41(e)].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR 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 CFR 122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), 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 CFR 122.41(i)] [CWC 13383(c)]:

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 CFR 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 CFR 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 CFR 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 CWC, any substances or parameters at any location [40 CFR 122.41(i)(4)].

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR 122.41(m)(1)(i)].
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [40 CFR 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 and I.G.5 below [40 CFR 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 CFR 122.41(m)(4)(i)]:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR 122.41(m)(4)(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 CFR 122.41(m)(4)(B)]; and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [40 CFR 122.41(m)(4)(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 CFR 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 CFR 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 [40 CFR 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 permittee. 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 CFR 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 paragraph H.2 of this section 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 CFR 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 CFR 122.41(n)(3)]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR 122.41(n)(3)(i)];
 - b. The permitted facility was, at the time, being properly operated [40 CFR 122.41(n)(3)(i)];
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [40 CFR 122.41(n)(3)(iii)]; and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR 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 CFR 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 CFR 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 CFR 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 CWC [40 CFR 122.41(l)(3)] [40 CFR 122.61].

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)].
- B. Monitoring results must be conducted according to test procedures under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503 unless other test procedures have been specified in this Order [40 CFR 122.41(j)(4)] [40 CFR 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 40 CFR 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 CFR 122.41(j)(2)]. It is recommended that the Discharger maintain the results of all analyses indefinitely.
- B. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements [40 CFR 122.41(j)(3)(i)];
 - 2. The individual(s) who performed the sampling or measurements [40 CFR 122.41(j)(3)(ii)];

3. The date(s) analyses were performed [40 CFR 122.41(j)(3)(iii)];
4. The individual(s) who performed the analyses [40 CFR 122.41(j)(3)(iv)];
5. The analytical techniques or methods used [40 CFR 122.41(j)(3)(v)]; and
6. The results of such analyses [40 CFR 122.41(j)(3)(vi)].

C. Claims of confidentiality for the following information will be denied [40 CFR 122.7(b)]:

1. The name and address of any permit applicant or Discharger [40 CFR 122.7(b)(1)]; and
2. Permit applications and attachments, permits and effluent data [40 CFR 122.7(b)(2)].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, 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, SWRCB, or USEPA copies of records required to be kept by this Order [40 CFR 122.41(h)] [CWC 13267].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, 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 CFR 122.41(k)].
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 CFR 122.22(a)(3)].
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 CFR 122.22(b)(1)];
 - b. The authorization specified 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 CFR 122.22(b)(2)]; and

- c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [40 CFR 122.22(b)(3)].
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR 122.22(c)].
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [40 CFR 122.41(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 CFR 122.41(l)(4)(i)].
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR 122.41(l)(6)(ii)]:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR 122.41(l)(6)(ii)(A)].
 - b. Any upset that exceeds any effluent limitation in this Order [40 CFR 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 CFR 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 CFR 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 40 CFR 122.29(b) [40 CFR §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 which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CWC, including, but not limited to, sections 13385, 13386, and 13387.
- B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions (40 CFR 122.41(a)(2)).
- C. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000. (40 CFR 122.41(a)(3)).
- D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this

paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. (40 CFR 122.41(j)(5))

- E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. (40 CFR 122.41(k)(2)).

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [40 CFR 122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 CFR 122.42(b)(1)]; and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [40 CFR 122.42(b)(2)].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [40 CFR 122.42(b)(3)].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (CI-1758)

Table of Contents

Attachment E – Monitoring and Reporting Program (MRP).....	E-3
I. General Monitoring Provisions.....	E-3
II. Monitoring Locations.....	E-6
III. Influent Monitoring Requirements.....	E-10
A. Monitoring Location (INF-001).....	E-10
IV. Effluent Monitoring Requirements.....	E-13
A. Monitoring Location (EFF-001, and Manifold Stations: EFF-002A and EFF-002B).....	E-13
B. Mass Emission Benchmarks.....	E-19
V. Whole Effluent Toxicity Testing Requirements.....	E-21
A. Acute Toxicity Testing.....	E-21
B. Chronic Toxicity Testing.....	E-22
C. Quality Assurance.....	E-23
D. Accelerated Monitoring.....	E-24
E. Preparation of an Initial Investigation TRE Workplan.....	E-24
F. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE).....	E-25
G. Ammonia Removal.....	E-26
H. Reporting.....	E-26
VI. Receiving Water Monitoring Requirements.....	E-27
A. Shoreline/Inshore/Offshore Microbiological Monitoring.....	E-27
B. Nearshore/Offshore Water Quality Monitoring.....	E-30
C. Benthic Sediments Monitoring.....	E-34
D. Fish and Invertebrate Monitoring.....	E-37
E. Kelp Bed Monitoring.....	E-42
VII. Other Monitoring Requirements.....	E-44
A. Special Study – Constituents of Emerging Concern in Effluent.....	E-44
B. Special Study – Nutrient Loading and Receiving Water Impacts.....	E-47
C. Outfall and Diffuser Inspection.....	E-47
D. Biosolids and Sludge Management.....	E-47
VIII. Reporting Requirements.....	E-47
A. General Monitoring and Reporting Requirements.....	E-47
B. Self Monitoring Reports (SMRs) and Discharge Monitoring Reports (DMRs).....	E-50
C. Other Reports.....	E-52

List of Tables

Table 1. Monitoring Station Locations.....	E-6
Table 2. Influent Monitoring.....	E-10
Table 3. Effluent Monitoring.....	E-14
Table 4. 12-Month Average Effluent Mass Emission Benchmarks.....	E-19
Table 5. Shoreline Monitoring Stations.....	E-28
Table 6. Shoreline Microbiological Monitoring Requirements.....	E-28
Table 7. Inshore Monitoring Stations.....	E-29
Table 8. Inshore Microbiological Monitoring Requirements.....	E-29
Table 9. Offshore Monitoring Stations.....	E-30
Table 10. Offshore Microbiological Monitoring Requirements.....	E-30
Table 11. Nearshore/Offshore Water Quality Monitoring Stations.....	E-31
Table 12. Nearshore/Offshore Water Quality Monitoring Requirements.....	E-32
Table 13. Nearshore/Offshore Monitoring Stations Requiring Additional Monitoring.....	E-32

Table 14. Additional Monitoring Requirements at 24 Nearshore/Offshore Monitoring Stations	E-33
Table 15. Nearshore Light Energy Monitoring Stations.....	E-33
Table 16. Nearshore Light Energy Monitoring Requirements	E-34
Table 17. Benthic Infauna and Sediment Chemistry Monitoring Stations	E-34
Table 18. Infauna Monitoring Requirments	E-35
Table 19. Sediment Chemistry Monitoring Requirements	E-36
Table 20. Trawl Sampling Stations	E-37
Table 21. Demersal Fish and Invertebrates Monitoring Requirements	E-38
Table 22. Bioaccumulation Sampling Zones.....	E-39
Table 23. Bioaccumulation Monitoring Requirements	E-39
Table 24. Seafood Safety Survey Zones.....	E-40
Table 25. Seafood Safety Monitoring Requirements	E-41
Table 26. Effluent Monitoring of CECs	E-45
Table 27. Reporting Schedule	E-51

List of Figures

Figure 1. Shoreline Monitoring Stations.....	E-54
Figure 2. Inshore Monitoring Stations	E-55
Figure 3. Nearshore/Offshore Water Quality Monitoring Stations.....	E-56
Figure 4. Nearshore Light Energy Profiling Stations	E-57
Figure 5. Benthic Infaunal and Sediment Chemistry Sampling Stations.....	E-58
Figure 6. Local Demersal Fish and Invertebrate Stations.....	E-59
Figure 7. Local Bioaccumulation Sampling Zones.....	E-60

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC 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. NPDES compliance monitoring focuses on the effects of a specific point source discharge. Generally, it is not designed to assess impacts from other sources of pollution (e.g., nonpoint source runoff, aerial fallout) or to evaluate the current status of important ecological resources in the waterbody. The scale of existing compliance monitoring programs does not match the spatial and, to some extent, temporal boundaries of the important physical and biological processes in the ocean. In addition, the spatial coverage provided by compliance monitoring programs is less than ten percent of the nearshore ocean environment. Better technical information is needed about status and trends in ocean waters to guide management and regulatory decisions, to verify the effectiveness of existing programs, and to shape policy on marine environmental protection.
- B. The Regional Water Board and USEPA, working with other groups, have developed a comprehensive basis for effluent and receiving water monitoring appropriate to large publicly owned treatment works (POTWs) discharging to waters of the Southern California Bight. This effort has culminated in the publication by the Southern California Coastal Water Research Project (SCCWRP) of the Model Monitoring Program guidance document (Schiff, K.C., J.S. Brown and S.B. Weisberg. 2001. *Model Monitoring Program for Large Ocean Dischargers in Southern California*. SCCWRP Tech. Rep #357. Southern California Coastal Water Research Project, Westminster, CA. 101 pp.). This guidance provides the principles, framework and recommended design for effluent and receiving water monitoring elements that have guided development of the monitoring program described below.
- C. In July 2000, the Santa Monica Bay Restoration Project (SMBRP) published “An Assessment of the Compliance Monitoring System in Santa Monica Bay” to set forth recommendations and priorities for compliance monitoring in Santa Monica Bay. This report reasoned that a reduced level of receiving water monitoring is justified for large POTWs discharging to Santa Monica Bay due to improvements in effluent quality and associated decreases in receiving water impacts. Like the Model Monitoring Program developed by SCCWRP, SMBRP recommendations are focused on providing answers to management questions and allowing a reduction in POTW receiving water monitoring where discharge effects are well understood. The monitoring plan set forth here has been guided by SMBRP recommendations.
- D. The conceptual framework for the Model Monitoring Program has three components that comprise a range of spatial and temporal scales: (1) core monitoring; (2) regional monitoring; and (3) special studies.
 - 1. Core monitoring is local in nature and focused on monitoring trends in quality and effects of the point source discharge. This includes effluent monitoring as well as some aspects of receiving water monitoring. In the monitoring program described below these core components are typically referred to as local monitoring.
 - 2. Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all

contaminant sources, and protection of beneficial uses. The final design of regional monitoring programs is developed by means of steering committees and technical committees comprised of participating agencies and organizations, and are not specified in this Order. Instead, for each regional component, the degree and nature of participation of the Discharger is specified. For this Order, these levels of effort are based upon past participation of the Joint Outfall System (Discharger or JOS), formerly referred to as the County Sanitation Districts of Los Angeles County, in regional monitoring programs.

The Discharger shall participate in regional monitoring activities coordinated by the SCCWRP or any other appropriate agency approved by the Regional Water Board. The procedures and time lines for the Regional Water Board approval shall be the same as detailed for special studies, below.

3. Special studies are focused on refined questions regarding specific effects or development of monitoring techniques and are anticipated to be of short duration and/or small scale, although multiyear studies also may be needed. Questions regarding effluent or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core or regional monitoring, may be pursued through special studies. These studies are by nature ad hoc and cannot be typically anticipated in advance of the five-year permit cycle.

The Discharger, the Regional Water Board shall consult annually to determine the need for special studies. Each year, the Discharger shall submit proposals for any proposed special studies to the Regional Water Board by December 31st for the following year's monitoring effort (July through June).

The following year, detailed scopes of work for proposals, including reporting schedules, shall be presented at a Spring Regional Water Board meeting, to obtain the Regional Water Board approval and to inform the public. Upon approval by the Regional Water Board, the Discharger shall implement its special study or studies.

E. Discharger participation in regional monitoring programs is required as a condition of this permit. The regional programs which must be conducted under this permit include:

1. Future Southern California Bight regional surveys, including benthic infauna, sediment chemistry, fish communities and fish predator risk.
2. Santa Monica Bay Restoration Project's Seafood Safety Survey – The Local Seafood Safety Survey stipulated in this permit is a contribution to the Santa Monica Bay Restoration Project's Seafood Safety Survey.
3. Central Region Kelp Monitoring Program – coordinated by the Regional Water Board.
4. Central Bight Water Quality Cooperative Program – coordinated monitoring conducted by the Orange County Sanitation District, the County Sanitation Districts of Los Angeles County, the City of Los Angeles and the City of Oxnard through appropriate agencies for water quality monitoring.

F. Bight Regional Monitoring. Regular regional monitoring for the Southern California Bight has been established, occurring at four- to five-year intervals, and coordinated through SCCWRP with discharger agencies and numerous other entities. The fourth regional monitoring program (Bight'08) occurred during summer 2008, although certain components of the program were conducted in subsequent years. The next (fifth) regional monitoring program (Bight'13) is expected to take place during 2013. While participation in regional programs is required under this permit, revisions to the monitoring program of this permit at the direction of the Regional Water Board may be necessary to accomplish the goals of regional monitoring or to allow the performance of special studies to investigate regional or site-specific water issues of concern. These revisions may include a reduction or increase in the number of parameters to be monitored, the

frequency of monitoring, or the number and size of samples to be collected. Such changes may be authorized by the Executive Officer upon written notification to the Discharger.

Discharger participation in regional monitoring programs is required as a condition of this Order. The Discharger shall complete collection and analysis of samples in accordance with the schedule established by the Steering Committee directing the Bight-wide regional monitoring surveys. The level of participation shall be similar to that provided by the Discharger in previous regional surveys conducted in 1994, 1998, 2003 and 2008.

- G. Bay Comprehensive Monitoring Program. The Santa Monica Bay Restoration Commission (SMBRC) adopted a new comprehensive monitoring program for Santa Monica Bay in April 2007. This new monitoring program, developed by the Commission's Technical Advisory Committee, culminates efforts that began in the mid 1990s with the identification of key management questions and monitoring priorities. It lays out new monitoring designs for five major habitats within the Bay:

- Pelagic Ecosystem;
- Soft Bottom Ecosystem;
- Hard Bottom Ecosystem;
- Rocky and Sandy Intertidal; and,
- Wetland.

Design for each habitat includes a core monitoring question, a number of related objectives, specific monitoring approaches, indicators, data products, and sampling designs detailing number and locations of stations, sampling frequency and measurements to be collected. The Bay Monitoring Program also includes an implementation plan that includes a detailed schedule, cost estimates for individual Program elements, and recommendations on the Program's management structure, including data management and assessment strategies.

The SMBRC has agreed to lead the effort to further develop the implementation plan for the monitoring program. Regional Water Board staff will participate in this effort. The Bay Monitoring Program is designed to be implemented, in part, through modifications to existing receiving water monitoring programs for major NPDES dischargers into coastal ocean waters. Some elements of this monitoring program already have been implemented, for example, through establishment of periodic Bight-wide regional monitoring surveys (Southern California Bight Pilot Project '94, Bight '98, Bight '03, and Bight '08) and kelp bed monitoring. However, other elements of the program have yet to be implemented.

SMBRC, USEPA, the Regional Water Board, the Discharger, affected NPDES permit holders, and other interested agencies and stakeholders will develop implementation plans to collaboratively fund these elements of the program and determine each party's level of participation. It is anticipated that funding for the program from the JOS will be supplied through a combination of modifications to this Order's Monitoring and Reporting Program, including redirection of existing effort and new monitoring efforts relevant to the JWPCP's discharge, and integration with monitoring efforts conducted by other agencies and interested stakeholders. Redirection of existing monitoring requirements and/or the imposition of additional monitoring efforts conducted under the terms of this Order are subject to a hearing before the Regional Water Board. This Order may be reopened and modified by the Regional Water Board to incorporate conforming monitoring requirements and schedule dates for implementation of the Comprehensive Monitoring Program for Santa Monica Bay (Santa Monica Bay Restoration Commission, January 2007).

Each year, SMBRC shall convene a meeting resulting in a report on progress in implementing the Comprehensive Monitoring Program. This report shall be presented at a Spring Regional Water Board meeting. The Discharger shall provide an informational report summarizing to date its contributing

activities towards coordinated implementation of the Comprehensive Monitoring Program for Santa Monica Bay (SMBRC, January 2007).

- H. The Regional Water Board has helped to establish the Central Region Kelp Survey Consortium to conduct regional kelp bed monitoring. This program is designed to require ocean dischargers in the Regional Water Board's jurisdiction to undertake a collaborative program (which may include participation by Orange County ocean dischargers) to monitor kelp beds in the Southern California Bight, patterned after the successful program implemented by the San Diego Regional Water Board since 1985. Data collected in this regional survey will be used to assess status and trends in kelp bed health and spatial extent. The regional nature of the survey will allow the status of beds local to specific dischargers to be compared to regional trends. Additionally, this survey provides data to the Santa Monica Bay Restoration Project's Kelp Beds program. The regional kelp monitoring survey was initiated during 2003.
- I. This monitoring program is comprised of requirements to demonstrate compliance with the conditions of the NPDES permit, ensure compliance with State water quality standards, and mandate participation in regional monitoring and/or area-wide studies.
- J. The receiving waters in the Palos Verdes Peninsula watershed were impacted by historical discharges of the JWPCP effluents containing elevated concentrations of PCBs and DDT. The highest concentrations of PCB and DDT are in a layer of low density sewage-derived sediments around the main sewer outfalls at White Point on the Palos Verdes Shelf. USEPA has designated the DDT/PCB contaminated area as a superfund site. USEPA may begin the remediation actions on the Palos Verdes Shelf during this permit cycle. Once a detailed remediation plan is available, the Regional Water Board, USEPA and the Discharger will ensure that the JWPCP outfalls are protected from damage and will design a suitable monitoring program to ensure that contaminated sediment is not being resuspended or impacting marine life.

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 1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Influent Monitoring Station		
--	INF-001	Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained.
Effluent Monitoring Station		
Discharge Points 001, 002, 003, and 004	EFF-001	The effluent sampling station shall be located downstream of any in-plant return flows but before entering discharge tunnel where representative samples of the effluent can be obtained.
Discharge Points 001, 002, 003, and 004	EFF-002A EFF-002B	These effluent sampling stations shall be located at the outfall manifold at White Point. Samples taken at monitoring location EFF-002A shall be considered representative of discharges from Discharge Points 001 and 003. Samples taken at monitoring location EFF-002B shall be considered representative of discharges from Discharge Points 002 and 004.
Receiving Water Monitoring Station		
- Shoreline Stations for Microbiological Monitoring (Figure 1)		
	RW-SL-SB	Bluff Cove, 33° 47.52', 118° 23.76' (R-M-SB in the former permit)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	
	RW-SL-SM	Malaga Cove, 33° 48.22', 118° 24.44'	(R-M-SM in the former permit)
	RW-SL-S1	Long Point, 33° 44.22', 118° 23.62'	(R-M-S1 in the former permit)
	RW-SL-S2	Abalone Cove, 33° 44.44', 118° 22.18'	(R-M-S2 in the former permit)
	RW-SL-S3	Portuguese Bend, 33° 44.02', 118° 21.40'	(R-M-S3 in the former permit)
	RW-SL-S5	White Point, 33° 43.12', 118° 19.35'	(R-M-S5 in the former permit)
	RW-SL-S6	Wilder Addition Park, 33° 42.59', 118° 17.95'	(R-M-S6 in the former permit)
	RW-SL-S7	Cabrillo Beach, 33° 42.50', 118° 16.86'	(R-M-S7 in the former permit)
- Inshore Stations for Microbiological Monitoring (figure 2)			
	RW-IS-IL2	Long Point, 33° 44.20', 118° 24.15'	(R-M-IL2 in the former permit)
	RW-IS -IL3	Portuguese Point, 33° 44.25', 118° 22.67'	(R-M-IL3 in the former permit)
	RW-IS -IL4	Bunker Point, 33° 43.46', 118° 21.10'	(R-M-IL4 in the former permit)
	RW-IS -IL5	Royal Palms, 33° 42.91', 118° 19.85'	(R-M-IL5 in the former permit)
	RW-IS -IL6	West of Point Fermin, 33° 42.44', 118° 18.53'	(R-M-IL6 in the former permit)
	RW-IS -IL7	Cabrillo Beach, 33° 42.20', 118° 17.04'	(R-M-IL7 in the former permit)
- Nearshore/Offshore Stations for Microbiological and Water Quality Monitoring (Figures 2 and 3)			
	RW-OS-6C	6C, 33° 42.47', 118° 21.24'	(R-M-6C in the former permit)
	RW-OS-8C	8C, 33° 41.91', 118° 20.14'	(R-M-8C in the former permit)
	RW-OS-9C	9C, 33° 41.32', 118° 19.10'	(R-M-9C in the former permit)
	RW-OS-2501	10 meter depth, 33° 43.67', 118° 07.21'	(R-WQ-2501 in the former permit)
	RW-OS-2502	20 meter depth, 33° 41.94', 118° 07.67'	(R-WQ-2502 in the former permit)
	RW-OS-2503	26 meter depth, 33° 40.21', 118° 08.12'	(R-WQ-2503 in the former permit)
	RW-OS-2504	33 meter depth, 33° 38.48', 118° 08.57'	(R-WQ-2504 in the former permit)
	RW-OS-2505	44 meter depth, 33° 36.75', 118° 09.02'	(R-WQ-2505 in the former permit)
	RW-OS-2506	60 meter depth, 33° 34.86', 118° 09.54'	(R-WQ-2506 in the former permit)
	RW-OS-2601	19 meter depth, 33° 43.23', 118° 11.06'	(R-WQ-2601 in the former permit)
	RW-OS-2602	23 meter depth, 33° 41.64', 118° 11.43'	(R-WQ-2602 in the former permit)
	RW-OS-2603	23 meter depth, 33° 40.05', 118° 11.80'	(R-WQ-2603 in the former permit)
	RW-OS-2604	32 meter depth, 33° 38.46', 118° 12.18'	(R-WQ-2604 in the former permit)
	RW-OS-2605	47 meter depth, 33° 36.88', 118° 12.55'	(R-WQ-2605 in the former permit)
	RW-OS-2606	62 meter depth, 33° 35.29', 118° 12.93'	(R-WQ-2606 in the former permit)
	RW-OS-2701	26 meter depth, 33° 42.46', 118° 14.80'	(R-WQ-2701 in the former permit)
	RW-OS-2702	26 meter depth, 33° 41.32', 118° 15.07'	(R-WQ-2702 in the former permit)
	RW-OS-2703	28 meter depth, 33° 40.17', 118° 15.34'	(R-WQ-2703 in the former permit)
	RW-OS-2704	50 meter depth, 33° 39.03', 118° 15.60'	(R-WQ-2704 in the former permit)
	RW-OS-2705	100 meter depth, 33° 37.88', 118° 15.87'	(R-WQ-2705 in the former permit)
	RW-OS-2706	80 meter depth, 33° 36.73', 118° 16.14'	(R-WQ-2706 in the former permit)
	RW-OS-2801	10 meter depth, 33° 42.17', 118° 17.06'	(R-WQ-2801 in the former permit)
	RW-OS-2802	30 meter depth, 33° 41.60', 118° 17.34'	(R-WQ-2802 in the former permit)
	RW-OS-2803	60 meter depth, 33° 40.11', 118° 17.81'	(R-WQ-2803 in the former permit)
	RW-OS-2804	100 meter depth, 33° 39.46', 118° 18.08'	(R-WQ-2804 in the former permit)
	RW-OS-2805	100 meter depth, 33° 38.91', 118° 18.24'	(R-WQ-2805 in the former permit)
	RW-OS-2806	100 meter depth, 33° 38.22', 118° 18.55'	(R-WQ-2806 in the former permit)
	RW-OS-2901	10 meter depth, 33° 42.86', 118° 19.41'	(R-WQ-2901 in the former permit)
	RW-OS-2902	30 meter depth, 33° 42.42', 118° 19.79'	(R-WQ-2902 in the former permit)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	RW-OS-2903	60 meter depth, 33° 41.91', 118° 20.14' (R-WQ-2903 in the former permit)
	RW-OS-2904	100 meter depth, 33° 41.27', 118° 20.34' (R-WQ-2904 in the former permit)
	RW-OS-2905	100 meter depth, 33° 40.26', 118° 20.77' (R-WQ-2905 in the former permit)
	RW-OS-2906	100 meter depth, 33° 39.25', 118° 21.26' (R-WQ-2906 in the former permit)
	RW-OS-3001	10 meter depth, 33° 43.93', 118° 21.62' (R-WQ-3001 in the former permit)
	RW-OS-3002	30 meter depth, 33° 43.34', 118° 21.79' (R-WQ-3002 in the former permit)
	RW-OS-3003	60 meter depth, 33° 42.88', 118° 21.96' (R-WQ-3003 in the former permit)
	RW-OS-3004	100 meter depth, 33° 42.06', 118° 22.28' (R-WQ-3004 in the former permit)
	RW-OS-3005	100 meter depth, 33° 41.10', 118° 22.86' (R-WQ-3005 in the former permit)
	RW-OS-3006	100 meter depth, 33° 40.01', 118° 23.44' (R-WQ-3006 in the former permit)
	RW-OS-3051	13 meter depth, 33° 44.18', 118° 23.66' (R-WQ-3051 in the former permit)
	RW-OS-3052	30 meter depth, 33° 43.99', 118° 24.03' (R-WQ-3052 in the former permit)
	RW-OS-3053	60 meter depth, 33° 43.80', 118° 24.15' (R-WQ-3053 in the former permit)
	RW-OS-3054	100 meter depth, 33° 43.14', 118° 24.66' (R-WQ-3054 in the former permit)
	RW-OS-3055	100 meter depth, 33° 42.30', 118° 25.32' (R-WQ-3055 in the former permit)
	RW-OS-3056	100 meter depth, 33° 41.38', 118° 25.99' (R-WQ-3056 in the former permit)
	RW-OS-3101	10 meter depth, 33° 46.26', 118° 25.81' (R-WQ-3101 in the former permit)
	RW-OS-3102	30 meter depth, 33° 45.90', 118° 26.12' (R-WQ-3102 in the former permit)
	RW-OS-3103	60 meter depth, 33° 45.44', 118° 26.46' (R-WQ-3103 in the former permit)
	RW-OS-3104	100 meter depth, 33° 44.72', 118° 26.99' (R-WQ-3104 in the former permit)
	RW-OS-3105	100 meter depth, 33° 43.73', 118° 27.67' (R-WQ-3105 in the former permit)
	RW-OS-3106	100 meter depth, 33° 42.75', 118° 28.53' (R-WQ-3106 in the former permit)
- Nearshore Light Energy Monitoring Stations (Figure 4)		
	RW-NS-L1	Palos Verdes Point, 33° 46.10', 118° 25.82' (R-WQ-L1 in the former permit)
	RW-NS-L2	Long Point, 33° 44.10', 118° 24.22' (R-WQ-L2 in the former permit)
	RW-NS-L3	Portuguese Point, 33° 44.09', 118° 22.67' (R-WQ-L3 in the former permit)
	RW-NS-L4	Bunker Point, 33° 43.42', 118° 21.11' (R-WQ-L4 in the former permit)
	RW-NS-L5	Royal Palms, 33° 42.84', 118° 19.90' (R-WQ-L5 in the former permit)
	RW-NS-L6	West of Point Fermin, 33° 42.36', 118° 18.56' (R-WQ-L6 in the former permit)
	RW-NS-L7	Cabrillo Beach, 33° 41.84', 118° 17.12' (R-WQ-L7 in the former permit)
- Bottom Stations for Benthic Sediments Monitoring (Figure 5)		
	RW-B-0A	305 meter depth, 33° 49.10', 118° 27.25' (R-B-0A in the former permit)
	RW-B-0B	152 meter depth, 33° 48.70', 118° 26.50' (R-B-0B in the former permit)
	RW-B-0C	61 meter depth, 33° 48.43', 118° 25.83' (R-B-0C in the former permit)
	RW-B-0D	30 meter depth, 33° 48.17', 118° 25.36' (R-B-0D in the former permit)
	RW-B-1A	305 meter depth, 33° 44.72', 118° 26.99' (R-B-1A in the former permit)
	RW-B-1B	152 meter depth, 33° 44.97', 118° 26.81' (R-B-1B in the former permit)
	RW-B-1C	61 meter depth, 33° 45.44', 118° 26.46' (R-B-1C in the former permit)
	RW-B-1D	30 meter depth, 33° 45.90', 118° 26.12' (R-B-1D in the former permit)
	RW-B-2A	305 meter depth, 33° 43.62', 118° 25.72' (R-B-2A in the former permit)
	RW-B-2B	152 meter depth, 33° 43.95', 118° 25.55' (R-B-2B in the former permit)
	RW-B-2C	61 meter depth, 33° 44.26', 118° 25.39' (R-B-2C in the former permit)
	RW-B-2D	30 meter depth, 33° 44.47', 118° 25.28' (R-B-2D in the former permit)
	RW-B-3A	305 meter depth, 33° 43.14', 118° 24.66' (R-B-3A in the former permit)
	RW-B-3B	152 meter depth, 33° 43.43', 118° 24.44' (R-B-3B in the former permit)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	
	RW-B-3C	61 meter depth, 33° 43.80', 118° 24.15'	(R-B-3C in the former permit)
	RW-B-3D	30 meter depth, 33° 43.99', 118° 24.03'	(R-B-3D in the former permit)
	RW-B-4A	305 meter depth, 33° 42.70', 118° 23.38'	(R-B-4A in the former permit)
	RW-B-4B	152 meter depth, 33° 43.00', 118° 23.24'	(R-B-4B in the former permit)
	RW-B-4C	61 meter depth, 33° 43.40', 118° 23.08'	(R-B-4C in the former permit)
	RW-B-4D	30 meter depth, 33° 43.91', 118° 22.83'	(R-B-4D in the former permit)
	RW-B-5A	305 meter depth, 33° 42.06', 118° 22.28'	(R-B-5A in the former permit)
	RW-B-5B	152 meter depth, 33° 42.54', 118° 22.08'	(R-B-5B in the former permit)
	RW-B-5C	61 meter depth, 33° 42.88', 118° 21.96'	(R-B-5C in the former permit)
	RW-B-5D	30 meter depth, 33° 43.34', 118° 21.79'	(R-B-5D in the former permit)
	RW-B-6A	305 meter depth, 33° 41.99', 118° 21.56'	(R-B-6A in the former permit)
	RW-B-6B	152 meter depth, 33° 42.18', 118° 21.35'	(R-B-6B in the former permit)
	RW-B-6C	61 meter depth, 33° 42.47', 118° 21.24'	(R-B-6C in the former permit)
	RW-B-6D	30 meter depth, 33° 42.98', 118° 20.91'	(R-B-6D in the former permit)
	RW-B-7A	305 meter depth, 33° 41.86', 118° 21.19'	(R-B-7A in the former permit)
	RW-B-7B	152 meter depth, 33° 42.05', 118° 21.09'	(R-B-7B in the former permit)
	RW-B-7C	61 meter depth, 33° 42.31', 118° 20.92'	(R-B-7C in the former permit)
	RW-B-7D	30 meter depth, 33° 42.76', 118° 20.61'	(R-B-7D in the former permit)
	RW-B-8A	305 meter depth, 33° 41.27', 118° 20.34'	(R-B-8A in the former permit)
	RW-B-8B	152 meter depth, 33° 41.53', 118° 20.24'	(R-B-8B in the former permit)
	RW-B-8C	61 meter depth, 33° 41.91', 118° 20.14'	(R-B-8C in the former permit)
	RW-B-8D	30 meter depth, 33° 42.42', 118° 19.79'	(R-B-8D in the former permit)
	RW-B-9A	305 meter depth, 33° 40.58', 118° 19.46'	(R-B-9A in the former permit)
	RW-B-9B	152 meter depth, 33° 40.89', 118° 19.31'	(R-B-9B in the former permit)
	RW-B-9C	61 meter depth, 33° 41.32', 118° 19.10'	(R-B-9C in the former permit)
	RW-B-9D	30 meter depth, 33° 41.97', 118° 18.78'	(R-B-9D in the former permit)
	RW-B-10A	305 meter depth, 33° 39.46', 118° 18.08'	(R-B-10A in the former permit)
	RW-B-10B	152 meter depth 33° 39.73', 118° 17.90'	(R-B-10B in the former permit)
	RW-B-10C	61 meter depth, 33° 40.11', 118° 17.81'	(R-B-10C in the former permit)
	RW-B-10D	30 meter depth, 33° 41.60', 118° 17.34'	(R-B-10D in the former permit)
- Bottom Stations for Bioaccumulation Monitoring (Figure 7)			
	RW-BA-Z1	Outfall zone: inshore of the 150 meter depth contour and between a line bearing 150° magnetic of White Point and a line bearing 180° magnetic off Bunker Point. (R-BA-Z1 in the former permit)	
	RW-BA-Z2	Intermediate zone: inshore of the 150 meter depth contour and between a line bearing 180° (true) off 33° 44.24' N. lat. 118° 22.50' W. long. (Portuguese Point) and a line bearing 270° (true) off 33° 44.80' N. lat. 118° 24.82' W. long.. (R-BA-Z2 in the former permit)	
	RW-BA-Z3	Distant zone: inshore of the 150 meter depth contour and between a line bearing 225° magnetic off the southern face of Palos Verdes Point and a line bearing 235° magnetic off the south end of the Redondo Beach Pier. (R-BA-Z3 in the former permit)	
- Bottom Stations for Fish and Invertebrate Monitoring (Trawl Sampling Stations) (Figure 6)			
	RW-T-T0/23	23 meter depth, 33° 48.19', 118° 25.04' (trawl mid-point) (Former R-T-T0/23)	
	RW-T-T0/61	61 meter depth, 33° 48.57', 118° 25.84' (trawl mid-point) (Former R-T-T0/61)	
	RW-T-T0/137	137 meter depth, 33° 48.83', 118° 26.36' (trawl mid-point)(Former R-T-T0/137)	

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	RW-T-T0/305	305 meter depth, 33° 49.23', 118° 27.09' (trawl mid-point)(Former R-T-T0/305)
	RW-T-T1/23	26 meter depth, 33° 44.65', 118° 25.09' (trawl mid-point) (Former R-T-T1/23)
	RW-T-T1/61	61 meter depth, 33° 44.16', 118° 25.23' (trawl mid-point) (Former R-T-T1/61)
	RW-T-T1/137	137 meter depth, 33° 44.84', 118° 25.34' (trawl mid-point)(Former R-T-T1/137)
	RW-T-T1/305	305 meter depth, 33° 43.55', 118° 25.64' (trawl mid-point)(Former R-T-T1/305)
	RW-T-T4/23	27 meter depth, 33° 42.79', 118° 20.48' (trawl mid-point) (Former R-T-T4/23)
	RW-T-T4/61	61 meter depth, 33° 42.33', 118° 20.92' (trawl mid-point) (Former R-T-T4/61)
	RW-T-T4/137	137 meter depth, 33° 42.06', 118° 21.05' (trawl mid-point)(Former R-T-T4/137)
	RW-T-T4/305	305 meter depth, 33° 42.00', 118° 21.49' (trawl mid-point)(Former R-T-T4/305)
	RW-T-T5/23	23 meter depth, 33° 42.29', 118° 18.98' (trawl mid-point) (Former R-T-T5/23)
	RW-T-T5/61	61 meter depth, 33° 41.45', 118° 19.31' (trawl mid-point) (Former R-T-T5/61)
	RW-T-T5/137	137 meter depth, 33° 41.11', 118° 19.61' (trawl mid-point)(Former R-T-T5/137)
	RW-T-T5/305	305 meter depth, 33° 40.85', 118° 19.85' (trawl mid-point)(Former R-T-T5/305)

III. INFLUENT MONITORING REQUIREMENTS

(Footnotes are specified on pages E-17 and E-18)

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program

A. Monitoring Location (INF-001)

1. The Discharger shall monitor influent to the Facility at influent monitoring station INF-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 2. Influent Monitoring

Influent Monitoring Program				
Parameter	Units	Sample Type ¹	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	calculated	daily	--
BOD ₅ 20°C	mg/L	24-hr composite	daily	4
Suspended solids	mg/L	24-hr composite	daily	4
pH	pH units	grab	daily	4
COD	mg/L	24-hr composite	daily	4
Oil and grease	mg/L	grab ⁵	monthly	4
Ammonia nitrogen	mg/L	24-hr composite	monthly	4
Cyanide	µg/L	grab	monthly	4
Nitrate nitrogen	mg/L	24-hr composite	quarterly	4

Influent Monitoring Program				
Parameter	Units	Sample Type ¹	Minimum Sampling Frequency	Required Analytical Test Method
Nitrite nitrogen	mg/L	24-hr composite	quarterly	4
Organic nitrogen	mg/L	24-hr composite	quarterly	4
Radioactivity ⁶ (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	24-hr composite	monthly	--
Total phosphorus (as P)	mg/L	24-hr composite	quarterly	4
Tributyltin	ng/L	24-hr composite	quarterly	4
Aldrin	µg/L	24-hr composite	quarterly	4
Chlordane & related compounds ⁷	µg/L	24-hr composite	quarterly	4
DDT ⁸	µg/L	24-hr composite	quarterly	4
Dieldrin	µg/L	24-hr composite	quarterly	4
Endosulfan ⁹	µg/L	24-hr composite	quarterly	4
Endrin	µg/L	24-hr composite	quarterly	4
HCH ¹⁰	µg/L	24-hr composite	quarterly	4
Heptachlor	µg/L	24-hr composite	quarterly	4
Heptachlor epoxide	µg/L	24-hr composite	quarterly	4
PCBs ¹¹	µg/L	24-hr composite	quarterly	4
Toxaphene	µg/L	24-hr composite	quarterly	4
2,4-Dinitrophenol	µg/L	24-hr composite	quarterly	4
2,4,6-Trichlorophenol	µg/L	24-hr composite	quarterly	4
2-Methyl-4,6-dinitrophenol	µg/L	24-hr composite	quarterly	4
Phenolic compounds (chlorinated) ¹³	µg/L	24-hr composite	quarterly	4
Phenolic compounds (non-chlorinated) ¹⁴	µg/L	24-hr composite	quarterly	4
Bis(2-chloro-ethoxy) methane	µg/L	24-hr composite	quarterly	4
Bis(2-chloro-isopropyl) ether	µg/L	24-hr composite	quarterly	4
Di-n-butylphthalate	µg/L	24-hr composite	quarterly	4
Dichlorobenzenes ¹⁵	µg/L	grab	quarterly	4
Diethylphthalate	µg/L	24-hr composite	quarterly	4
Dimethylphthalate	µg/L	24-hr composite	quarterly	4
Fluoranthene	µg/L	24-hr composite	quarterly	4
Hexachlorocyclopentadiene	µg/L	24-hr composite	quarterly	4

Influent Monitoring Program				
Parameter	Units	Sample Type ¹	Minimum Sampling Frequency	Required Analytical Test Method
Isophorone	µg/L	24-hr composite	quarterly	4
Nitrobenzene	µg/L	24-hr composite	quarterly	4
Benzidine	µg/L	24-hr composite	quarterly	4
Bis(2-chloroethyl) ether	µg/L	24-hr composite	quarterly	4
Bis(2-ethylhexyl) phthalate	µg/L	24-hr composite	quarterly	4
1,4-Dichlorobenzene	µg/L	grab	quarterly	4
3,3'-Dichlorobenzidine	µg/L	24-hr composite	quarterly	4
2,4-Dinitrotoluene	µg/L	24-hr composite	quarterly	4
1,2-Diphenylhydrazine	µg/L	24-hr composite	quarterly	4
Hexachlorobenzene	µg/L	24-hr composite	quarterly	4
Hexachlorobutadiene	µg/L	24-hr composite	quarterly	4
Hexachloroethane	µg/L	24-hr composite	quarterly	4
N-Nitrosodimethylamine	µg/L	24-hr composite	quarterly	4
N-Nitrosodi-n-propylamine	µg/L	24-hr composite	quarterly	4
N-Nitrosodiphenylamine	µg/L	24-hr composite	quarterly	4
PAHs ¹⁶	µg/L	24-hr composite	quarterly	4
TCDD equivalents ¹⁷	pg/L	24-hr composite	quarterly	4
Acrolein	µg/L	Grab	quarterly	4
Acrylonitrile	µg/L	grab	quarterly	4
Benzene	µg/L	grab	quarterly	4
Carbon tetrachloride	µg/L	Grab	quarterly	4
Chlorobenzene	µg/L	grab	quarterly	4
Chlorodibromomethane	µg/L	Grab	quarterly	4
Chloroform	µg/L	Grab	quarterly	4
Dichlorobromomethane	µg/L	Grab	quarterly	4
Dichloromethane	µg/L	Grab	quarterly	4
1,1-Dichloroethylene	µg/L	grab	quarterly	4
1,2-Dichloroethane	µg/L	Grab	quarterly	4
1,3-Dichloropropene	µg/L	Grab	quarterly	4
Ethylbenzene	µg/L	Grab	quarterly	4
Halomethanes ¹⁸	µg/L	Grab	quarterly	4
Methyl-tert-butyl-ether	µg/L	Grab	quarterly	4

Influent Monitoring Program				
Parameter	Units	Sample Type ¹	Minimum Sampling Frequency	Required Analytical Test Method
Toluene	µg/L	Grab	quarterly	4
1,1,2,2-Tetrachloroethane	µg/L	Grab	quarterly	4
1,1,1-Trichloroethane	µg/L	grab	quarterly	4
1,1,2-Trichloroethane	µg/L	grab	quarterly	4
Tetrachloroethylene	µg/L	Grab	quarterly	4
Trichloroethylene	µg/L	Grab	quarterly	4
Vinyl chloride	µg/L	Grab	quarterly	4
Antimony	µg/L	24-hr composite	quarterly	4
Arsenic	µg/L	24-hr composite	monthly	4
Beryllium	µg/L	24-hr composite	quarterly	4
Cadmium	µg/L	24-hr composite	monthly	4
Chromium (III)	µg/L	calculated	quarterly	4
Copper	µg/L	24-hr composite	monthly	4
Chromium (VI) ¹⁹	µg/L	Grab	monthly	4
Lead	µg/L	24-hr composite	monthly	4
Mercury	µg/L	24-hr composite	monthly	4
Nickel	µg/L	24-hr composite	monthly	4
Selenium	µg/L	24-hr composite	monthly	4
Silver	µg/L	24-hr composite	monthly	4
Thallium	µg/L	24-hr composite	quarterly	4
Zinc	µg/L	24-hr composite	monthly	4

IV. EFFLUENT MONITORING REQUIREMENTS

(Footnotes are specified on pages E-17 and E-18)

Effluent monitoring is required to:

- Determine compliance with NPDES permit conditions and water quality standards.
- Assess plant performance, identify operational problems and improve plant performance.
- Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.

A. Monitoring Location (EFF-001, and Manifold Stations: EFF-002A and EFF-002B)

1. The Discharger shall monitor secondary effluent at effluent monitoring location EFF-001 for all parameters except chlorine residual and bacteria. The chlorine residual and bacteria samples shall be collected at effluent manifold monitoring locations EFF-002A and EFF-002B. Effluent limitations

for chlorine residual and bacteria applicable to discharges through Discharge Points 001 and 003 shall apply at manifold monitoring location EFF-002A. Effluent limitations for chlorine residual and bacteria applicable to discharges through Discharge Points 002 and 004 shall apply at manifold monitoring location EFF-002B. The effluent monitoring program is described as follows:

Table 3. Effluent Monitoring

Effluent Monitoring Program				
Parameter	Units	Sample Type ¹	Minimum Sampling Frequency ²	Required Analytical Test Method
Flow	mgd	recorder/totalizer	continuous ³	--
BOD ₅ 20°C	mg/L	24-hr composite	daily	4
Suspended solids	mg/L	24-hr composite	daily	4
pH	pH units	grab	daily	4
Oil and grease	mg/L	grab ⁵	daily	4
Temperature	°C	grab	daily	4
Settleable solids	ml/L	grab	daily	4
Total chlorine residual (at manifold stations)	mg/L	grab	daily	4
Turbidity	NTU	24-hr composite	daily	4
Total coliform (at manifold stations)	CFU/100 ml or MPN/100 ml	grab	daily	4
Enterococcus (at manifold stations)	CFU/100 ml or MPN/100 ml	grab	daily	4
Fecal coliform (at manifold stations)	CFU/100 ml or MPN/100 ml	grab	5 times/month	4
COD	mg/L	24-hr composite	daily	4
TOC	mg/L	24-hr composite	monthly	4
Ammonia nitrogen	mg/L	24-hr composite	monthly	4
Toxicity, acute	TUa	24-hr composite	monthly	4
Toxicity, chronic	TUc	24-hr composite	monthly	4
Cyanide	µg/L	grab	monthly	4
Nitrate nitrogen	mg/L	24-hr composite	quarterly	4
Nitrite nitrogen	mg/L	24-hr composite	quarterly	4
Organic nitrogen	mg/L	24-hr composite	quarterly	4
Radioactivity ⁶ (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	24-hr composite	monthly	--
Total phosphorus (as P)	mg/L	24-hr composite	quarterly	4
Tributyltin	ng/L	24-hr composite	quarterly	4

Effluent Monitoring Program				
Aldrin	µg/L	24-hr composite	quarterly	4
Chlordane & related compounds ⁷	µg/L	24-hr composite	quarterly	4
DDT ⁸	µg/L	24-hr composite	quarterly	4
Dieldrin	µg/L	24-hr composite	quarterly	4
Endosulfan ⁹	µg/L	24-hr composite	quarterly	4
Endrin	µg/L	24-hr composite	quarterly	4
HCH ¹⁰	µg/L	24-hr composite	quarterly	4
Heptachlor	µg/L	24-hr composite	quarterly	4
Heptachlor epoxide	µg/L	24-hr composite	quarterly	4
PCBs ¹¹	µg/L	24-hr composite	quarterly	4
PCBs congeners ¹²	µg/L	24-hr composite	annually	4
Toxaphene	µg/L	24-hr composite	quarterly	4
2,4-Dinitrophenol	µg/L	24-hr composite	quarterly	4
2,4,6-Trichlorophenol	µg/L	24-hr composite	quarterly	4
2-Methyl-4,6-dinitrophenol	µg/L	24-hr composite	quarterly	4
Phenolic compounds (chlorinated) ¹³	µg/L	24-hr composite	quarterly	4
Phenolic compounds (non-chlorinated) ¹⁴	µg/L	24-hr composite	quarterly	4
Bis(2-chloro-ethoxy) methane	µg/L	24-hr composite	quarterly	4
Bis(2-chloro-isopropyl) ether	µg/L	24-hr composite	quarterly	4
Di-n-butylphthalate	µg/L	24-hr composite	quarterly	4
Dichlorobenzenes ¹⁵	µg/L	grab	quarterly	4
Diethylphthalate	µg/L	24-hr composite	quarterly	4
Dimethylphthalate	µg/L	24-hr composite	quarterly	4
Fluoranthene	µg/L	24-hr composite	quarterly	4
Hexachlorocyclopentadiene	µg/L	24-hr composite	quarterly	4
Isophorone	µg/L	24-hr composite	quarterly	4
Nitrobenzene	µg/L	24-hr composite	quarterly	4
Benzidine	µg/L	24-hr composite	quarterly	4
Bis(2-chloroethyl) ether	µg/L	24-hr composite	quarterly	4
Bis(2-ethylhexyl) phthalate	µg/L	24-hr composite	quarterly	4
1,4-Dichlorobenzene	µg/L	grab	quarterly	4
3,3-Dichlorobenzidine	µg/L	24-hr composite	quarterly	4
2,4-Dinitrotoluene	µg/L	24-hr composite	quarterly	4

Effluent Monitoring Program				
1,2-Diphenylhydrazine	µg/L	24-hr composite	quarterly	4
Hexachlorobenzene	µg/L	24-hr composite	quarterly	4
Hexachlorobutadiene	µg/L	24-hr composite	quarterly	4
Hexachloroethane	µg/L	24-hr composite	quarterly	4
N-Nitrosodimethylamine	µg/L	24-hr composite	quarterly	4
N-Nitrosodi-n-propylamine	µg/L	24-hr composite	quarterly	4
N-Nitrosodiphenylamine	µg/L	24-hr composite	quarterly	4
PAHs ¹⁶	µg/L	24-hr composite	quarterly	4
TCDD equivalents ¹⁷	pg/L	24-hr composite	quarterly	4
Acrolein	µg/L	grab	quarterly	4
Acrylonitrile	µg/L	grab	quarterly	4
Benzene	µg/L	grab	quarterly	4
Carbon tetrachloride	µg/L	grab	quarterly	4
Chlorobenzene	µg/L	grab	quarterly	4
Chlorodibromomethane	µg/L	grab	quarterly	4
Chloroform	µg/L	grab	quarterly	4
Dichlorobromomethane	µg/L	grab	quarterly	4
Dichloromethane	µg/L	grab	quarterly	4
1,1-Dichloroethylene	µg/L	grab	quarterly	4
1,2-Dichloroethane	µg/L	grab	quarterly	4
1,3-Dichloropropene	µg/L	grab	quarterly	4
Ethylbenzene	µg/L	grab	quarterly	4
Halomethanes ¹⁸	µg/L	grab	quarterly	4
Methyl-tert-butyl-ether	µg/L	grab	quarterly	4
Toluene	µg/L	grab	quarterly	4
1,1,2,2-Tetrachloroethane	µg/L	grab	quarterly	4
1,1,1-Trichloroethane	µg/L	grab	quarterly	4
1,1,2-Trichloroethane	µg/L	grab	quarterly	4
Tetrachloroethylene	µg/L	grab	quarterly	4
Trichloroethylene	µg/L	grab	quarterly	4
Vinyl chloride	µg/L	grab	quarterly	4
Antimony	µg/L	24-hr composite	quarterly	4
Arsenic	µg/L	24-hr composite	monthly	4
Beryllium	µg/L	24-hr composite	quarterly	4

Effluent Monitoring Program				
Cadmium	µg/L	24-hr composite	monthly	4
Chromium (III)	µg/L	calculated	quarterly	4
Copper	µg/L	24-hr composite	monthly	4
Chromium (VI) ¹⁹	µg/L	grab	monthly	4
Lead	µg/L	24-hr composite	monthly	4
Mercury	µg/L	24-hr composite	monthly	20
Nickel	µg/L	24-hr composite	monthly	4
Selenium	µg/L	24-hr composite	monthly	4
Silver	µg/L	24-hr composite	monthly	4
Thallium	µg/L	24-hr composite	quarterly	4
Zinc	µg/L	24-hr composite	monthly	4

Footnotes for Influent and Effluent Monitoring Program

- 1 For 24-hour composite samples, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted samples shall be obtained during the discharge period and composited. For discharge durations of less than eight hours, individual "grab samples" may be substituted. A grab sample is an individual sample collected in less than 15 minutes.
- 2 For Discharge Points 003 and 004, the minimum frequency of analysis shall be once per discharge day, but no more than one analysis need be done during the period indicated. The permit does not require acute toxicity testing of this effluent discharge. During routine maintenance activities if it is reported to the Regional Water Board in advance, sampling and analyses are not required.
- 3 When continuous monitoring of flow is required, total daily flow and peak daily flow (24-hr basis) shall be reported.
- 4 Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; where no methods are specified for a given pollutant, methods approved by this Regional Water Board, or the State Water Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Appendix II of the Ocean Plan, the analytical method with the lowest ML must be selected.
- 5 Oil and grease monitoring in the influent and effluent shall consist of a single grab sample at peak flow over a 24-hour period.
- 6 Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium.

Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds 5 pCi/L, analyze for tritium, strontium-90 and uranium.
- 7 Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-cis, nonachlor-trans and oxychlordane. Discharger may temporarily suspend the monitoring requirements for alpha and gamma chlordene if standards for these compounds are not available. However, Discharger is required to resume detection and quantification practices as soon as standards for these two compounds become available.

- 8 DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
- 9 Endosulfan shall mean the sum of endosulfan-alpha, endosulfan-beta, and endosulfan sulfate.
- 10 HCH shall mean the sum of alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.
- 11 PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
- 12 To facilitate interpretation of sediment/fish tissue data and TMDL development, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.
- 13 Chlorinated phenolic compounds shall mean the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.
- 14 Nonchlorinated phenolic compounds shall mean the sum of Phenol, 2,4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 2-Methyl-4,6-dinitrophenol.
- 15 Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.
- 16 PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
- 17 TCDD equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below. USEPA Method 1613 shall be used to analyze TCDD equivalents.
- | <u>Isomer Group</u> | <u>Toxicity Equivalence Factor</u> |
|---------------------|------------------------------------|
| 2,3,7,8-tetra CDD | 1.0 |
| 2,3,7,8-penta CDD | 0.5 |
| 2,3,7,8-hexa CDDs | 0.1 |
| 2,3,7,8-hepta CDD | 0.01 |
| octa CDD | 0.001 |
| 2,3,7,8-tetra CDF | 0.1 |
| 1,2,3,7,8-penta CDF | 0.05 |
| 2,3,4,7,8-penta CDF | 0.5 |
| 2,3,7,8-hexa CDFs | 0.1 |
| 2,3,7,8-hepta CDFs | 0.01 |
| octa CDF | 0.001 |
- 18 Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).
- 19 Discharger may, at its option, meet the chromium (VI) limitation by analyzing for total chromium rather than hexavalent chromium.
- 20 USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total mercury.

B. Mass Emission Benchmarks

The following Mass Emission Benchmarks, in metric tons per year (MT/yr), have been established for the discharge through Discharge Points 001 and 002 (methodology described in the Fact Sheet). The Discharger shall monitor and report the mass emission rate for all constituents that have mass emission benchmarks. For each constituent, the 12-month average mass emission rate and the concentration and flow used to calculate that mass emission rate shall be reported in the annual pretreatment report and the annual receiving water monitoring report.

Table 4. 12-Month Average Effluent Mass Emission Benchmarks

Ocean Plan Constituent	12-month Average Mass Emission Benchmarks (MT/yr)
Marine Aquatic Life Toxicants	
Arsenic	0.95
Cadmium	0.47
Chromium (VI)	46.70
Copper	5.78
Lead	3.74
Mercury	0.23
Nickel	22.58
Selenium	5.00
Silver	2.33
Zinc	11.67
Cyanide	4.05
Chlorine Residual	N/A
Ammonia as N	17070
Phenolic compounds (non-chlorinated)	23.35
Phenolic compounds (chlorinated)	23.35
Endosulfan	0.047
HCH	0.0047
Endrin	0.0047
Acute toxicity	N/A
Chronic toxicity	N/A
Radioactivity	N/A
Human Health Toxicants – Non-Carcinogens	
Acrolein	4.67
Antimony	1.61
Bis(2-chloroethoxy) methane	11.67
Bis(2-chloroisopropyl) ether	4.67

Ocean Plan Constituent	12-month Average Mass Emission Benchmarks (MT/yr)
Chlorobenzene	0.23
Chromium (III)	5.60
Di-n-butyl-phthalate	23.35
Dichlorobenzenes	4.67
Diethyl phthalate	4.67
Dimethyl phthalate	4.67
2-Methyl-4,6-dinitrophenol	11.67
2,4-Dinitrophenol	11.67
Ethyl benzene	0.23
Fluoranthene	2.33
Hexachlorocyclopentadiene	11.67
Nitrobenzene	2.33
Thallium	4.67
Toluene	0.23
Tributyltin	0.028
1,1,1-Trichloroethane	0.23
Human Health Toxicants – Carcinogens	
Acrylonitrile	2.33
Aldrin	N/A
Benzene	0.23
Benzidine	N/A
Beryllium	0.47
Bis(2-chloroethyl) ether	2.33
Bis(2-ethylhexyl) phthalate	15.25
Carbon tetrachloride	0.23
Chlordane	N/A
Chlorodibromomethane	1.15
Chloroform	20.78
DDT	N/A
1,4-Dichlorobenzene	2.33
3,3'-Dichlorobenzidine	0.065
1,2-Dichloroethane	0.23
1,1-Dichloroethylene	0.23
Bromodichloromethane	0.84

Ocean Plan Constituent	12-month Average Mass Emission Benchmarks (MT/yr)
Dichloromethane	5.38
1,3-Dichloropropene	0.23
Dieldrin	N/A
2,4-Dinitrotoluene	11.67
1,2-Diphenylhydrazine	2.33
Halomethanes	1.50
Heptachlor	N/A
Heptachlor epoxide	N/A
Hexachlorobenzene	N/A
Hexachlorobutadiene	2.33
Hexachloroethane	2.33
Isophorone	2.33
N-Nitrosodimethylamine	11.67
N-Nitrosodi-N-propylamine	11.67
N-Nitrosodiphenylamine	2.33
PAHs	23.35
PCBs	N/A
TCDD equivalents	N/A
1,1,2,2-Tetrachloroethane	0.23
Tetrachloroethylene	4.41
Toxaphene	N/A
Trichloroethylene	0.23
1,1,2-Trichloroethane	0.23
2,4,6-Trichlorophenol	23.35
Vinyl chloride	0.23

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

1. Methods and test species.

The Discharger shall conduct 96-hour static renewal acute toxicity tests on flow-weighted 24-hour composite effluent samples. When conducting toxicity tests in accordance with the specified chronic test methods manual, if daily observations of mortality make it possible to also calculate acute toxicity for the desired exposure period and the dilution series for the toxicity test includes the acute instream waste concentration (IWC), such method may be used to estimate the 96-hour LC50.

The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA 821-R-02-012, 2002), with preference for West Coast vertebrate and invertebrate species.

2. Frequency

- a. Screening - The Discharger shall conduct the first acute toxicity test screening for three consecutive months in 2012. Re-screening is required every 24 months. The Discharger shall re-screen with a marine vertebrate species and a marine invertebrate species and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrate that the same species is the most sensitive, then the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five, suites.
- b. Regular toxicity tests - After the screening period, monitoring shall be conducted monthly using the most sensitive marine species.

3. Toxicity Units.

The acute toxicity of the effluent shall be expressed and reported in Acute Toxic Units, TU_a, where,

$$TU_a = \frac{100}{LC50}$$

The Lethal Concentration, 50 Percent (LC50) is expressed as the estimate of the percent effluent concentration that causes death in 50% of the test population in the time period prescribed by the toxicity test.

B. Chronic Toxicity Testing

1. Methods and test species.

The Discharger shall conduct critical life stage chronic toxicity tests on flow-weighted, 24-hour composite effluent samples. The presence of chronic toxicity shall be estimated in accordance to *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Pursuant to the 2009 California Ocean Plan, upon the approval of the Executive Officer of the Regional Water Board, the Discharger may use a second tier organism (e.g., silverside) if first tier organisms (e.g., topsmelt) are not available. However, the Discharger is required to immediately resume the chronic toxicity test using the original testing organism as soon as this organism becomes available. When a chronic toxicity test method that incorporates a 96-hour acute toxicity endpoint is used to monitor toxicity at the chronic IWC in effluent discharged from Discharge Point 003 or 004, the 96-hour acute toxicity statistical endpoint may also be reported as LC50 and TU_a, along with other chronic toxicity test results required by this permit.

2. Frequency

- a. Screening - The Discharger shall conduct the first chronic toxicity test screening for three consecutive months in 2012. Re-screening is required every 24 months. The Discharger shall re-screen with a marine vertebrate species, a marine invertebrate species, and a marine alga species

and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrate that the same species is the most sensitive, then the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five, suites.

- b. Regular toxicity tests - After the screening period, monitoring shall be conducted monthly using the most sensitive species.

3. Toxicity Units.

The chronic toxicity of the effluent shall be expressed and reported in Chronic Toxic Units, TUC, where,

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage 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 manual (EPA-821-R-02-012 and/or EPA/600/R-95/136), then the Discharger must re-sample and re-test within 14 days.
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.
4. A series of at least five dilutions and a control shall be tested. The dilution series shall include the instream waste concentration (IWC), and two dilutions above and two below the IWC. The acute IWC for Discharge Points 001 and 002 is 19% effluent. The chronic IWC for Discharge Points 001 and 002 is 0.60% effluent; the chronic IWC for Discharge Point 003 is 0.662% effluent; the chronic IWC for Discharge Point 004 is 0.86% effluent.
5. Following Paragraph 10.2.6.2 of USEPA's chronic freshwater test methods manual (EPA/821/R-02/013, 2002, as specified in 40 CFR part 136), the Discharger shall review the concentration-response relationship for each multi-concentration test to ensure that calculated test results are interpreted appropriately. All WET test results should be reviewed and reporting following Method Guidance and Recommendations for WET Testing (EPA/821/B-00-004, 2000).
6. Because this Permit requires sublethal hypothesis testing endpoints from test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995), within-test variability must be reviewed for acceptability and a variability criterion (upper %MSD bound) must be applied, as directed under each test method. Based on this review, only accepted effluent toxicity test results shall be reported on the DMR form. If excessive within-test variability invalidates a test result, then the Discharger must resample and retest within 14 days.

7. pH drift during the toxicity test may contribute to artifactual toxicity when pH-dependent toxicants (e.g., ammonia, metals) are present in an effluent. To determine whether or not pH drift during the toxicity test is contributing to artifactual toxicity, the Discharger shall conduct three sets of parallel toxicity tests, in which the pH of one treatment is controlled at the pH of the effluent and the pH of the other treatment is not controlled, as described in section 11.3.6.1 of the test methods manual, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R-02/013, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit or trigger is observed in the treatments controlled at the pH of the effluent. If toxicity is confirmed to be artifactual and due to pH drift, then, following written approval by the permitting authority, the Discharger may use the procedures outlined in section 11.3.6.2 of the test methods manual to control sample pH during the toxicity test.

D. Accelerated Monitoring

If the effluent toxicity test result exceeds the limitation, then the Discharger shall immediately implement accelerated toxicity testing that consists of six additional tests, approximately every two weeks, over a 12-week period. Effluent sampling for the first test of the six additional tests shall commence within 5 working days of receipt of the test results exceeding the toxicity limitation.

1. If all the results of the six additional tests are in compliance with the toxicity limitation, then the Discharger may resume regular monthly testing.
2. If the result of any of the six additional tests exceeds the toxicity limitation, then the Discharger shall continue to monitor once every two weeks until six consecutive biweekly tests are in compliance. At that time, the Discharger may resume regular monthly testing.
3. If the results of any two of the six additional tests (any two tests in a 12-week period) exceed the toxicity limitation, the Discharger shall implement the initial investigation Toxicity Reduction Evaluation (TRE) workplan.
4. If implementation of the initial investigation TRE workplan (see section V.E below) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

E. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or most current version. At a minimum, the workplan must contain the provisions in Attachment G. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

1. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
2. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,

3. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See section V.F.3 below for guidance manuals.

F. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

1. If results of the implementation of the facility's initial investigation TRE workplan indicate the need to continue the TRE/TIE, then the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE. The detailed workplan shall include, but not be limited to:
 - a. Further actions to investigate and identify the cause of toxicity;
 - b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
 - c. A schedule for these actions.
2. The following section summarizes the stepwise approach used in conducting the TRE:
 - a. Step 1 includes basic data collection.
 - b. Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and selection and use of in-plant process chemicals.
 - c. If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) and employment of all reasonable efforts using currently available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity.
 - d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options.
 - e. Step 5 evaluates in-plant treatment options.
 - f. Step 6 consists of confirmation once a toxicity control method has been implemented.
3. The Discharger may initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, USEPA test method manuals; Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures (EPA/600/6-91/003, 1991); Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080, 1993); Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/081, 1993); and Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document (EPA/600/R-96-054, 1996).
4. If a TRE/TIE is initiated prior to completion of the accelerated testing required in section V.D. of this program, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
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 Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

G. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia *because of increasing test pH* when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.
 - a. There is consistent toxicity in the effluent, and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
 - b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
 - c. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
 - d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.
2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

H. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month, as required by this permit. Test results shall be reported in Acute Toxicity Units (TUa) or Chronic Toxicity Units (TUc), as required, with the self-monitoring report (SMR) for the month in which the test is conducted.

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

1. The full report shall be received by the Regional Water Board by the 15th day of the second month following sampling.
2. A full laboratory report for all toxicity testing shall be submitted as an attachment to the SMR for the month in which the toxicity test was conducted and shall also include: the toxicity test results reported according to the test methods manual chapter on report preparation and test review; the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations. Routine reporting shall include, at a minimum, as applicable for each toxicity test:
 - a. Sample collection date(s)

- b. Test initiation date
 - c. Test species
 - d. End point values for each dilution (e.g. number of young, growth rate, percent survival)
 - e. LC₅₀ value(s) in percent effluent
 - f. TU_a value(s) $\left(TU_a = \frac{100}{LC50}\right)$
 - g. NOEC value(s) in percent effluent
 - h. TU_c values $\left(TU_c = \frac{100}{NOEC}\right)$
 - i. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable)
 - j. IC/EC₂₅ values(s) in percent effluent
 - k. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)
 - l. Available water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia).
3. The Discharger shall provide a compliance summary that includes a summary table of toxicity data from at least eleven of the most recent samples for toxicity testing.
 4. The Discharger shall notify this Regional Water Board of any exceedance of a toxicity limitation, in writing, 14 days after the receipt of the test results. The notification will describe actions 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. RECEIVING WATER MONITORING REQUIREMENTS

(Footnotes are specified on pages E-43 and E-44)

A. Shoreline/Inshore/Offshore Microbiological Monitoring

The shoreline monitoring addresses the question: Are densities of bacteria in water contact zones below those that ensure public safety? The data collected provide public health officials with information necessary for the management of beach postings and closures. Monitoring at these shoreline stations is conducted for the purposes of public health assessment and to ensure protection for public recreational use of coastal ocean waters throughout Santa Monica Bay, and are not intended for use as compliance sites for JWPCP.

The inshore and offshore monitoring addresses the question: Are Ocean Plan compliance standards for bacteriological contamination being met? The data collected at inshore stations will provide the means to

determine whether bacteriological standards for water contact and shellfish harvesting are being met in the area of greatest potential water contact and shellfish harvesting most proximal to the point of discharge. The data collected at the offshore sites will provide the means to determine whether bacteriological standards for water contact are being met in the area of around the discharge point. Data from both inshore and offshore compliance sampling sites are augmented by the frequent (typical daily) manifold bacterial monitoring collected for plant operational purposes and which provides effluent bacterial densities actually discharged through the outfall system.

1. Shoreline Monitoring

The Discharger shall monitor the following eight shoreline stations (Figure 1):

Table 5. Shoreline Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Shoreline Station	RW-SL-SB	Bluff Cove, 33° 47.52', 118° 23.76' (Former R-M-SB)
Shoreline Station	RW-SL-SM	Malaga Cove, 33° 48.22', 118° 24.44' (Former R-M-SM)
Shoreline Station	RW-SL-S1	Long Point, 33° 44.22', 118° 23.62' (Former R-M-S1)
Shoreline Station	RW-SL-S2	Abalone Cove, 33° 44.44', 118° 22.18' (Former R-M-S2)
Shoreline Station	RW-SL-S3	Portuguese Bend, 33° 44.02', 118° 21.40' (Former R-M-S3)
Shoreline Station	RW-SL-S5	White Point, 33° 43.12', 118° 19.35' (Former R-M-S5)
Shoreline Station	RW-SL-S6	Wilder Addition Park, 33° 42.59', 118° 17.95' (Former R-M-S6)
Shoreline Station	RW-SL-S7	Cabrillo Beach, 33° 42.50', 118° 16.86' (Former R-M-S7)

as follows:

Table 6. Shoreline Microbiological Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total coliform ¹	CFU/100 ml (or MPN/100 ml)	Grab in wave wash zone	weekly
Fecal coliform ¹	CFU/100 ml (or MPN/100 ml)	Grab in wave wash zone	weekly
Enterococcus ¹	CFU/100 ml (or MPN/100 ml)	Grab in wave wash zone	weekly
Visual observation ²	--	--	weekly

Visual observations shall be recorded at the same time that bacteriological samples are collected. Monitoring at these eight stations is conducted for the purposes of public health assessment and to ensure protection for public recreational use of coastal ocean waters throughout Santa Monica Bay, and are not intended for use as compliance sites for JWPCP.

In the event of stormy weather that makes sampling hazardous or impractical, these samples can be omitted.

2. Inshore Monitoring

The Discharger shall monitor the following six inshore stations located along the 30-foot (9.1-meter) depth contour (Figure 2):

Table 7. Inshore Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Inshore Station	RW-IS-IL2	Long Point, 33° 44.20', 118° 24.15' (Former R-M-IL2)
Inshore Station	RW-IS-IL3	Portuguese Point, 33° 44.25', 118° 22.67' (Former R-M-IL3)
Inshore Station	RW-IS-IL4	Bunker Point, 33° 43.46', 118° 21.10' (Former R-M-IL4)
Inshore Station	RW-IS-IL5	Royal Palms, 33° 42.91', 118° 19.85' (Former R-M-IL5)
Inshore Station	RW-IS-IL6	West of Point Fermin, 33° 42.44', 118° 18.53' (Former R-M-IL6)
Inshore Station	RW-IS-IL7	Cabrillo Beach, 33° 42.20', 118° 17.04' (Former R-M-IL7)

as follows:

Table 8. Inshore Microbiological Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total coliform ¹	CFU/100 ml (or MPN/100 ml)	Grabs at 0.5 meters below the surface (designated as surface sample) and within 2 meters of the seabed (designated as bottom sample)	5 times per month
Fecal coliform ^{1,3}	CFU/100 ml (or MPN/100 ml)	Grabs at 0.5 meters below the surface (designated as surface sample) and within 2 meters of the seabed (designated as bottom sample)	5 times per month
Enterococcus ¹	CFU/100 ml (or MPN/100 ml)	Grabs at 0.5 meters below the surface (designated as surface sample) and within 2 meters of the seabed (designated as bottom sample)	5 times per month
Visual observation ²	--	--	5 times per month

Visual observations shall be recorded at the same time that bacteriological samples are collected.

In the event of stormy weather that makes sampling hazardous or impractical, these samples can be omitted. Sampling may be conducted along a deeper depth contour during periods of adverse weather.

If a kelp bed is present at any of the six inshore stations, sampling shall be conducted at the outer edge of the kelp bed rather than at the 30-foot depth contour. The actual depth of all sampling stations shall be reported in the monthly monitoring reports.

3. Offshore Monitoring

The Discharger shall monitor the following three offshore stations located along the 200-foot (60-meter) depth contour (Figure 2):

Table 9. Offshore Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Offshore Station	RW-OS-6C	6C, 33° 42.47', 118° 21.24' (Former R-M-6C)
Offshore Station	RW-OS-8C	8C, 33° 41.91', 118° 20.14' (Former R-M-6C)
Offshore Station	RW-OS-9C	9C, 33° 41.32', 118° 19.10' (Former R-M-6C)

as follows:

Table 10. Offshore Microbiological Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total coliform ¹	CFU/100 ml (or MPN/100 ml)	Grab at 0.5 meters below the surface	monthly
Fecal coliform ^{1,3}	CFU/100 ml (or MPN/100 ml)	Grab at 0.5 meters below the surface	monthly
Enterococcus ¹	CFU/100 ml (or MPN/100 ml)	Grab at 0.5 meters below the surface	monthly
Visual observation ²	--	--	monthly

Visual observations shall be recorded at the same time that bacteriological samples are collected.

B. Nearshore/Offshore Water Quality Monitoring

This monitoring addresses the question: Are Ocean Plan and Basin Plan objectives for physical and chemical parameters being met? The data collected will provide the information necessary to demonstrate compliance with the standards. In addition, the data collected by the Discharger are a contribution to the Central Region Cooperative Water Quality Survey. This regionally coordinated survey provides integrated water quality surveys on a quarterly basis. These surveys cover more than 200 kilometers of coast in Ventura, Los Angeles, Orange and San Diego Counties from the nearshore zone to approximately 10 kilometers offshore. This cooperative program contributes to a regional understanding of seasonal patterns in the nearshore water column structure. The regional view provides context for determining the significance and causes of locally observed patterns in the area of wastewater outfalls. The collection of chlorophyll-a profiles during the quarterly survey is a contribution to the Santa Monica Bay Restoration Commission's Pelagic Ecosystem Monitoring program. The light energy survey addresses the compliance question: Is the transmission of natural light within ranges that ensure the protection of benthic algal communities. The data from this survey will be used to determine if discharged wastewater reduces natural light levels sufficient to suppress macroalgal growth.

1. Nearshore/Offshore Monitoring

- a. The Discharger shall monitor the following 48 nearshore/offshore stations on the Palos Verdes and San Pedro Shelf (Figure 3):

Table 11. Nearshore/Offshore Water Quality Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	RW-OS-2501	10 meter depth, 33° 43.67', 118° 07.21' (Former R-WQ-2501)
Nearshore/Offshore Station	RW-OS-2502	20 meter depth, 33° 41.94', 118° 07.67' (Former R-WQ-2502)
Nearshore/Offshore Station	RW-OS-2503	26 meter depth, 33° 40.21', 118° 08.12' (Former R-WQ-2503)
Nearshore/Offshore Station	RW-OS-2504	33 meter depth, 33° 38.48', 118° 08.57' (Former R-WQ-2504)
Nearshore/Offshore Station	RW-OS-2505	44 meter depth, 33° 36.75', 118° 09.02' (Former R-WQ-2505)
Nearshore/Offshore Station	RW-OS-2506	60 meter depth, 33° 34.86', 118° 09.54' (Former R-WQ-2506)
Nearshore/Offshore Station	RW-OS-2601	19 meter depth, 33° 43.23', 118° 11.06' (Former R-WQ-2601)
Nearshore/Offshore Station	RW-OS-2602	23 meter depth, 33° 41.64', 118° 11.43' (Former R-WQ-2602)
Nearshore/Offshore Station	RW-OS-2603	23 meter depth, 33° 40.05', 118° 11.80' (Former R-WQ-2603)
Nearshore/Offshore Station	RW-OS-2604	32 meter depth, 33° 38.46', 118° 12.18' (Former R-WQ-2604)
Nearshore/Offshore Station	RW-OS-2605	47 meter depth, 33° 36.88', 118° 12.55' (Former R-WQ-2605)
Nearshore/Offshore Station	RW-OS-2606	62 meter depth, 33° 35.29', 118° 12.93' (Former R-WQ-2606)
Nearshore/Offshore Station	RW-OS-2701	26 meter depth, 33° 42.46', 118° 14.80' (Former R-WQ-2701)
Nearshore/Offshore Station	RW-OS-2702	26 meter depth, 33° 41.32', 118° 15.07' (Former R-WQ-2702)
Nearshore/Offshore Station	RW-OS-2703	28 meter depth, 33° 40.17', 118° 15.34' (Former R-WQ-2703)
Nearshore/Offshore Station	RW-OS-2704	50 meter depth, 33° 39.03', 118° 15.60' (Former R-WQ-2704)
Nearshore/Offshore Station	RW-OS-2705	100 meter depth, 33° 37.88', 118° 15.87' (Former R-WQ-2705)
Nearshore/Offshore Station	RW-OS-2706	80 meter depth, 33° 36.73', 118° 16.14' (Former R-WQ-2706)
Nearshore/Offshore Station	RW-OS-2801	10 meter depth, 33° 42.17', 118° 17.06' (Former R-WQ-2801)
Nearshore/Offshore Station	RW-OS-2802	30 meter depth, 33° 41.60', 118° 17.34' (Former R-WQ-2802)
Nearshore/Offshore Station	RW-OS-2803	60 meter depth, 33° 40.11', 118° 17.81' (Former R-WQ-2803)
Nearshore/Offshore Station	RW-OS-2804	100 meter depth, 33° 39.46', 118° 18.08' (Former R-WQ-2804)
Nearshore/Offshore Station	RW-OS-2805	100 meter depth, 33° 38.91', 118° 18.24' (Former R-WQ-2805)
Nearshore/Offshore Station	RW-OS-2806	100 meter depth, 33° 38.22', 118° 18.55' (Former R-WQ-2806)
Nearshore/Offshore Station	RW-OS-2901	10 meter depth, 33° 42.86', 118° 19.41' (Former R-WQ-2901)
Nearshore/Offshore Station	RW-OS-2902	30 meter depth, 33° 42.42', 118° 19.79' (Former R-WQ-2902)
Nearshore/Offshore Station	RW-OS-2903	60 meter depth, 33° 41.91', 118° 20.14' (Former R-WQ-2903)
Nearshore/Offshore Station	RW-OS-2904	100 meter depth, 33° 41.27', 118° 20.34' (Former R-WQ-2904)
Nearshore/Offshore Station	RW-OS-2905	100 meter depth, 33° 40.26', 118° 20.77' (Former R-WQ-2905)
Nearshore/Offshore Station	RW-OS-2906	100 meter depth, 33° 39.25', 118° 21.26' (Former R-WQ-2906)
Nearshore/Offshore Station	RW-OS-3001	10 meter depth, 33° 43.93', 118° 21.62' (Former R-WQ-3001)
Nearshore/Offshore Station	RW-OS-3002	30 meter depth, 33° 43.34', 118° 21.79' (Former R-WQ-3002)
Nearshore/Offshore Station	RW-OS-3003	60 meter depth, 33° 42.88', 118° 21.96' (Former R-WQ-3003)
Nearshore/Offshore Station	RW-OS-3004	100 meter depth, 33° 42.06', 118° 22.28' (Former R-WQ-3004)
Nearshore/Offshore Station	RW-OS-3005	100 meter depth, 33° 41.10', 118° 22.86' (Former R-WQ-3005)
Nearshore/Offshore Station	RW-OS-3006	100 meter depth, 33° 40.01', 118° 23.44' (Former R-WQ-3006)
Nearshore/Offshore Station	RW-OS-3051	13 meter depth, 33° 44.18', 118° 23.66' (Former R-WQ-3051)
Nearshore/Offshore Station	RW-OS-3052	30 meter depth, 33° 43.99', 118° 24.03' (Former R-WQ-3052)
Nearshore/Offshore Station	RW-OS-3053	60 meter depth, 33° 43.80', 118° 24.15' (Former R-WQ-3053)
Nearshore/Offshore Station	RW-OS-3054	100 meter depth, 33° 43.14', 118° 24.66' (Former R-WQ-3054)
Nearshore/Offshore Station	RW-OS-3055	100 meter depth, 33° 42.30', 118° 25.32' (Former R-WQ-3055)
Nearshore/Offshore Station	RW-OS-3056	100 meter depth, 33° 41.38', 118° 25.99' (Former R-WQ-3056)

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	RW-OS-3101	10 meter depth, 33° 46.26', 118° 25.81' (Former R-WQ-3101)
Nearshore/Offshore Station	RW-OS-3102	30 meter depth, 33° 45.90', 118° 26.12' (Former R-WQ-3102)
Nearshore/Offshore Station	RW-OS-3103	60 meter depth, 33° 45.44', 118° 26.46' (Former R-WQ-3103)
Nearshore/Offshore Station	RW-OS-3104	100 meter depth, 33° 44.72', 118° 26.99' (Former R-WQ-3104)
Nearshore/Offshore Station	RW-OS-3105	100 meter depth, 33° 43.73', 118° 27.67' (Former R-WQ-3105)
Nearshore/Offshore Station	RW-OS-3106	100 meter depth, 33° 42.75', 118° 28.53' (Former R-WQ-3106)

as follows:

Table 12. Nearshore/Offshore Water Quality Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved oxygen	mg/L	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
Temperature	°C	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
Salinity	psu	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
Transmissivity	% transmission	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
Chlorophyll a	µg/L	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
pH	pH units	Continuous profile from surface to bottom (or maximum depth of 100 meters)	quarterly
Visual observations ²	--	--	quarterly

Water quality methods and protocols shall follow those described in the most current edition of the *Field Operations Manual for Marine Water Column, Benthic and Trawl Monitoring in Southern California*. Visual observations shall be recorded at each station.

- b. In addition, the Discharger shall also monitor the following 24 nearshore/offshore stations (Figure 3):

Table 13. Nearshore/Offshore Monitoring Stations Requiring Additional Monitoring

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	RW-OS-2504	33 meter depth, 33° 38.48', 118° 08.57' (Former R-WQ-2504)
Nearshore/Offshore Station	RW-OS-2505	44 meter depth, 33° 36.75', 118° 09.02' (Former R-WQ-2505)
Nearshore/Offshore Station	RW-OS-2506	60 meter depth, 33° 34.86', 118° 09.54' (Former R-WQ-2506)
Nearshore/Offshore Station	RW-OS-2604	32 meter depth, 33° 38.46', 118° 12.18' (Former R-WQ-2604)
Nearshore/Offshore Station	RW-OS-2605	47 meter depth, 33° 36.88', 118° 12.55' (Former R-WQ-2605)
Nearshore/Offshore Station	RW-OS-2606	62 meter depth, 33° 35.29', 118° 12.93' (Former R-WQ-2606)
Nearshore/Offshore Station	RW-OS-2704	50 meter depth, 33° 39.03', 118° 15.60' (Former R-WQ-2704)
Nearshore/Offshore Station	RW-OS-2705	100 meter depth, 33° 37.88', 118° 15.87' (Former R-WQ-2705)
Nearshore/Offshore Station	RW-OS-2706	80 meter depth, 33° 36.73', 118° 16.14' (Former R-WQ-2706)
Nearshore/Offshore Station	RW-OS-2802	30 meter depth, 33° 41.60', 118° 17.34' (Former R-WQ-2802)

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	RW-OS-2803	60 meter depth, 33° 40.11', 118° 17.81' (Former R-WQ-2803)
Nearshore/Offshore Station	RW-OS-2804	100 meter depth, 33° 39.46', 118° 18.08' (Former R-WQ-2804)
Nearshore/Offshore Station	RW-OS-2902	30 meter depth, 33° 42.42', 118° 19.79' (Former R-WQ-2902)
Nearshore/Offshore Station	RW-OS-2903	60 meter depth, 33° 41.91', 118° 20.14' (Former R-WQ-2903)
Nearshore/Offshore Station	RW-OS-2904	100 meter depth, 33° 41.27', 118° 20.34' (Former R-WQ-2904)
Nearshore/Offshore Station	RW-OS-3002	30 meter depth, 33° 43.34', 118° 21.79' (Former R-WQ-3002)
Nearshore/Offshore Station	RW-OS-3003	60 meter depth, 33° 42.88', 118° 21.96' (Former R-WQ-3003)
Nearshore/Offshore Station	RW-OS-3004	100 meter depth, 33° 42.06', 118° 22.28' (Former R-WQ-3004)
Nearshore/Offshore Station	RW-OS-3052	30 meter depth, 33° 43.99', 118° 24.03' (Former R-WQ-3052)
Nearshore/Offshore Station	RW-OS-3053	60 meter depth, 33° 43.80', 118° 24.15' (Former R-WQ-3053)
Nearshore/Offshore Station	RW-OS-3054	100 meter depth, 33° 43.14', 118° 24.66' (Former R-WQ-3054)
Nearshore/Offshore Station	RW-OS-3102	30 meter depth, 33° 45.90', 118° 26.12' (Former R-WQ-3102)
Nearshore/Offshore Station	RW-OS-3103	60 meter depth, 33° 45.44', 118° 26.46' (Former R-WQ-3103)
Nearshore/Offshore Station	RW-OS-3104	100 meter depth, 33° 44.72', 118° 26.99' (Former R-WQ-3104)

as follows:

Table 14. Additional Monitoring Requirements at 24 Nearshore/Offshore Monitoring Stations

Parameter	Units	Sample Type	Minimum Sampling Frequency
Ammonia	µg/L	Grabs at 0, 15, 30 and 45 meters (or as deep as practical for stations in depths less than 45 m)	quarterly

These discrete water samples shall be collected concurrently with the CTD profiling survey.

- c. The Discharger shall participate in the Central Region Cooperative Water Quality Survey steering and technical committees. Recommendations for changes in survey design that significantly alter the Water Quality Survey design described above shall be submitted to the Executive Officer for approval prior to implementation.

2. Nearshore Light Energy Survey

The Discharger shall monitor the following seven nearshore stations along the 60-foot (18.3-meter) depth contour (Figure 4):

Table 15. Nearshore Light Energy Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore Station	RW-NS-L1	Palos Verdes Point, 33° 46.10', 118° 25.82' (Former R-WQ-L1)
Nearshore Station	RW-NS-L2	Long Point, 33° 44.10', 118° 24.22' (Former R-WQ-L2)
Nearshore Station	RW-NS-L3	Portuguese Point, 33° 44.09', 118° 22.67' (Former R-WQ-L3)
Nearshore Station	RW-NS-L4	Bunker Point, 33° 43.42', 118° 21.11' (Former R-WQ-L4)
Nearshore Station	RW-NS-L5	Royal Palms, 33° 42.84', 118° 19.90' (Former R-WQ-L5)
Nearshore Station	RW-NS-L6	West of Point Fermin, 33° 42.36', 118° 18.56' (Former R-WQ-L6)
Nearshore Station	RW-NS-L7	Cabrillo Beach, 33° 41.84', 118° 17.12' (Former R-WQ-L7)

as follows:

Table 16. Nearshore Light Energy Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Photosynthetic light energy	Quanta/sec/cm ²	Underwater sensor	monthly

All samples shall be taken between 10 a.m. and 2 p.m., ideally when the sun is not obscured by clouds (a slight haze is permissible). Sampling during a uniform cloud cover is permissible if sampling during clear weather can not be completed during month. Measurement of photosynthetic light energy shall be made with a spherical underwater sensor and hemispherical reference cell on deck, both having equal quantum response from 400-700 nanometers.

C. Benthic Sediments Monitoring

1. Local Benthic Trends Survey

This survey addresses the question: Are benthic conditions under the influence of the discharge changing over time? The data collected are used for regular assessment of trends in sediment contamination and biological response along a fixed grid of sites within the influence (or historical influence) of the discharge. The resulting physical and chemical data will be used for assessment of trends in sediment contamination and to draw inferences concerning the relationship between effluent-derived alteration of the benthic habitat and patterns in infaunal community structure.

a. Infaunal Community and Habitat Variables Survey

The Discharger shall monitor the following 44 bottom stations (Figure 5):

Table 17. Benthic Infauna and Sediment Chemistry Monitoring Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-B-0A	305 meter depth, 33° 49.10', 118° 27.25' (Former R-B-0A)
Bottom Station	RW-B-0B*	152 meter depth, 33° 48.70', 118° 26.50' (Former R-B-0B)
Bottom Station	RW-B-0C*	61 meter depth, 33° 48.43', 118° 25.83' (Former R-B-0C)
Bottom Station	RW-B-0D*	30 meter depth, 33° 48.17', 118° 25.36' (Former R-B-0D)
Bottom Station	RW-B-1A	305 meter depth, 33° 44.72', 118° 26.99' (Former R-B-1A)
Bottom Station	RW-B-1B*	152 meter depth, 33° 44.97', 118° 26.81' (Former R-B-1B)
Bottom Station	RW-B-1C*	61 meter depth, 33° 45.44', 118° 26.46' (Former R-B-1C)
Bottom Station	RW-B-1D*	30 meter depth, 33° 45.90', 118° 26.12' (Former R-B-1D)
Bottom Station	RW-B-2A	305 meter depth, 33° 43.62', 118° 25.72' (Former R-B-2A)
Bottom Station	RW-B-2B	152 meter depth, 33° 43.95', 118° 25.55' (Former R-B-2B)
Bottom Station	RW-B-2C	61 meter depth, 33° 44.26', 118° 25.39' (Former R-B-2C)
Bottom Station	RW-B-2D	30 meter depth, 33° 44.47', 118° 25.28' (Former R-B-2D)
Bottom Station	RW-B-3A	305 meter depth, 33° 43.14', 118° 24.66' (Former R-B-3A)
Bottom Station	RW-B-3B*	152 meter depth, 33° 43.43', 118° 24.44' (Former R-B-3B)
Bottom Station	RW-B-3C*	61 meter depth, 33° 43.80', 118° 24.15' (Former R-B-3C)
Bottom Station	RW-B-3D*	30 meter depth, 33° 43.99', 118° 24.03' (Former R-B-3D)

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-B-4A	305 meter depth, 33° 42.70', 118° 23.38' (Former R-B-4A)
Bottom Station	RW-B-4B	152 meter depth, 33° 43.00', 118° 23.24' (Former R-B-4B)
Bottom Station	RW-B-4C	61 meter depth, 33° 43.40', 118° 23.08' (Former R-B-4C)
Bottom Station	RW-B-4D	30 meter depth, 33° 43.91', 118° 22.83' (Former R-B-4D)
Bottom Station	RW-B-5A	305 meter depth, 33° 42.06', 118° 22.28' (Former R-B-5A)
Bottom Station	RW-B-5B*	152 meter depth, 33° 42.54', 118° 22.08' (Former R-B-5B)
Bottom Station	RW-B-5C*	61 meter depth, 33° 42.88', 118° 21.96' (Former R-B-5C)
Bottom Station	RW-B-5D*	30 meter depth, 33° 43.34', 118° 21.79' (Former R-B-5D)
Bottom Station	RW-B-6A	305 meter depth, 33° 41.99', 118° 21.56' (Former R-B-6A)
Bottom Station	RW-B-6B*	152 meter depth, 33° 42.18', 118° 21.35' (Former R-B-6B)
Bottom Station	RW-B-6C*	61 meter depth, 33° 42.47', 118° 21.24' (Former R-B-6C)
Bottom Station	RW-B-6D*	30 meter depth, 33° 42.98', 118° 20.91' (Former R-B-6D)
Bottom Station	RW-B-7A	305 meter depth, 33° 41.86', 118° 21.19' (Former R-B-7A)
Bottom Station	RW-B-7B*	152 meter depth, 33° 42.05', 118° 21.09' (Former R-B-7B)
Bottom Station	RW-B-7C*	61 meter depth, 33° 42.31', 118° 20.92' (Former R-B-7C)
Bottom Station	RW-B-7D*	30 meter depth, 33° 42.76', 118° 20.61' (Former R-B-7D)
Bottom Station	RW-B-8A	305 meter depth, 33° 41.27', 118° 20.34' (Former R-B-8A)
Bottom Station	RW-B-8B*	152 meter depth, 33° 41.53', 118° 20.24' (Former R-B-8B)
Bottom Station	RW-B-8C*	61 meter depth, 33° 41.91', 118° 20.14' (Former R-B-8C)
Bottom Station	RW-B-8D*	30 meter depth, 33° 42.42', 118° 19.79' (Former R-B-8D)
Bottom Station	RW-B-9A	305 meter depth, 33° 40.58', 118° 19.46' (Former R-B-9A)
Bottom Station	RW-B-9B*	152 meter depth, 33° 40.89', 118° 19.31' (Former R-B-9B)
Bottom Station	RW-B-9C*	61 meter depth, 33° 41.32', 118° 19.10' (Former R-B-9C)
Bottom Station	RW-B-9D*	30 meter depth, 33° 41.97', 118° 18.78' (Former R-B-9D)
Bottom Station	RW-B-10A	305 meter depth, 33° 39.46', 118° 18.08' (Former R-B-10A)
Bottom Station	RW-B-10B	152 meter depth 33° 39.73', 118° 17.90' (Former R-B-10B)
Bottom Station	RW-B-10C	61 meter depth, 33° 40.11', 118° 17.81' (Former R-B-10C)
Bottom Station	RW-B-10D	30 meter depth, 33° 41.60', 118° 17.34' (Former R-B-10D)

as follows:

Table 18. Infauna Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Benthic infauna community ⁴	--	0.1 square meter Van Veen grab	Annually
Total organic carbon	mg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Organic nitrogen	mg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Grain size	Phi size	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually

One sample shall be taken at each station for benthic infaunal community analysis. The entire contents of each sample shall be passed through a 1.0 millimeter screen to retrieve the benthic organisms. Sampling methods and protocols shall follow those described in the most current

edition of the *Field Operations Manual for Marine Water Column, Benthic and Trawl Monitoring in Southern California*. All organisms contained within the sample shall be identified to the lowest possible taxon and counted. The resulting data shall be used to describe community structure at each station.

b. Sediment Chemistry Survey

The Discharger shall monitor 24 bottom stations [as indicated with “*” in bottom station table (Benthic Infauna and Sediment Chemistry Monitoring Stations) for the Infaunal Community Survey above] in years one, two, four and five of the permit and all 44 bottom stations in year three of the permit as follows:

Table 19. Sediment Chemistry Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved sulfides	mg/L	0.1 square meter Van Veen grab (upper 2 centimeters, porewater)	Annually
Total organic carbon	% dry wt	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Organic nitrogen	mg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Grain size	Phi size	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Arsenic	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Cadmium	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Chromium	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Copper	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Lead	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Mercury	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Nickel	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Silver	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Zinc	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Total DDT ⁵	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
DDT derivatives ⁶	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Total PCB ⁷	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
PCB derivatives ⁸	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Compounds on 303(d) list for Santa Monica Bay	µg/kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually

A separate grab sample shall be collected at each station whenever a biological sample is collected. Sub-samples (upper two centimeters) shall be taken from the grab for sediment chemistry analyses.

2. Regional Benthic Survey

This regional survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in soft-bottom benthic habitats within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure? The data collected will be used to assess the condition of the sea-floor environment and the health of the biological resources in the Bight.

Sampling Design - A regional survey of benthic conditions within the Southern California Bight took place in 2008 (Bight'08). The final survey design was determined cooperatively by the participants represented on the Regional Steering Committee. The Discharger provided support to the Bight'08 benthic survey by participating in or performing the following activities:

- Participation on the Steering Committee
- Participation on the relevant Technical Committees (e.g., Information Management, Field Methods and Logistics, Benthos and Chemistry)
- Field sampling at sea
- Infaunal sample analysis
- Sediment chemistry analysis
- Data management

This level of participation in the 2008 survey was consistent with that provided by the Discharger during the 1994, 1998 and 2003 Regional Benthic Surveys. The next regional survey is expected to take place in 2013 and the Discharger's level of participation shall be consistent with that provided in previous survey.

D. Fish and Invertebrate Monitoring

1. Local Demersal Fish and Invertebrate Survey

This survey addresses the question: Is the health of demersal fish and epibenthic invertebrate communities in the vicinity of the discharge changing over time? The data collected will be used for regular assessment of temporal trends in community structure along a fixed grid of sites within the vicinity of the discharge. Data also will be collected on trash and debris to contribute to the Santa Monica Bay Restoration Project's Sources and Loadings program.

The Discharger shall monitor the following 16 trawling stations along four transverses perpendicular to the shoreline (Figure 6):

Table 20. Trawl Sampling Stations

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-T-T0/23	23 meter depth, 33° 48.19', 118° 25.04' (trawl mid-point) (Former R-T-T0/23)
Bottom Station	RW-T-T0/61	61 meter depth, 33° 48.57', 118° 25.84' (trawl mid-point) (Former R-T-T0/61)
Bottom Station	RW-T-T0/137	137 meter depth, 33° 48.83', 118° 26.36' (trawl mid-point) (Former R-T-T0/137)

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-T-T0/305	305 meter depth, 33° 49.23', 118° 27.09' (trawl mid-point) (Former R-T-T0/305)
Bottom Station	RW-T-T1/23	26 meter depth, 33° 44.65', 118° 25.09' (trawl mid-point) (Former R-T-T1/23)
Bottom Station	RW-T-T1/61	61 meter depth, 33° 44.16', 118° 25.23' (trawl mid-point) (Former R-T-T1/61)
Bottom Station	RW-T-T1/137	137 meter depth, 33° 44.84', 118° 25.34' (trawl mid-point) (Former R-T-T1/137)
Bottom Station	RW-T-T1/305	305 meter depth, 33° 43.55', 118° 25.64' (trawl mid-point) (Former R-T-T1/305)
Bottom Station	RW-T-T4/23	27 meter depth, 33° 42.79', 118° 20.48' (trawl mid-point) (Former R-T-T4/23)
Bottom Station	RW-T-T4/61	61 meter depth, 33° 42.33', 118° 20.92' (trawl mid-point) (Former R-T-T4/61)
Bottom Station	RW-T-T4/137	137 meter depth, 33° 42.06', 118° 21.05' (trawl mid-point) (Former R-T-T4/137)
Bottom Station	RW-T-T4/305	305 meter depth, 33° 42.00', 118° 21.49' (trawl mid-point) (Former R-T-T4/305)
Bottom Station	RW-T-T5/23	23 meter depth, 33° 42.29', 118° 18.98' (trawl mid-point) (Former R-T-T5/23)
Bottom Station	RW-T-T5/61	61 meter depth, 33° 41.45', 118° 19.31' (trawl mid-point) (Former R-T-T5/61)
Bottom Station	RW-T-T5/137	137 meter depth, 33° 41.11', 118° 19.61' (trawl mid-point) (Former R-T-T5/137)
Bottom Station	RW-T-T5/305	305 meter depth, 33° 40.85', 118° 19.85' (trawl mid-point) (Former R-T-T5/305)

as follows:

Table 21. Demersal Fish and Invertebrates Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Demersal fish and invertebrates.	--	10-minute otter trawl	semiannually (summer and winter)

Single otter trawls shall be taken at each station, with each trawl running along a line approximately parallel to the isobath. All organisms captured shall be identified to the lowest possible taxon and counted. Fish shall be size classed. Wet-weight biomass shall be estimated for all species. Each individual captured shall be examined for the presence of externally evident signs of disease or anomaly. Estimates of type, quantity and weight of trash and debris in each trawl shall be made. Sampling methods and protocols shall follow those described in the most current edition of the *Field Operations Manual for Marine Water Column, Benthic and Trawl Monitoring in Southern California*. The resulting data shall be used to describe community structure⁹ at each station.

2. Regional Demersal Fish and Invertebrate Survey

This survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in demersal fish and epibenthic communities within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure? The data collected will be used to assess the condition of the seafloor environment and health of biological resources in the Bight.

A regional survey of trawl-caught demersal fish and epibenthic invertebrates within the Southern California Bight took place in 2008 (Bight'08). The final survey design was determined cooperatively by the participants as represented on the Regional Steering Committee. The Discharger provided support to the Bight'08 surveys by participating in or performing the following activities:

- Participation on the Steering Committee
- Participation on the relevant Technical Committees (e.g., Information Management, Field Methods and Logistics, Fish and Invertebrates)

- Field sampling at sea
- Trawl sample analysis
- Data management

The level of participation in the 2008 survey was consistent with that provided by the Discharger during the 1998 and 2003 Regional Surveys. The next regional survey is expected to take place in 2013 and the Discharger's level of participation shall be consistent with that provided in previous surveys.

3. Bioaccumulation Monitoring

a. Local Bioaccumulation Trends Survey

This survey addresses the question: Is fish tissue contamination in the vicinity of the outfall changing over time? The data collected will be used for regular assessment of temporal trends in two sentinel fish species.

The Discharger shall monitor the following 3 zones (Figure 7):

Table 22. Bioaccumulation Sampling Zones

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-BA-Z1	Outfall zone: inshore of the 150 meter depth contour and between a line bearing 150° magnetic of White Point and a line bearing 180° magnetic off Bunker Point. (Former R-BA-Z1)
Bottom Station	RW-BA-Z2	Intermediate zone: inshore of the 150 meter depth contour and between a line bearing 180° (true) off 33° 44.24' N. lat. 118° 22.50' W. long. (Portuguese Point) and a line bearing 270° (true) off 33° 44.80' N. lat. 118° 24.82' W. long.. (Former R-BA-Z2)
Bottom Station	RW-BA-Z3	Distant zone: inshore of the 150 meter depth contour and between a line bearing 225° magnetic off the southern face of Palos Verdes Point and a line bearing 235° magnetic off the south end of the Redondo Beach Pier. (Former R-BA-Z3)

as follows:

Table 23. Bioaccumulation Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total DDT ⁵	µg/kg	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually
DDT derivatives ⁶	µg/kg	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total PCB ⁷	µg/kg	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually
PCB derivatives ⁸	µg/kg	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually
% moisture	%	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually
% lipid	%	Composite of <u>liver tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>hornyhead turbot</u> ¹⁰	annually
		Composite of <u>muscle tissue</u> from 10 individuals of <u>white croaker</u> ¹⁰	annually

Hornyhead turbot within the size range of 150 to 200 millimeters (standard length) are to be targeted. White croaker within the size range of 170 to 220 mm (standard length) are to be targeted. Additional parameters for analysis may be added to the list by the Executive Officer.

b. Local Seafood Safety Survey

This survey addresses two questions: 1) Where seafood consumption advisories exist locally, do tissue concentrations of contaminants continue to exceed the Advisory Tissue Concentration (ATC)? and 2) What are the tissue contaminant trends relative to the ATC in other species not currently subject to local consumption advisories? The data collected will be used to provide information necessary for the management of local seafood consumption advisories.

A regionally coordinated survey shall be conducted covering Santa Monica Bay, the Palos Verdes shelf and slope, and Los Angeles Harbor employing the sampling design proposed by the Santa Monica Bay Restoration Commission (SMBRC). The Discharger shall provide field sampling and analysis of tissue for the three sampling zones on the Palos Verdes Shelf as follows:

Table 24. Seafood Safety Survey Zones

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-BA-Z1	Outfall zone: inshore of the 150 meter depth contour and between a line bearing 150° magnetic of White Point and a line bearing 180° magnetic off Bunker Point. (Former R-BA-Z1)

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	RW-BA-Z2	Intermediate zone: inshore of the 150 meter depth contour and between a line bearing 180° (true) off 33° 44.24' N. lat. 118° 22.50' W. long. (Portuguese Point) and a line bearing 270° (true) off 33° 44.80' N. lat. 118° 24.82' W. long.. (Former R-BA-Z2)
Bottom Station	RW-BA-Z3	Distant zone: inshore of the 150 meter depth contour and between a line bearing 225° magnetic off the southern face of Palos Verdes Point and a line bearing 235° magnetic off the south end of the Redondo Beach Pier. (Former R-BA-Z3)

One species from each of five groups of fish (rockfish, kelpbass, sandbass, surfperches and croakers) shall be sampled from each of the three zones in years one, three and five of the permit. For rockfishes, scorpionfish (*Scorpaena guttata*) is the preferred species, followed by bocaccio (*Sebastes paucispinis*) and then by any other abundant and preferably benthic rockfish species. For surfperches, black surfperch (*Embiotoca jacksoni*) is the preferred species, followed by white surfperch (*Phanerodon furcatus*) and then by walleye surfperch (*Hyperprosopon argenteum*).

For fish tissue analysis, one composite sample of ten individuals of each target shall be collected within each of the three zones. Sampling should take place within the same season of the year (preferably late summer/early fall) and should focus upon a consistent size class of fish. All tissue samples shall be analyzed for:

Table 25. Seafood Safety Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
% moisture	%	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
% lipid	%	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
Arsenic	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
Mercury	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
Total DDT ⁵	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
DDT derivatives ⁶	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
Total PCB ⁷	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*
PCB derivatives ⁸	µg/kg	Composite of muscle tissue from 10 individuals of each of 5 species ¹⁰	Annually (during years 1, 3 and 5)*

* The year one (1) sampling shall be conducted in 2012.

c. Regional Seafood Safety Survey

This regional survey addresses the question: “Are seafood tissue levels within the Southern California Bight below levels that ensure public safety?” The data collected will be used to assess levels of contaminants in the edible tissue of commercial or recreationally important fish within the Bight relative to Advisory Tissue Concentrations.

Sampling Design - A regional survey of edible tissue contaminant levels in fish within the Southern California Bight shall be conducted at least once every ten years, encompassing a broader set of sampling sites and target species than those addressed in the local seafood survey. The objective is to determine whether any unexpected increases or decreases in contaminant levels have occurred in non-target species and/or at unsampled sites. The final survey design may be determined cooperatively by participants represented on a Regional Steering Committee or by the State of California's Office of Environmental Health and Hazard Assessment. A regional seafood safety survey within the Southern California Bight took place in 2009 (Bight'08). The final survey design was determined cooperatively by participants represented on the Regional Steering Committee and the Surface Water Ambient Monitoring Program (SWAMP). The Discharger provided support to the Bight'08 Seafood Safety Survey by participating in or performing the following activities:

- Participation on a Steering Committee
- Participation on relevant Technical Committees (e.g., Information Management, Field Methods & Logistics, and Chemistry)
- Tissue chemical analysis

The next regional survey is expected to occur in 2018. The Discharger's level of participation shall be consistent with that provided in previous surveys.

d. Regional Predator Risk Survey

This regional survey addresses the question: "Are fish body burdens within the Southern California Bight a health risk to higher trophic levels in the marine food web?" The data collected will be used to estimate health risk to marine birds, mammals and wildlife from the consumption of fish tissue.

The most recent regional survey of whole fish body burdens of contaminants within the Southern California Bight took place in 2003 (Bight'03). The final survey design was determined cooperatively by participants represented on the Regional Steering Committee. The Discharger provided support to the Bight'08 Predator Risk Survey by participating in or performing the following activities:

- Participation on the Steering Committee
- Participation on relevant Technical Committees (e.g., Information Management, Field Methods & Logistics, and Chemistry)
- Tissue chemical analysis

This level of participation in the 2003 survey was consistent with that provided by the Discharger to the 1998 Regional Predator Risk Surveys. The next regional survey is expected to occur in 2013 and the Discharger's level of participation shall be consistent with that provided in previous surveys.

E. Kelp Bed Monitoring

This regional survey is to address the question: "Is the extent of kelp beds in the Southern California Bight changing over time and are some beds changing at rates different than others?" The data collected in this regional survey will be used to assess status and trends in kelp bed health and spatial extent. The regional nature of the survey will allow the status of beds local to the discharge to be compared to regional trends.

The Discharger shall participate in the Central Region Kelp Survey Consortium (CRKSC) to conduct regional kelp bed monitoring in Southern California coastal waters. The CRKSC design is based upon quarterly measures of kelp canopy extent using aerial imaging. The Discharger shall provide up to \$10,000 per year in financial support to the CRKSC (annual level of support will depend on the number of participants in the program). The Discharger shall participate in the regional management and technical committees responsible for the development of the survey design and implementation of the assessment of kelp bed resources in the Bight. This support is intended to ensure that Palos Verdes kelp beds (CF&G beds 13 and 14) are included in the quarterly surveys of kelp beds in the Bight, and that these beds are included in any data products resulting from those surveys.

In the event that Palos Verdes kelp beds are found to deviate from the broader regional pattern, the Discharger will carry out special studies to address unexplained deterioration of local beds.

Participation in this survey provides data to the SMBRC's Kelp Beds program.

Footnotes for Receiving Water Monitoring Program

- 1 In addition to reporting the actual concentration of bacterial organisms in each sample collected for the purpose of demonstrating compliance (where applicable), the geometric mean values shall also be determined and reported. The geometric mean values should be calculated using at least five most recent sample results. If sampling occurs more frequently than weekly, all samples during the previous 30-day period shall be used to calculate the geometric mean. During a wet-weather event, stormwater runoff will impact shoreline, inshore and offshore stations. The day of rain (0.1 inch and greater) plus three following days worth of bacteriology data should be excluded from Single Sample and Geometric mean limits.
- 2 Receiving water observations of water color, turbidity, odor and unusual or abnormal amounts of floating or suspended matter in the water or on the beach, rocks and jetties or beach structures, shall be made and recorded at each receiving water station. The character and extent of such matter shall be described. The dates, times and depths of sampling and observations also shall be reported.
- 3 Fecal coliform sampling may be omitted at the inshore stations if the total coliform sampling program demonstrates compliance with the fecal coliform limits.
- 4 Community analysis of benthic infauna shall include number of species, number of individuals per species, total numerical abundance per station, benthic response index (BRI) and biological indices, plus utilize appropriate regression analyses, parametric and nonparametric statistics, and multivariate techniques or other appropriate analytical techniques.
- 5 Total DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
- 6 At a minimum, 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
- 7 Total PCB (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
- 8 At a minimum, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.
- 9 Community analysis of demersal fish and macroinvertebrate communities shall include wet weight of fish and macroinvertebrate species (when combined weight of individuals of a species is greater than or equal to 0.1

kilogram), number of species, number of individuals per species, total numerical abundance per station, number of individuals in each 1-centimeter size class for each species of fish, species richness, species diversity, species evenness, cluster analyses, or other appropriate multivariate statistical techniques approved by the Executive Officer.

- 10 Individuals collected for local bioaccumulation trends survey or local seafood safety survey shall be collected during a single season each year to minimize the variability in reproductive state. It may be impossible to collect the required number of fish every year at each zone. If fish of the target size are absent in a given zone, additional trawls need not be attempted. If target fish are present in a given zone, one additional trawl shall be conducted to attempt to collect the necessary number of individuals. For collection efforts using gear other than trawls, the Discharger may fail to achieve the sampling goals because of local absence of a target species. In that case, upon request of the Discharger, the Executive Officer may approve temporary relief from requirement to collect that species for the survey year. The request for relief must be submitted to the Executive Officer and be accompanied by documented evidence of the sampling effort expended.

VII. OTHER MONITORING REQUIREMENTS

A. Special Study – Constituents of Emerging Concern in Effluent

Background

Advancements in analytical technology over the last decade have dramatically increased the number of chemicals that can be detected and greatly decreased the concentrations at which chemicals can be detected. This new ability to detect trace levels of chemical concentrations has expanded the existing understanding of the kinds of contaminants present in water and wastewater. Many man-made chemicals, particularly pesticides, pharmaceuticals and personal care products, have been found in waters across the United States.

Collectively, these compounds are referred to as Emerging Constituents (ECs) or Constituents of Emerging Concern (CECs) because their presence is starting to be revealed by rapid advances in analytical technology. Despite recent improvements in analytical science, there is still scarcity of data and lack of robust methodologies for measuring most CECs. CECs are part of the unregulated chemicals, for which no water quality standards or State notification levels have been established.

Recent publications and media reports on CECs have increased public awareness of the issue, providing an impetus for CEC investigations around the country, including local efforts by the City of Los Angeles and Southern California Coastal Water Research Project (SCCWRP). For instance, starting in 2005, the City of Los Angeles has been conducting a special study as part of Order No. 2005-0020, and results suggest that the presence of natural and synthetic estrogen hormones has caused feminization of male fish (hornyhead turbot) in Santa Monica Bay, especially near the Hyperion Treatment Plant outfall. In January 2010, SCCWRP convened a workshop where 50 scientists, water quality managers, and stakeholders discussed and collaborated on developing an effective CEC monitoring and management strategy that is protective of water quality. Anticipated outcomes of this workshop include recommended lists of CECs for monitoring in recycled water (for groundwater concerns) by the end of 2010, and for monitoring in ambient waters, including ocean waters, by the summer of 2011.

In recent years, this Regional Water Board has incorporated monitoring of a select group of CECs into the NPDES permits issued to POTWs.

CEC Special Study Requirements

1. The Discharger shall initiate an investigation of CECs by conducting a special study. Specifically, within 6 months of the effective date of this Order, the Discharger shall develop a CEC Special Study Work Plan (Work Plan) and submit it for Regional Water Board Executive Officer approval. Immediately upon approval of the Work Plan, the Discharger shall fully implement the Work Plan.

This Work Plan shall include, but not be limited to, the following:

- a. Identification of CECs to be monitored in the effluent, sample type (e.g., 24-hour composite), sampling frequency, and sampling methodology. The following table identifies the minimum parameters to be monitored.

Table 26. Effluent Monitoring of CECs

Parameter *	Units	Sample Type	Minimum Sampling Frequency	Analytical Test Method and (Minimum Level, units)
17 α -Ethinyl Estradiol	ng/L	To be proposed	Annually	To be proposed
17 β -Estradiol	ng/L	To be proposed	Annually	To be proposed
Estrone	ng/L	To be proposed	Annually	To be proposed
Bisphenol A	ng/L	To be proposed	Annually	To be proposed
Nonylphenol and nonylphenol polyethoxylates	ng/L	To be proposed	Annually	To be proposed
Octylphenol	ng/L	To be proposed	Annually	To be proposed
Polybrominated diphenyl ethers	ng/L	To be proposed	Annually	To be proposed
Acetaminophen	ng/L	To be proposed	Annually	To be proposed
Amoxicillin	ng/L	To be proposed	Annually	To be proposed
Azithromycin	ng/L	To be proposed	Annually	To be proposed
Carbamazepine	ng/L	To be proposed	Annually	To be proposed
Ciprofloxacin	ng/L	To be proposed	Annually	To be proposed
Dilantin	ng/L	To be proposed	Annually	To be proposed
Gemfibrozil	ng/L	To be proposed	Annually	To be proposed
Ibuprofen	ng/L	To be proposed	Annually	To be proposed
Lipitor	ng/L	To be proposed	Annually	To be proposed
Sulfamethoxazole	ng/L	To be proposed	Annually	To be proposed
Trimethoprim	ng/L	To be proposed	Annually	To be proposed
Salicylic acid	ng/L	To be proposed	Annually	To be proposed
Triclosan	ng/L	To be proposed	Annually	To be proposed
DEET	ng/L	To be proposed	Annually	To be proposed
Caffeine	ng/L	To be proposed	Annually	To be proposed
Iodinated contrast media (i.e., iopromide)	ng/L	To be proposed	Annually	To be proposed
Fire retardants (e.g., TCEP)	ng/L	To be proposed	Annually	To be proposed

* Given the evolving state of research, science, and policy involving CECs, the Regional Water Board Executive Officer may add or remove CECs from the monitoring and reporting program.

Once the SCCWRP's recommended list of CEC monitoring in ambient waters, including ocean waters, is finalized, the above list of minimum parameters to be monitored by the Discharger and the sampling frequency may be re-evaluated and modified by the Executive Officer. At such

time, upon request by the Executive Officer, the Discharger shall monitor the requested CEC parameters at the specified frequency. In the Work Plan, the Discharger may also propose, for consideration and approval by the Executive Officer, surrogate or indicator CECs that may contribute towards a better understanding of CECs in its effluent.

Sample Type - The Discharger shall propose in the Work Plan the appropriate sample type for each type of constituent.

Sampling Period - At minimum, the Discharger shall monitor the specified CECs once per year. The Work Plan shall propose the appropriate sampling month or quarter for each year, consistent with the goals of the analyses. The rationale for selecting the particular sampling month or quarter shall be explained in the Work Plan.

Analytical Test Methodology and QA/QC - The Discharger shall review and consider all available analytical test methodologies and appropriate QA/QC procedures, including but not limited to those listed in USEPA Methods 1694 and 1698 or utilized by the U.S. Geologic Survey, California Department of Public Health, or other federal or State agencies. Based on its review, the Discharger shall propose the most appropriate analytical methodology, considering sensitivity, accuracy, availability, and cost.

- b. Characterization of existing CEC data (data collected previous to Special Study) - The Discharger shall propose a characterization of all existing CEC data (associated with its effluent or receiving water) that have been collected for various purposes in the past. At minimum, the characterization shall include:
- an identification of all CECs monitored to date (outside of this Special Study);
 - monitoring duration, frequency, and date(s) (for example, from 2000- present, annually);
 - analytical methodologies employed;
 - RL, MLs, and MDLs achieved for each methodology used; and
 - temporal/seasonal trend analyses (using both statistical and graphical demonstration) of CEC data, over time and by season.
- c. Evaluation of CEC data collected as part of this Special Study. The Discharger shall propose an evaluation of CEC data (associated with its effluent) to be collected as part of this special study. At minimum, the characterization shall include:
- an identification of CECs that have been monitored;
 - monitoring duration, frequency, and date(s);
 - RL, MLs and MDLs achieved for each methodology used;
 - a brief update on any improvements (or change) in the analytical methodologies and associated RL, MLs and MDLs achieved for each methodology used; and
 - temporal/seasonal trend analyses (using both statistical and graphical demonstration) of CEC data collected as part of this special study.
2. Reporting - By April 15th of each year (starting April 15, 2013), the Discharger shall submit to the Regional Water Board Executive Officer an annual report summarizing the monitoring results from the previous calendar year. Each annual report shall include a compilation of effluent monitoring data of CECs listed in the approved Work Plan, MLs, sample type, analytical methodology used, sampling date/time, QA/QC information, and an evaluation of cumulative CEC data collected to date as part of this special study (see above for further details on CEC data evaluation). In addition, the first annual report due April 15, 2013 shall include a characterization of existing CEC data, i.e., all

data collected outside of this special study (see above for further details on existing CEC data characterization).

B. Special Study – Nutrient Loading and Receiving Water Impacts

By July 14, 2012, consistent with the logistics described in section I.D.3 of the MRP, the Discharger shall propose, as a special study, a summary assessment of existing nutrient data (both effluent and receiving water) collected under the Order/Permit during the period of secondary treatment and quantify the resulting effects, if any, of the discharge on receiving water quality for dissolved oxygen, pH, and percent transmission.

C. Outfall and Diffuser Inspection

Each ocean outfall shall be inspected externally a minimum of once a year. Inspections shall include general observations and photographic/videographic records of the outfall pipes and adjacent ballast material. The inspections may be conducted by remotely operated vehicle, diver, or manned submarine. A summary report of the inspection findings shall be provided. This written report, augmented with videographic and/or photographic images, will provide a description of the observed condition of the outfall structures from shallow water to their respective termini.

D. Biosolids and Sludge Management

The Discharger must comply with all Clean Water Act and regulatory requirements of 40 CFR parts 257, 258, 501, and 503, including all applicable monitoring, record keeping, and reporting requirements. The Discharger must comply with the requirements in Attachment H of this Order/Permit.

VIII. 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. The Discharger shall inform the Regional Water Board well in advance of any proposed construction or maintenance or modification to the POTW that could potentially affect compliance with applicable requirements.
3. If the Discharger monitors (other than for process/operational control, startup, research, or equipment testing) any influent, effluent, or receiving water constituent more frequently than required by this Permit using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order/Permit.
4. The date and time of sampling (as appropriate) shall be reported with the analytical values determined.
5. Weekly effluent analyses shall be performed on different weekdays during each month. Quarterly influent and effluent analyses shall be performed during the months of February, May, August, and November. Semiannual influent and effluent analyses shall be performed during the months of May and November. Annual influent and effluent analyses shall be performed during the month of August.

Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Regional Water Board, state the reason why the monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported by the 15th of the second month following the monitoring period.

6. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136 or where no methods are specified for a particular pollutant, by methods approved by the Regional Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program. For any analyses performed for which no procedure is specified in USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.
7. The laboratory conducting analyses shall be certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP), in accordance with CWC section 13176, or approved by the Regional Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program for that particular parameter 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/renewal certification is obtained from ELAP and must be submitted with the annual summary report. Each monitoring report must affirm in writing that: "All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health, or approved by the Regional Water Board Executive Officer (in consultation with the State Water Board's Quality Assurance Program), and in accordance with current USEPA guideline procedures or as specified in this MRP."
8. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR part 136.3. All QA/QC analyses must be run on the same dates that samples are actually analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit this documentation when requested by the Regional Water Board and/or USEPA. Proper chain of custody procedures must be followed and a copy of this documentation shall be submitted with the monthly report.
9. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments to insure accuracy of measurements.
10. The Discharger shall report with each sample result in the monitoring reports: the analytical method used, the Method Detection Limit (MDL) as determined by the procedure in 40 CFR part 136, and the Reporting Level (RL) [the applicable Minimum Level (ML) or Reported Minimum Level (RML)] for each pollutant. The MLs are those published by the State Water Board in Appendix II of the 2009 Ocean Plan. The ML represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the analytical method for dilution or concentration of samples, other factors are applied to the ML depending on the sample preparation. The resulting value is the reported Minimum Level.
11. The Discharger shall select the analytical method that provides an ML lower than the effluent limitation or performance goal established for a given parameter or where no such requirement exists, the lowest applicable water quality objective in the Ocean Plan. If the effluent limitation, performance goal, or the lowest applicable water quality objective is lower than all the MLs in Appendix II of the 2009 Ocean Plan, the Discharger must select the method with the lowest ML for

compliance purposes. The Discharger shall include in the annual summary reports a list of the analytical methods and MLs employed for each test.

12. Non-detect levels reported for the JWPCP's effluent are generally higher than effluent limitations or water quality objectives for DDT, chlordane, PCBs and PAHs. Therefore, the Discharger shall strive for lower analytical detection levels than those specified in Appendix II of the 2009 Ocean Plan to facilitate pollutant load quantification for future DDT and PCBs TMDLs.
13. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (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. In accordance with section 14 below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix II of the 2009 Ocean Plan.
14. Upon request by the Discharger, the Regional Water Board, in consultation with the State Water Board's Quality Assurance Program and/or USEPA, may establish an ML that is not contained in Appendix II of the 2009 Ocean Plan, to be included in the Discharger's NPDES permit, in any of the following situations:
 - a. When the pollutant under consideration is not included in Appendix II;
 - b. When the Discharger agrees to use a test method that is more sensitive than those specified in 40 CFR 136 (most recent revision);
 - c. When the Discharger agrees to use an ML lower than those listed in Appendix II;
 - d. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix II and proposes an appropriate ML for their matrix; or
 - e. 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, Regional Water Board, State Water Board and/or USEPA shall agree on a lowest quantifiable limit, and that limit will substitute for the ML for reporting and compliance determination purposes.
15. 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 reported ML, 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.").
 - c. Sample results less than the laboratory's MDL shall be reported as "Not Detected" or ND.

16. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliforms, at a minimum; and 1 to 1000 per 100 ml for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 CFR part 136 (most recent revision).
17. Records and reports of marine monitoring surveys conducted to meet receiving water monitoring requirements shall include, at a minimum, the following information:
 - a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, unusual or abnormal amounts of floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling or measurements, tidal stage and height, etc.).
 - b. The date, exact place and description of sampling stations, including differences unique to each station (e.g., date, time, station location, depth, and sample type).
 - c. A list of the individuals participating in field collection of samples or data and description of the sample collection and preservation procedures used in the various surveys.
 - d. A description of the specific method used for laboratory analysis, the date(s) the analyses were performed and the individuals participating in these analyses.
 - e. An in-depth discussion of the results of the survey. All tabulations and computations shall be explained.
18. 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 this Permit.
19. All hardcopy reports must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the addresses listed below. (Reference the reports to Compliance File No. CI-1758 to facilitate routing to the appropriate staff and file.)

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

B. Self-Monitoring Reports (SMRs) and Discharge Monitoring Reports (DMRs)

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. SMR submittals to CIWQS and hardcopy SMRs include only numeric influent, effluent, and microbiological monitoring data for Shoreline, Inshore, and Offshore Stations. DMR electronic submittals and hardcopies include only influent and effluent data. All other data is to be submitted with the annual or biennial ocean monitoring report. The Discharger shall submit monthly

SMRs/DMRs 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 monitoring reports.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule, except where specific monitoring periods and reporting dates are required elsewhere in this permit:

Table 27. Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	By the 15 th day of the second month after the month of sampling
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	By the 15 th day of the second month after the month of sampling
Weekly	Sunday following permit effective date or on permit effective date if that date is Sunday	Sunday through Saturday	By the 15 th day of the second month after the month of sampling
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	By the 15 th day of the second month after the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15 August 15 November 15 February 15
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 15 February 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	February 15

4. The Discharger shall submit hard copy SMRs in accordance with the following requirements:
 - a. 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. 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. (Reference the reports to Compliance File No. CI-1758 to facilitate routing to the appropriate staff and file.)

California Regional Water Quality Control Board
 Los Angeles Region
 320 West 4th Street, Suite 200
 Los Angeles, CA 90013
 Attention: Information Technology Unit

5. The Discharger shall submit hard copy DMRs in accordance with the following requirements:

- a. As described in section VIII.B.1 above, at any time during the term of this Order, 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.
- b. DMRs must be signed and certified as required by the Standard Provisions (Attachment D). The Discharger shall submit the original DMR to the State Water Board 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, 15 th Floor Sacramento, CA 95814

- c. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated must be approved by USEPA

C. Other Reports

1. Annual Summary Report

By April 1 of each year, the Discharger shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results, as well as graphical and tabular summaries of the monitoring analytical data. The data shall be submitted to the Regional Water Board on hard copy and a CD-ROM disk or other appropriate electronic medium. The submitted data must be IBM compatible, preferably using Microsoft Excel software. The Discharger shall discuss the compliance record and any corrective actions taken or planned that may be needed to bring the discharge into full compliance with Permit requirements.

The first annual report shall be due April 1, 2012, covering the sampling period from January 2011 – December 2011.

2. Receiving Water Monitoring Report

An annual summary of the receiving water monitoring data collected during each sampling year (January-December) shall be prepared and submitted so that it is received by the Regional Water Board by August 1 of the following year. The first annual receiving water monitoring summary report is due by August 1, 2013.

By August 1 of every other year, a detailed receiving water monitoring biennial assessment report (instead of the annual receiving water monitoring summary report) of the data collected during the two previous calendar sampling years (January – December) shall be prepared and submitted to the Regional Water Board. This report shall include an annual data summary and shall also include an in-depth analysis of the biological, chemical, and physical data following recommendations in the Model Monitoring Program guidance document (Schiff, K.C., J.S. Brown and S.B. Weisberg. 2001. *Model Monitoring Program for Large Ocean Dischargers in Southern California*. SCCWRP Tech.

Rep. #357. SCCWRP, Westminster, CA. 101 pp.). Data shall be tabulated, summarized, and graphed where appropriate, analyzed, interpreted, and generally presented in such a way as to facilitate ready understanding of its significance. Spatial and temporal trends shall be examined and compared. The relation of physical and chemical parameters to biological parameters shall be evaluated. See, also, section IV.H of this Monitoring and Reporting Program. All receiving water monitoring data shall be submitted in accordance with the data submittal formats developed for the Southern California Bight Regional Monitoring Surveys.

The first biennial assessment report shall be due August 1, 2012, covering sampling periods of January – December 2010 and January – December 2011. Subsequent reports shall be due August 1, 2014, and August 1, 2016, to cover sampling periods of January 2012 – December 2013 and January 2014 – December 2015, respectively.

3. Outfall Inspection Report

By August 1 of each year, a summary report of the outfall inspection findings for the previous calendar year shall be prepared and submitted to the Regional Water Board. This written report, augmented with videographic and/or photographic images, shall provide a description of the observed external condition of the discharge pipes from shallow water to their respective termini.

The first summary report shall be due August 1, 2012, covering the monitoring period from January 2011 – December 2011.

4. Database Management System

The Regional Water Board and State Water Resources Control Board are developing a database compliance monitoring management system. The Discharger may be required to submit all monitoring and annual summary reports electronically in a specified format when this system becomes fully operational.

Figure 1. Shoreline Monitoring Stations

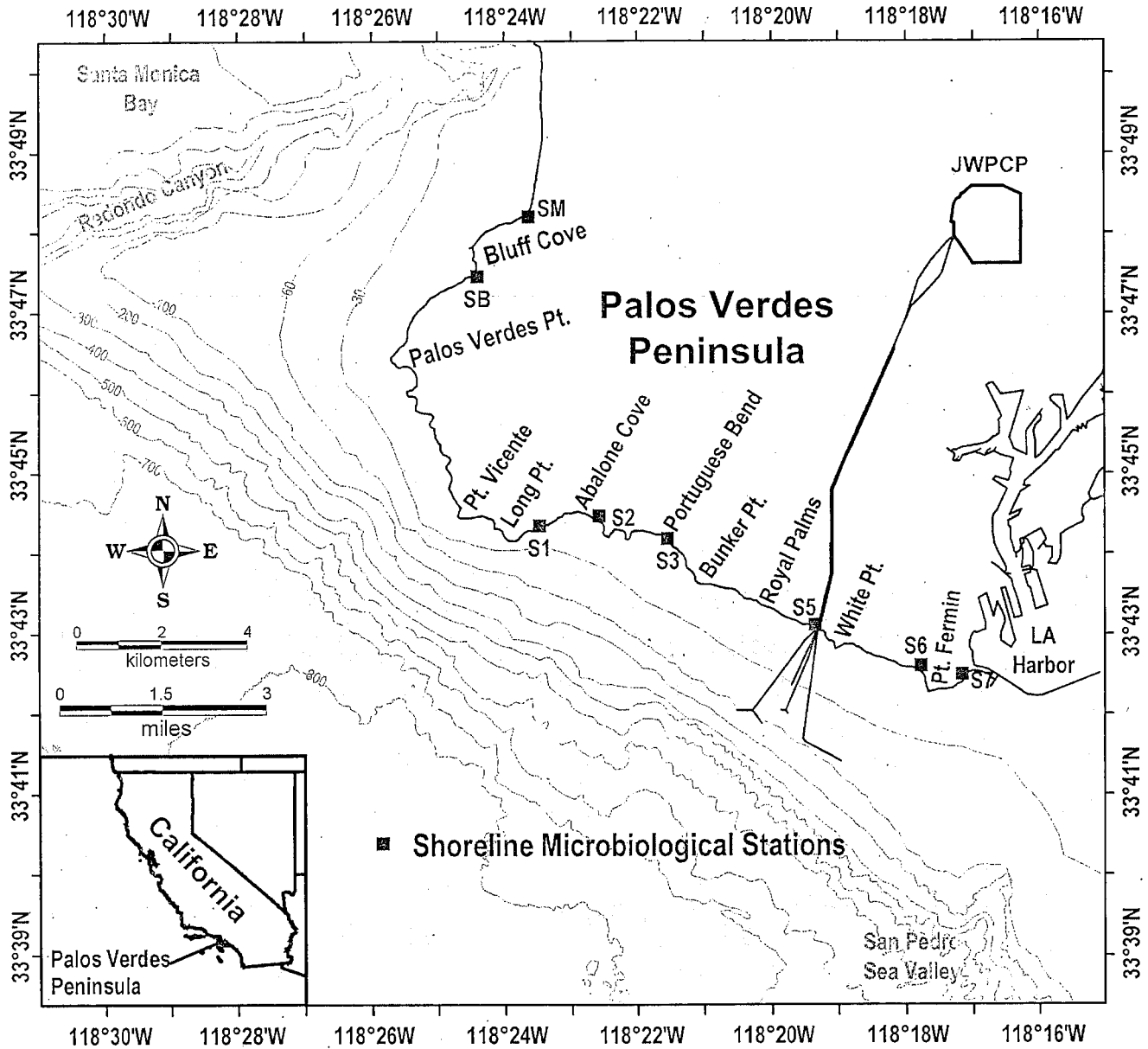


Figure 2. Inshore Monitoring Stations

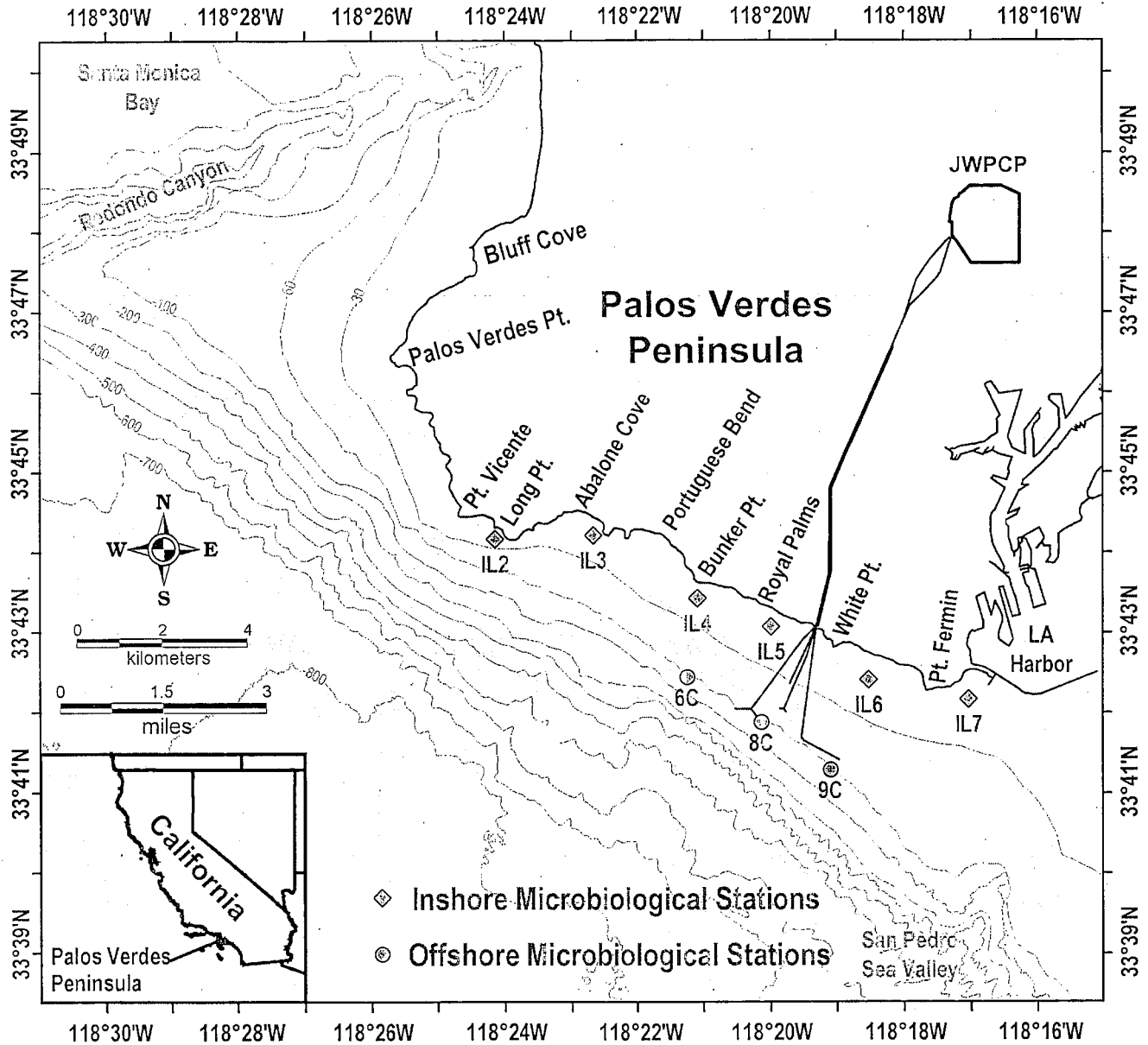


Figure 3. Nearshore/Offshore Water Quality Monitoring Stations

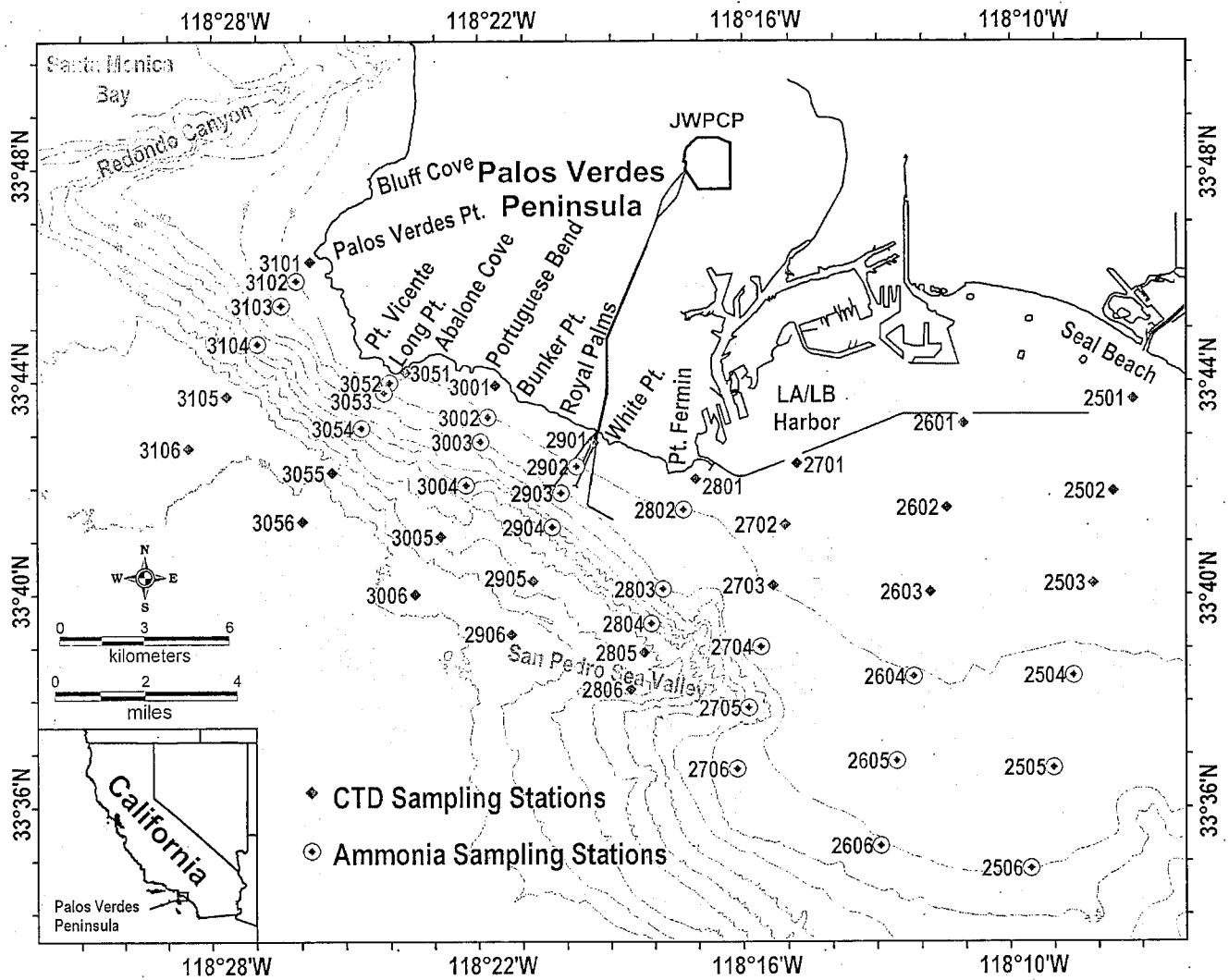


Figure 4. Nearshore Light Energy Profiling Stations

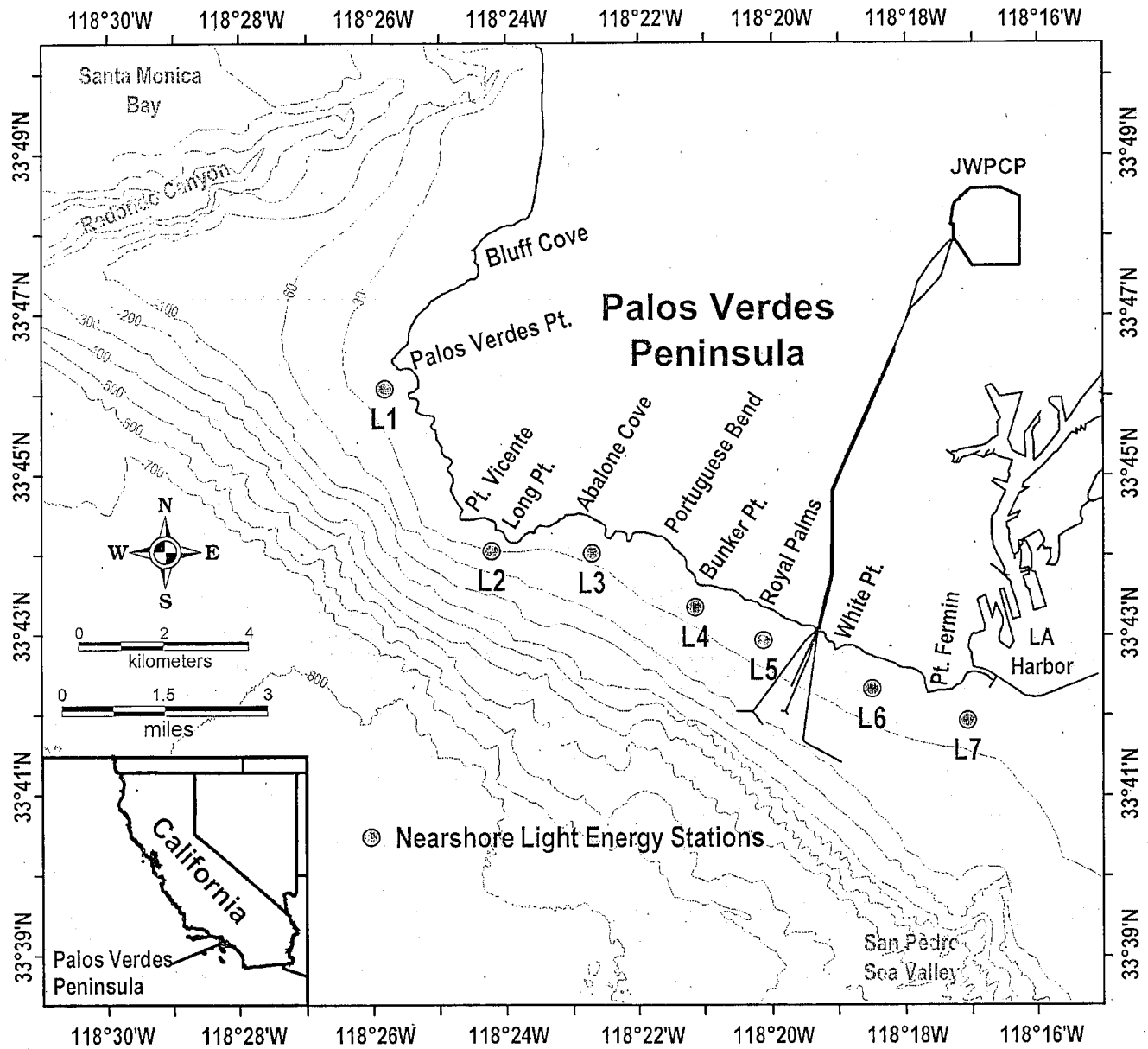


Figure 5. Benthic Infaunal and Sediment Chemistry Sampling Stations

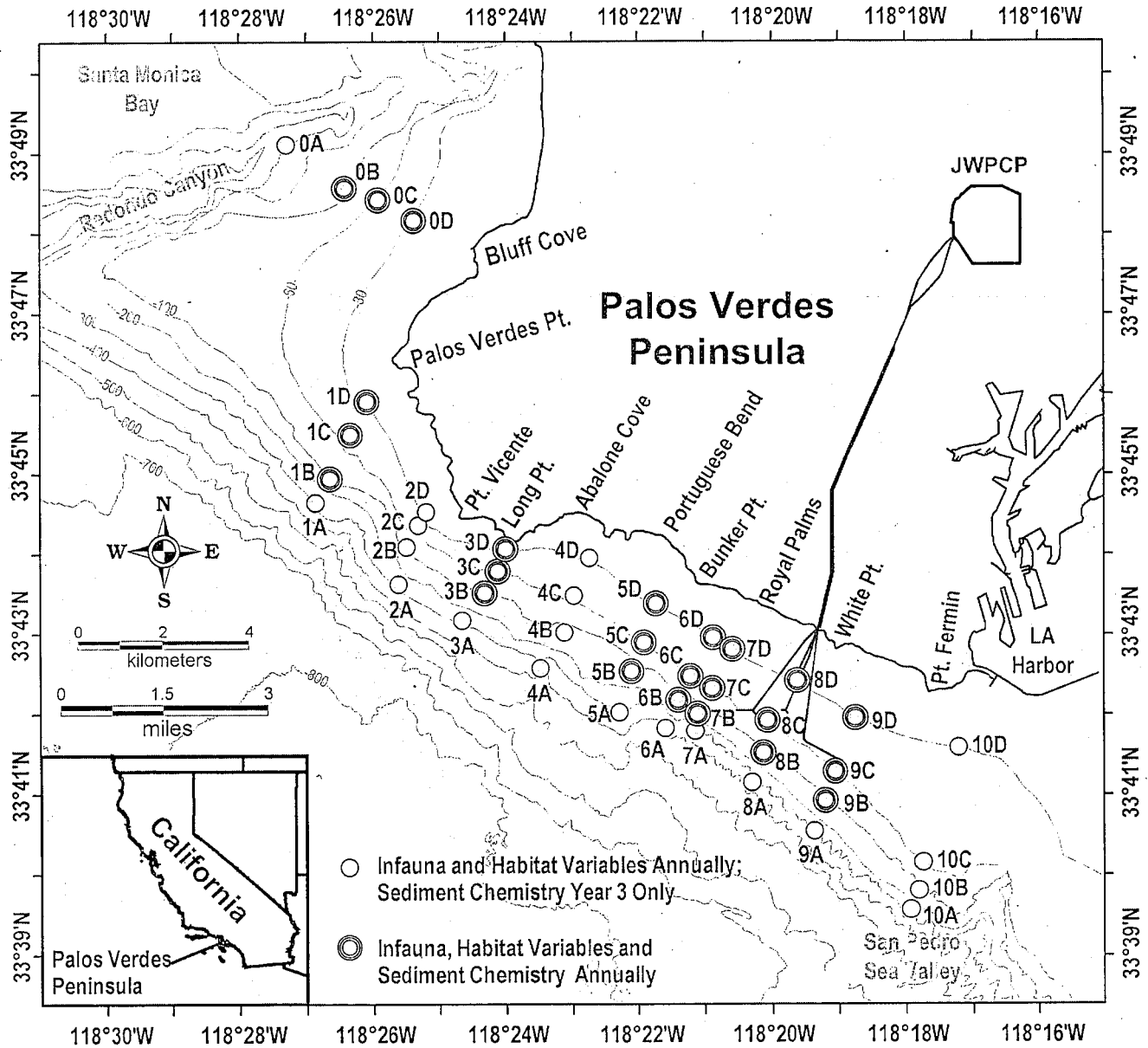


Figure 6. Local Demersal Fish and Invertebrate Stations

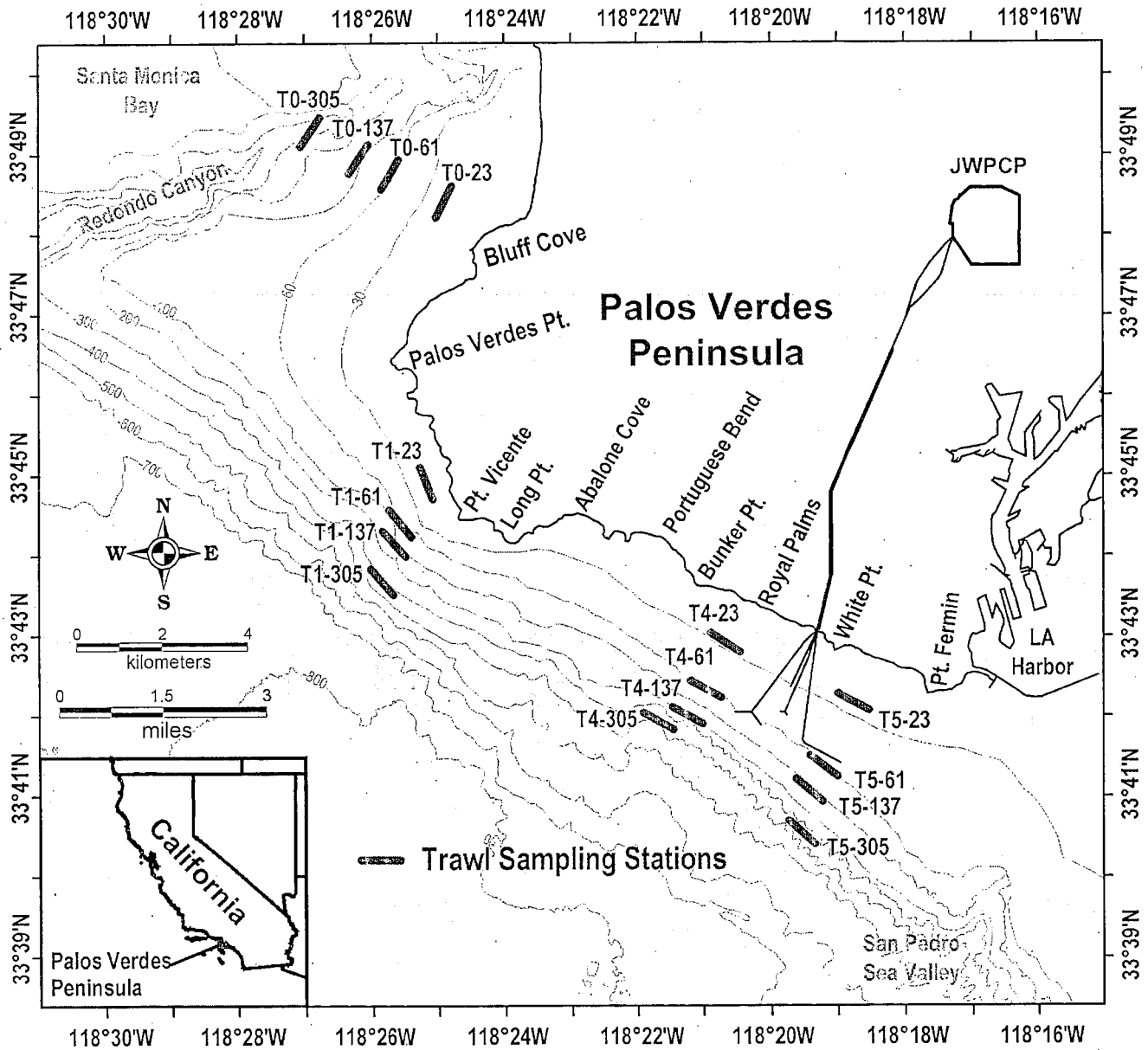
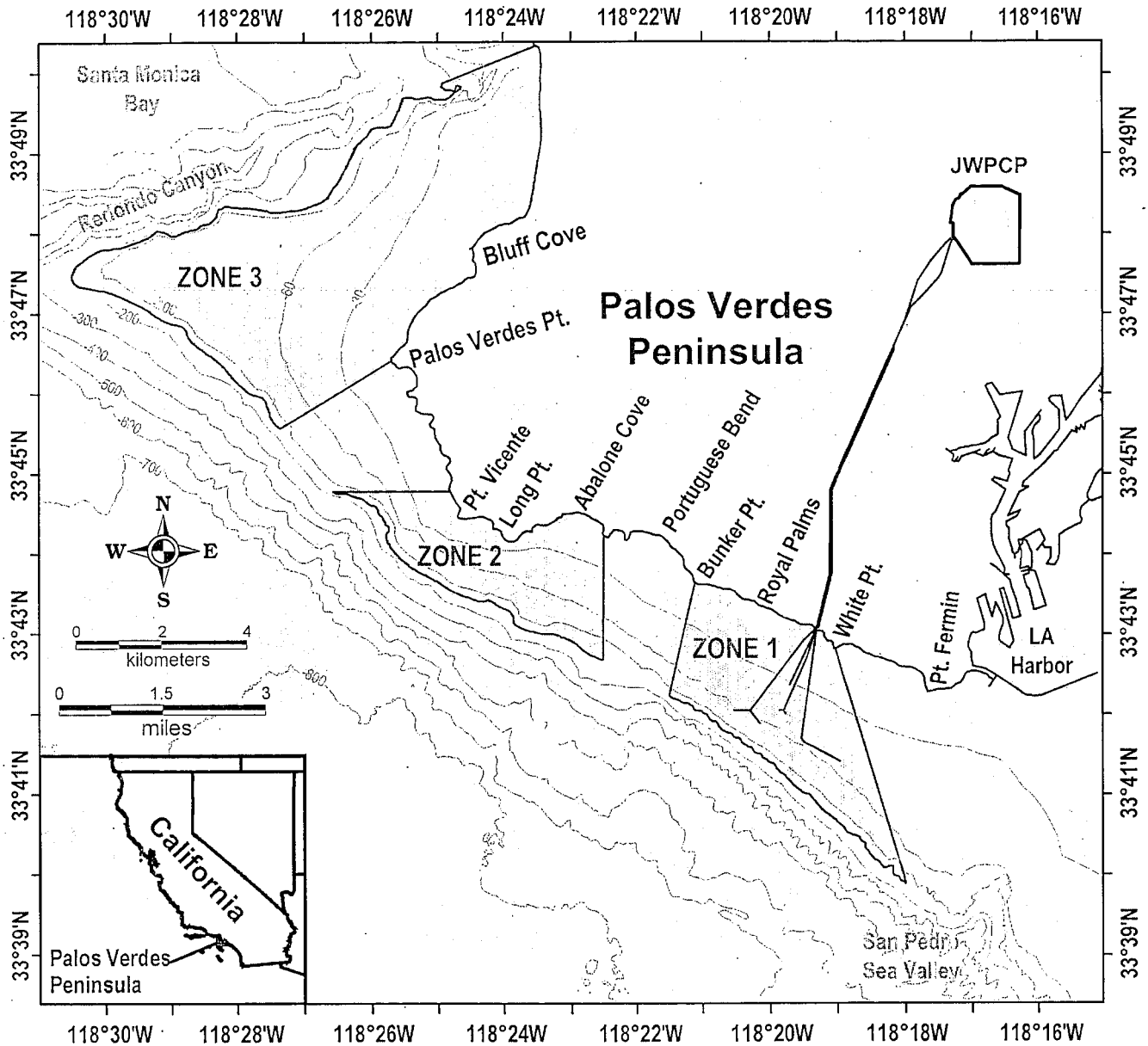


Figure 7. Local Bioaccumulation Sampling Zones



ATTACHMENT F – FACT SHEET

Table of Contents

Attachment F – Fact Sheet.....	F-3
I. Permit Information.....	F-3
II. Facility Description.....	F-4
A. Description of Wastewater and Biosolids Treatment or Controls.....	F-4
B. Discharge Points and Receiving Waters	F-7
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data	F-8
D. Compliance Summary.....	F-10
E. Planned Changes	F-10
III. Applicable Plans, Policies, and Regulations.....	F-11
A. Legal Authorities.....	F-11
B. California Environmental Quality Act (CEQA).....	F-11
C. State and Federal Regulations, Policies, and Plans	F-11
D. Impaired Water Bodies on CWA 303(d) List	F-14
E. Other Plans, Policies and Regulations.....	F-14
IV. Rationale for Effluent Limitations and Discharge Specifications.....	F-16
A. Discharge Prohibitions	F-16
B. Technology-Based Effluent Limitations	F-16
1. Scope and Authority	F-16
2. Applicable Technology-Based Effluent Limitations	F-16
C. Water Quality-Based Effluent Limitations (WQBELs).....	F-18
1. Scope and Authority	F-18
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives	F-18
3. Expression of WQBELs	F-18
4. Determining the Need for WQBELs	F-19
5. 303(d) Listed Constituents and Discharge Limitations – DDT and PCBs	F-20
6. WQBEL Calculations.....	F-21
7. Whole Effluent Toxicity (WET)	F-23
D. Final Effluent Limitations	F-23
1. Satisfaction of Anti-Backsliding Requirements	F-23
2. Satisfaction of Antidegradation Policy.....	F-24
3. Stringency of Requirements for Individual Pollutants	F-24
E. Performance Goals.....	F-34
F. Mass Emission Benchmarks.....	F-35
V. Rationale for Receiving Water Limitations	F-36
VI. rationale for Monitoring and Reporting Requirements	F-36
A. Influent Monitoring.....	F-36
B. Effluent Monitoring.....	F-36
C. Receiving Water Monitoring.....	F-37
D. Other Monitoring Requirements	F-39
1. Outfall and Diffuser Inspection.....	F-39
2. Biosolids and Sludge Management	F-39
VII. Rationale for Provisions.....	F-39
A. Standard Provisions.....	F-39
B. Special Provisions	F-39
1. Reopener Provisions.....	F-39
2. Special Studies and Additional Monitoring Requirements	F-40
3. Best Management Practices and Pollution Prevention	F-40
4. Construction, Operation, and Maintenance Specifications.....	F-40

5. Special Provisions for Municipal Facilities.....	F-40
VIII. Public Participation.....	F-41
A. Notification of Interested Parties.....	F-41
B. Written Comments.....	F-41
C. Public Hearing.....	F-42
D. Nature of Hearing.....	F-42
E. Parties to the Hearing.....	F-42
F. Public Comments and Submittal of Evidence.....	F-42
G. Hearing Procedure.....	F-43
H. Waste Discharge Requirements Petitions.....	F-43
I. Information and Copying.....	F-43
J. Register of Interested Persons.....	F-43
K. Additional Information.....	F-43

List of Tables

Table 1. Facility Information.....	F-3
Table 2. Historic Effluent Limitations and Monitoring Data (Conventional and Nonconventional Pollutants).....	F-8
Table 3. Historic Effluent Limitations and Monitoring Data (Toxic Pollutants).....	F-8
Table 4. Basin Plan Beneficial Uses of the Applicable Receiving Waters.....	F-11
Table 5. Ocean Plan Beneficial Uses of the Pacific Ocean.....	F-12
Table 6. Summary of Technology-based Effluent Limitations for Secondary Treatment Facility by USEPA at 40 CFR part 133.102.....	F-17
Table 7. Summary of Technology-based Effluent Limitations for POTWs established by the Ocean Plan.....	F-17
Table 8. Summary of Technology-based Effluent Limitations - Discharge Points 001, 002, 003 and 004.....	F-17
Table 9. Pollutants with Background Seawater Concentrations.....	F-22
Table 10. Ocean Plan Water Quality Objectives for Copper, Chlorine Residual and Chronic Toxicity.....	F-22
Table 11. Summary of Final Effluent Limitations for Discharge Points 001 and 002.....	F-25
Table 12. Summary of Final Effluent Limitations for Discharge Point 003.....	F-28
Table 13. Summary of Final Effluent Limitations for Discharge Point 004.....	F-30

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.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	4B190107013
Discharger	Joint Outfall System
Name of Facility	Joint Water Pollution Control Plant, Carson
Facility Address	24501 South Figueroa Street
	Carson, CA 90745
	Los Angeles County
Facility Contact, Title and Phone	Ann Heil, Supervising Engineer, (562) 908-4288 x 2803
Authorized Person to Sign and Submit Reports	Ann Heil, Supervising Engineer, (562) 908-4288 x 2803
Mailing Address	1955 Workman Mill Road, Whittier, CA 90601
Billing Address	1955 Workman Mill Road, Whittier, CA 90601
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Reclamation Requirements	None
Facility Permitted Flow	400 million gallons per day as monthly average daily dry weather flow
Facility Design Flow	400 million gallons per day as monthly average daily dry weather flow
Watershed	Santa Monica Bay Watershed Management Area
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

- A. The Joint Outfall System (hereinafter Discharger or JOS) is the owner and operator of the Joint Water Pollution Control Plant (hereinafter Facility or JWPCP), a municipal Publicly Owned Treatment Works (POTW). USEPA and the Regional Water Board have classified the JWPCP as a major discharger. It has a Threat to Water Quality and Complexity rating of 1-A pursuant to California Code of Regulations (CCR), Title 23, section 2200.

The Joint Outfall System was formerly referred to as the County Sanitation Districts of Los Angeles County. Ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County.

- B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States, at White Point, off the Palos Verdes Peninsula and is currently regulated by Order No. R4-2006-0042 which was issued on April 6, 2006 and expired on May 24, 2011. The terms and conditions of the existing Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are issued pursuant to this Order.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on November 9, 2010. The application was deemed complete on December 30, 2010.
- D. On June 8, 1994, a Consent Decree [No. 92 0061 RG (JRx)] was entered in federal court records between the Discharger and the USEPA Region 9 and the Regional Water Board. The Consent Decree primarily requires the Discharger to construct additional secondary treatment facilities and achieve compliance with full secondary treatment at JWPCP by December 31, 2002. The Discharger achieved full secondary treatment on November 8, 2002. On May 29, 2008 the Discharger submitted a certification that all penalties, costs, and fees had been paid; all remedial measures and supplemental projects required by the Decree had been completed; and compliance for twelve consecutive months with the secondary treatment requirements of 40 CFR Section 133.102 was achieved as of November 8, 2003. On January 7, 2009 the Discharger filed a Notice of Termination of Consent Decree with the court and on January 21, 2009, the court acknowledged that the Consent Decree was terminated.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The Discharger owns and operates the Joint Water Pollution Control Plant, located at 24501 South Figueroa Street in Carson, California. JWPCP has a monthly average daily dry weather design treatment capacity of 400 million gallons per day (MGD) and a dry weather peak design capacity of 540 MGD of secondary treatment. The wet weather peak hydraulic capacity is up to 675 MGD. For the period from September 2009 to August 2010, secondary effluent discharge flow from JWPCP has averaged 280 MGD with a maximum daily flow of 428 MGD. JWPCP receives discharges from more than 900 significant industrial users.

JWPCP is part of an integrated network of facilities, known as the Joint Outfall System, which incorporates JWPCP and six upstream water reclamation plants - La Cañada, Whittier Narrows, San Jose Creek, Pomona, Los Coyotes and Long Beach. The six upstream plants are connected to a common sewer system, which allows for the diversion of desired flows into or around each upstream plant. The flow from the six upstream plants can be bypassed, to a limited extent, to JWPCP. The sludge generated from the upstream plants are returned to the joint outfall trunk sewers and conveyed to JWPCP for further treatment. The Joint Outfall System serves an urban area of 654 square miles and includes all or part of 78 cities in addition to multiple communities and unincorporated areas. The Joint Outfall System provides wastewater treatment services to much of Los Angeles County. There are approximately five million people in the Joint Outfall System service area.

The treatment system at JWPCP consists of screening, grit removal, primary sedimentation, pure oxygen activated sludge reactors, secondary clarification, and chlorination. Effluent from the primary sedimentation tanks is biologically treated in pure oxygen activated sludge reactors. The secondary treated effluent is then clarified, chlorinated and pumped into the outfall manifold. The secondary treated effluent from JWPCP is routinely discharged through Discharge Points 001 and 002 to the Pacific Ocean, a water of the United States, at White Point within the Palos Verdes Peninsula Sub-Watershed that is part of the Santa Monica Bay Watershed.

Solid fractions recovered from wastewater treatment processes include grit, primary screenings, primary sludge and skimmings, thickened waste activated sludge, digested sludge screenings and digester cleaning solids. The fine solids (grit, primary screenings, digested sludge screenings, digester cleaning solids) which are primarily inorganic materials are hauled away to a landfill. The remaining solid fractions (primary sludge and skimmings, thickened waste activated sludge) are anaerobically digested on-site. The digested solids are screened, and dewatered using scroll centrifuges. JWPCP generates approximately 118,000 dry metric tons of Class B biosolids per year. The biosolids are hauled off-site for use in composting and land application, combined with municipal solid waste for co-disposal, or processed into a renewable fuel for cement kilns.

Methane gas generated in the anaerobic digestion process is used to produce power and digester heating steam in a total energy facility that utilizes gas turbines and waste-heat recovery steam generators. The on-site generation of electricity permits the JWPCP to produce its own electricity.

Each treatment process is described in more detail below.

Primary and Secondary Treatment

Primary treatment begins with two inlet works that receive flow from three influent sewers. Inlet Works No. 1 receives approximately 70% of the total plant flow and Inlet Works No. 2 receives the remaining 30%. Six bar screens for Inlet Works No. 1 and three bar screens for Inlet Works No. 2 remove solids by capturing large debris through bars spaced approximately 1 inch apart. Captured debris is continuously removed from each bar screen, by five equally spaced rakes, and deposited into a trough. The trough delivers the debris to one of two dewatering compactors. Water removed in the compactors is returned to the treatment process upstream of the bar screens while the dewatered debris is disposed of in a landfill. Wastewater effluent from the bar screens is directed to one of six grit chambers, which remove heavy inorganic material. Grit slurry is pumped from the chambers and dewatered with the use of cyclones and clarifiers. The water is returned to the inlet of the grit chambers and the dewatered grit is disposed of in a landfill. Wastewater from the grit chambers is then directed to the sedimentation tanks for settleable and floatable solids removal. The JWPCP has 52 primary sedimentation tanks arranged into three sedimentation tank batteries. The wastewater enters each tank through three inlet gates with diffusers. Flow is reduced from roughly 3 feet per second to 3 feet per minute to allow suspended solids to settle. Sludge is directed through draw off lines and pumped to raw sludge transfer stations before transfer to anaerobic digesters. Floatable solids are pushed to the effluent end of the tank where they are pulled up into a skimmings trough, then conveyed to one of four skimmings wet wells. Ultimately the skimmings are directed to one of 24 circular anaerobic digesters, each with a volume of approximately 500,000 cubic feet, for final processing. Anaerobic digestion of the sludge reduces the concentration of pathogens, offensive odors, and the overall amount of solids to be dewatered. It also produces methane as a by-product, which is used to power the JWPCP.

A secondary influent pumping station pumps primary effluent to the secondary treatment facilities. Eight biological reactors, each with a design capacity of 50 MGD, convert finely divided and dissolved organic matter that passes through primary treatment into settleable solids than can be removed by final clarification. Each reactor is subdivided into four stages, each stage with three aerators/mixers to facilitate oxygen dissolution and mixing. The first stage of the reactors is operated as an anaerobic selector, with limited exposure to oxygen to suppress the growth of certain organisms in the activated sludge. In the following three stages, the activated sludge consumes organic matter in the mixed liquor and produces more organisms. The fourth stage of some of the reactors also functions as a pH adjustment stage. The reactors are covered to retain the high purity oxygen gas introduced into the system and permit a high degree of oxygen utilization by the activated sludge.

After passing through the biological reactors, wastewater flows into the final clarifiers to separate the activated sludge solids from the biological reactor's mixed liquor. Each reactor has a bank of 26 sedimentation tanks where floatable material is skimmed off the top, collected, and directed to a sewer line. Solids that settle to the bottom are scraped to two hoppers where the sludge is collected and drawn off to return sludge pumping stations. There is one pumping station per reactor, each consisting of three pumps, that pumps activated sludge to the inlet of the reactors to keep an effective concentration of microorganisms in the reactors. However, a portion of the activated sludge is wasted from the reactor/clarifier system to maintain the desired population of microorganisms in the reactors.

A dissolved air flotation thickening system is used to concentrate the waste activated sludge produced in secondary treatment. Solids on the surface of the flotation tank are collected using skimmers and then pumped to the anaerobic digestion system, located with the primary treatment facilities. The clarified effluent is returned to the secondary influent force main. Secondary effluent is disinfected using a bleach solution to achieve a chlorine residual of approximately 1-2 mg/L and then is either pumped or gravity fed, depending on tidal conditions, to the Pacific Ocean.

Solids Processing

Discharge from the 24 circular digesters is diverted into three pump station wet wells, one of which is the central wet well for transfer of digested sludge to solids processing. The central wet well consists of three individual structures, each with a capacity of 822,800 gallons and equipped with two gas blowers that pump digester gas into the wet well to provide mixing. Sludge is pumped using three digested sludge pumps through rotary screens and into centrifuge feed pumping station wet wells, housing a total of five pumps. The pumps are used to deliver digested sludge to the centrifuges, which are used to separate water from the suspended solids. There are currently 31 low-speed and 8 high-speed centrifuges. The high-speed centrifuges are capable of increasing gravity up to a factor of 3,000, while the low-speed centrifuges increase gravity by a factor of approximately 1,000. Diluted cationic polymer is used in the process to enhance flocculation. The dewatered cake (biosolids) drops through a hopper below each elevated centrifuge onto a conveyor belt, while the waste centrate is collected through a second hopper into a centrate drainage system. Eighteen storage silos, each of which can hold up to 510 tons, store the biosolids prior to conveyance to truck loading stations. Centrate from the centrifuges is collected and gravity flows to the Centrate Treatment System Facility, where solids are concentrated using dissolved air flotation. The clarified effluent from the Centrate Treatment Facility discharges to a wet well, where it gravity flows to the influent of the JWPCP.

Power Generation

The JWPCP is self-reliant with respect to power generation. All of the power and most of the heating steam requirements for the plant are provided by three digester gas fired turbines and one steam turbine. Utility power is available whenever the on-site power plant is out of service.

Digester gas must be dewatered and scrubbed of particulate matter prior to combustion. Digester gas is first scrubbed, using two Venturi scrubbers and non-potable water, and particulate matter is regularly blown-down from the scrubber storage tanks. Two mist eliminators downstream of the Venturi scrubbers remove water droplets from the gas stream, and the digester gas is then further treated using two chillers that condense water vapor. From there, digester gas is directed to a surge tank prior to compression. Natural gas is used to boost the heat input during periods of low digester gas production. Three compressors are used to compress the digester gas, or a mixture of digester gas and natural gas, from approximately 10 inches of water column to approximately 350 pounds per square inch (psig). Prior to combustion in the gas turbine, the high-pressure digester gas is chilled to 40 degrees Fahrenheit, using a refrigeration system, to remove any remaining water vapor. As mentioned above, three gas-fired turbines, each equipped with a 9.9 MW electric generator, are the normal source of

power for the JWPCP. Typically, only two gas turbines are in action while one acts as a standby. During periods when the gas turbines are not operational, digester gas can be burned at two different flare stations, with the South Flare Station consisting of five waste gas flares and the North Flare Station consisting of seven waste gas flares. Waste heat from the gas turbine exhaust is used to produce steam, through the use of heat recovery steam generators, and directed to a steam turbine for power production and digester heating steam. At present, this steam generation system is out of service due to replacement of the steam turbine, which is expected to be completed in the summer of 2011. Until that time, the gas turbines are operated in simple cycle, meaning without waste heat recovery. Currently, digester heating steam is provided by means of four digester gas-fired boilers, along with an additional natural gas-fired boiler available for emergencies. These boilers both supplement and serve as a backup to the waste heat steam generators.

B. Discharge Points and Receiving Waters

After chlorination, the secondary treated effluent travels about 6 miles through tunnels to the outfall manifold and then is discharged to the Pacific Ocean, at White Point off the Palos Verdes Peninsula.

JWPCP has fifteen discharge points (Discharge Points 001 through 015). Four outfalls (Discharge Points 001 through 004) are located at White Point, off the Palos Verdes Peninsula. Discharge Points 001 and 002 are routinely used for discharge of secondary treated wastewater. Discharge Point 003 is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. Discharge Point 004 serves as a standby outfall to provide additional hydraulic relief during the very heaviest flows. These four outfalls are described as follows:

<u>Discharge Point</u>	<u>Description</u>
001	White Point 120-inch ocean outfall (Latitude 33 ° 41' 21" N, Longitude 118° 19' 00" W) This outfall routinely discharges approximately 65% of the effluent from the JWPCP. It discharges south of the shoreline off White Point, San Pedro. The outfall is 7440 ft long to the beginning of a single L-shaped diffuser leg which is 4440 ft long. Depth at the beginning of the diffuser is 167 ft and at the end of the diffuser is 190 ft.
002	White Point 90-inch ocean outfall (Latitude 33 ° 42' 03" N, Longitude 118° 20' 17" W) This outfall routinely discharges approximately 35% of the effluent from the JWPCP. It discharges southwest of the shoreline off White Point, San Pedro. The outfall is 7982 ft long to the beginning of a y-shaped diffuser with two legs. Each leg is 1208 ft long. Depth at the beginning of the diffusers is 196 ft and at the end of the diffusers is 210 ft.
003	White Point 72-inch ocean outfall (Latitude 33 ° 42' 05" N, Longitude 118° 20' 20" W) This outfall is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. When used, it discharges off the White Point shoreline between Discharge Points 001 and 002 and about 160 ft below the ocean surface. The outfall is about 6500 ft long and connects to one of three legs of a y-shaped diffuser upstream of the y-intersection. Each leg is approximately 200 ft long.
004	White Point 60-inch ocean outfall (Latitude 33 ° 41' 20" N, Longitude 118° 19' 40" W) This outfall is used as a standby to provide additional hydraulic relief during the heaviest flow. When used, it discharges off the White Point shoreline between Discharge Serial Nos. 002 and 003 and about 110 ft below the ocean surface. The outfall is about 5000 ft long and connect to a single, very short diffuser.

Two discharge points (Serial Nos. 006 and 013) have been eliminated following facility modifications. The remaining nine discharge points, with seven of them being bypass points (Discharge Points 007-012 and 014) located prior to the headworks, provide for overflow, emergency bypass, and/or hydraulic

relief of the JWPCP. This permit does not authorize any discharge from these nine discharge points (Discharge Points 005, 007-012, 014, and 015).

In addition to the JWPCP effluent, the waste brine generated by the West Basin Municipal Water District's Carson Regional Water Recycling Plant is discharging to the ocean through the JWPCP's outfalls via a waste brine line connected to the JWPCP effluent tunnel. This discharge of waste brine is regulated under separate waste discharge requirements and a separate NPDES permit.

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

Effluent limitations contained in the existing Order (Order No. R4-2006-0042) for discharges from JWPCP and representative monitoring data for conventional and nonconventional pollutants from May 2006 to August 2010 during the term of the previous Order are as follows:

Table 2. Historic Effluent Limitations and Monitoring Data (Conventional and Nonconventional Pollutants)

Parameter (units)	Effluent Limitation In Order No. R4-2006-0042				Monitoring Data (From May 2006 to Aug. 2010)		
	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Highest 30-day Average Discharge	Highest 7-day Average Discharge	Highest Daily Discharge
BOD ₅ (mg/L)	30	45	--	--	8.6	11	17
TSS (mg/L)	30	45	--	--	17	21	48
O&G (mg/L)	15	22.5	45	75	<1.05	<1.05	6.0
Settleable Solids (ml/L)	0.5	0.75	1.5	3.0	<0.1	0.1	3
Turbidity (NTU)	75	100	--	225	6.9	7.4	19
pH (pH units)	6.0 to 9.0				6.67 to 8.21		
Temperature (°F)	<100				72.7 to 88.7		

Order No. R4-2006-0042 established effluent limitations for toxic pollutants based on water quality objectives of the Ocean Plan. A summary of existing effluent limitations and monitoring data of toxic pollutants for the period from May 2006 to August 2010 are showed below.

Table 3. Historic Effluent Limitations and Monitoring Data (Toxic Pollutants)

Parameters	units	Effluent Limitation in Order No. R4-2006-0042			Monitoring Data (From May, 2006 to Aug. 2010)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Marine Aquatic Life Protection								
Arsenic	µg/L	--	--	--	--	--	1	2.61
Cadmium	µg/L	--	--	--	<0.004	<0.03	0.31	0.81
Chromium (VI)	µg/L	--	--	--	<0.1	<0.6	--	--
Copper	µg/L	--	--	--	--	--	1.95	6.37
Lead	µg/L	--	--	--	<0.01	<0.17	0.25	0.44
Mercury	µg/L	--	--	--	<0.01	<0.03	0.04	0.04
Nickel	µg/L	--	--	--	--	--	1.87	13.4
Selenium	µg/L	--	--	--	--	--	0.37	7.62
Silver	µg/L	--	--	--	<0.01	<0.05	0.25	0.99
Zinc	µg/L	--	--	--	--	--	8.9	75.4

Parameters	units	Effluent Limitation in Order No. R4-2006-0042			Monitoring Data (From May, 2006 to Aug. 2010)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Total Cyanide	µg/L	--	--	--	<0.5	<0.9	5	36
Chlorine Residual (Daily) (Outfall 001)	µg/L	330	1300	10000	--	--	50	430
Chlorine Residual (Daily) (Outfall 002)	µg/L	330	1300	10000	--	--	50	300
Ammonia as N	mg/L	--	--	--	--	--	11.4	39.8
Acute Toxicity	TUa	--	--	5.3	--	--	1.4	4.5
Chronic Toxicity (survival)	TUc	--	--	167	--	--	42	42
Phenols (unchlorinated)	µg/L	--	--	--	<0.59	<1.73	1	3.6
Phenols (chlorinated)	µg/L	--	--	--	<0.15	<0.6	--	--
Endosulfan	µg/L	--	--	--	<0.003	<0.003	--	--
Endrin	µg/L	--	--	--	<0.001	<0.002	--	--
HCH	µg/L	--	--	--	<0.003	<0.005	0.003	0.02
Human Health Protection – Noncarcinogens								
Acrolein	µg/L	--	--	--	<0.31	<0.94	--	--
Antimony	µg/L	--	--	--	--	--	1.4	9.83
Bis(2-cl-ethoxy) methane	µg/L	--	--	--	<0.13	<1	--	--
Bis(2-cl-isopropyl) ether	µg/L	--	--	--	<0.16	<0.5	--	--
Chlorobenzene	µg/L	--	--	--	<0.1	<0.32	--	--
Chromium (III) (using total Cr data)	µg/L	--	--	--	--	--	0.453	8.09
Di-n-butyl-phthalate	µg/L	--	--	--	<0.36	<0.45	0.52	4.4--
Dichlorobenzene	µg/L	--	--	--	<0.26	<0.43	0.5	0.5
Diethyl phthalate	µg/L	--	--	--	<0.21	<0.43	--	--
Dimethyl phthalate	µg/L	--	--	--	<0.19	<0.4	--	--
2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	<0.29	<1.31	--	--
2,4-Dinitrophenol	µg/L	--	--	--	<0.33	<1.73	--	--
Ethyl benzene	µg/L	--	--	--	<0.06	<0.24	--	--
Fluoranthene	µg/L	--	--	--	<0.19	<0.37	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	<0.75	<1.58	--	--
Nitrobenzene	µg/L	--	--	--	<0.22	<0.68	--	--
Thallium	µg/L	--	--	--	<0.004	<0.06	--	--
Toluene	µg/L	--	--	--	<0.21	<0.21	0.1	0.5
Tributyltin	ng/L	--	--	--	<1	<1	--	--
1,1,1-Trichloroethane	µg/L	--	--	--	<0.1	<0.32	--	--
Human Health Protection – Carcinogens								
Acrylonitrile	µg/L	--	--	--	<0.2	<0.61	--	--
Aldrin	µg/L	0.0037	--	--	<0.002	<0.002	--	--
Benzene	µg/L	--	--	--	<0.06	<0.22	--	--
Benzidine	µg/L	0.012	--	--	<0.031	<2.76	--	--
Beryllium	µg/L	--	--	--	<0.01	<0.07	--	--
Bis(2-chloroethyl) ether	µg/L	--	--	--	<0.19	<0.53	--	--
Diethylhexyl phthalate	µg/L	--	--	--	<0.7	<5	0.7	16.6
Carbon tetrachloride	µg/L	--	--	--	<0.09	<0.2	--	--
Chlordane	µg/L	0.0038	--	--	<0.001	<0.005	--	--
Dibromochloromethane	µg/L	--	--	--	<0.08	<0.08	0.12	0.6
Chloroform	µg/L	--	--	--	--	--	7	30
Total DDT	µg/L	0.028	--	--	<0.003	<0.003	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	<0.07	<0.48	0.3	1

Parameters	units	Effluent Limitation in Order No. R4-2006-0042			Monitoring Data (From May, 2006 to Aug. 2010)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
3,3'-Dichlorobenzidine	µg/L		--	--	<0.02	<2.78	--	--
1,2-Dichloroethane	µg/L		--	--	<0.08	<0.18	0.6	0.6
1,1-Dichloroethene	µg/L	--	--	--	<0.07	<0.36	--	--
Bromodichloromethane	µg/L	--	--	--	<0.08	<0.08	0.3	2
Methylene chloride	µg/L		--	--	--	--	1.4	3
1,3-Dichloropropene		--	--	--	<0.09	<0.21	--	--
Dieldrin	µg/L	0.0067	--	--	<0.001	<0.001	--	--
2,4-Dinitrotoluene	µg/L	--	--	--	<0.2	<0.33	--	--
1,2-Diphenylhydrazine	µg/L	--	--	--	<0.13	<0.47	--	--
Halomethanes	µg/L	--	--	--	<0.07	<0.32	0.2 (Est.)	1
Heptachlor	µg/L	0.0084	--	--	<0.0009	<0.001	--	--
Heptachlor epoxide	µg/L	0.0033	--	--	<0.001	<0.002	--	--
Hexachlorobenzene	µg/L	0.035	--	--	<0.18	<0.4	--	--
Hexachlorobutadiene	µg/L	--	--	--	<0.14	<0.44	--	--
Hexachloroethane	µg/L	--	--	--	<0.14	<0.45	--	--
Isophorone	µg/L	--	--	--	<0.13	<0.54	--	--
N-Nitrosodimethylamine	µg/L	--	--	--	<0.14	<0.47	0.6 (Est.)	0.6 (Est.)
N-Nitrosodi-n-propylamine	µg/L	--	--	--	<0.12	<0.61	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	<0.15	<0.45	--	--
PAHs	µg/L	--	--	--	<0.14	<0.46	0.06 (Est.)	0.06 (Est.)
PCBs	µg/L	0.0032	--	--	<0.1	<0.3	--	--
TCDD Equivalents	pg/L	0.65	--	--			--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	<0.08	<0.2	--	--
Tetrachloroethylene	µg/L	--	--	--	<0.1	<0.16	0.18 (Est.)	22
Toxaphene	µg/L	0.035	--	--	<0.04	<0.06	--	--
Trichloroethylene	µg/L	--	--	--	<0.1	<0.31	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	<0.08	<0.17	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	<0.12	<0.6	--	--
Vinyl chloride	µg/L	--	--	--	<0.05	<0.4	--	--

Est.: Estimated concentration. Sample results are less than the reported ML, but greater than or equal to the MDL.

D. Compliance Summary

Monitoring data from 2006 to 2010 indicate that the Discharger has fully complied with the effluent limitations in Order No. R4-2006-0042. However, there are some reporting deficiencies during the reporting period.

In accordance with applicable permits, the Discharger have reported a number of spills and/or overflows in the JOS service area over the past five years. In the period from 2006 to 2010, 43 spills were reported in all JOS sewers maintained by the Discharger, 6 of which were caused by high intensity rainfall in the area. The appropriate enforcement actions are being evaluated by the Regional Water Board for these violations.

E. Planned Changes

The Discharger has no significant planned changes.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the 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 (CWC). 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 CWC (commencing with Section 13260).

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the CEQA (Public Resources Code sections 21100 through 21177) in accordance with section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** On June 13, 1994, the Regional Water Board adopted the *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (hereinafter Basin Plan), as amended, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. 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. Basin Plan beneficial uses applicable to the Pacific Ocean (Point Vicente Beach, Royal Palms Beach, and White Point Beach) in the Palos Verdes Peninsula are as follows:

Table 4. Basin Plan Beneficial Uses of the Applicable Receiving Waters

Discharge Point	Receiving Water Name	Beneficial Use(s)
Points 001, 002, 003, and 004	Point Vicente Beach, Royal Palms Beach, and White Point Beach	<u>Existing:</u> Navigation (NAV); contact (REC-1) and non-contact (REC-2) water recreation; commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); and, shellfish harvesting (SHELL). <u>Potential:</u> Spawning, reproduction, and/or early development of fish (SPWN).
	Nearshore Zone (The zone bounded by the shoreline and a line 1000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline)	<u>Existing:</u> Industrial service supply (IND); navigation (NAV); contact (REC-1) and non-contact (REC-2) water recreation; commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); preservation of biological habitats (BIOL); preservation of rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development of fish (SPWN); and, shellfish harvesting (SHELL).

Discharge Point	Receiving Water Name	Beneficial Use(s)
Points 001, 002, 003, and 004	Offshore Zone	<u>Existing:</u> Industrial service supply (IND); navigation (NAV); contact (REC-1) and non-contact (REC-2) water recreation; commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); preservation of rare; threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction; and/or early development of fish (SPWN); and, shellfish harvesting (SHELL).

Requirements of this Order/Permit implement the Basin Plan. The Basin Plan relies primarily on the requirements of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) for protection of the beneficial uses of the State ocean waters. The Basin Plan, however, may contain additional water quality objectives applicable to the Discharger.

2. **California Thermal Plan.** In 1972, 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* (hereinafter Thermal Plan), as amended. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order implement the Thermal Plan.
3. **California Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005 and 2009. The State Water Board adopted the latest amendment (2009 California Ocean Plan) on September 15, 2009. The Office of Administration Law and the USEPA approved it on March 10, 2010 and October 8, 2010, respectively. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Ocean Plan beneficial uses applicable to ocean waters of the State are shown in the following table.

Table 5. Ocean Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use(s)
Points 001, 002, 003, and 004	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Area of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and, shellfish harvesting.

To protect the beneficial uses in ocean water, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Santa Monica Bay Restoration Plan.** The JWPCP discharges to Santa Monica Bay, one of the most heavily used recreational areas in California. Recognizing the importance of the Bay as a national resource, the State of California and USEPA nominated and Congress included Santa Monica Bay in the National Estuary Program. This led to the formation of the Santa Monica Bay Restoration Project (currently named Santa Monica Bay Restoration Commission) that developed the Bay Restoration Plan (BRP) which serves as a blueprint for restoring and enhancing the Bay. The Regional Water Board plays a lead role in the implementation of the BRP. Three of the proposed priorities of the BRP are reduction of pollutants of concern at the source (including municipal wastewater treatment plants), attainment of full secondary treatment at the City of Los Angeles' Hyperion Treatment Plant and the County Sanitation Districts of Los Angeles County's

Joint Water Pollution Control Plant, and implementation of the mass emission approach for discharges of pollutants to the Bay.

5. **Alaska Rule.** USEPA has revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR part 131.21; 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (hereinafter 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.
6. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based effluent limitations and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (5-day) (BOD₅), total suspended solids (TSS), and pH, and percent removal of BOD₅ and TSS, which implement the minimum, applicable federal technology-based requirements for POTWs. Also, effluent limitations consisting of restrictions on oil and grease, settleable solids, and turbidity more stringent than federal technology-based requirements are necessary to implement State treatment standards in Table A of the Ocean Plan. Water quality-based effluent limitations consisting of restrictions on chlorine residual, acute toxicity, chronic toxicity, benzidine, chlordane, DDT, 3,3'-dichlorobenzidine, hexachlorobenzene, PCBs, TCCD equivalents and toxaphene have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. Collectively, restrictions on individual pollutants in this Order are no more stringent than required by the CWA.
7. **Antidegradation Policy.** Part 131.12 of 40 CFR requires that 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. This resolution incorporates the requirements of 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 Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F), the permitted discharge is consistent with the antidegradation provision of 40 CFR part 131.12 and State Water Board Resolution No. 68-16.
8. **Anti-Backsliding Requirements.** CWA sections 402(o)(2)/303(d)(4) and 40 CFR part 122.44(l) prohibit backsliding and require effluent limitations, permit conditions, and standards in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations and conditions may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in this Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

This Order is consistent with State and federal antidegradation policies in that it does not authorize a change in pollutant mass emission rates, nor does it authorize a relaxation in the manner of treatment of the discharge. Pollutant limit mass emission rates continue to be based on the design flow rate of the treatment plant under the 1997 permit of 385 MGD. Although the design flow rate of the treatment plant has increased to 400 MGD, this increase has been accompanied by a significant improvement in the level of treatment necessary to achieve full secondary treatment. As a result, both the quantity of discharged pollutants and quality of the discharge are expected to

remain relatively constant or improve during this permit term, consistent with antidegradation policies. In conformance with reasonable potential analysis procedures identified in State Water Board and USEPA documents, effluent limitations for some constituents are not carried forward in this Order/Permit because there is not presently reasonable potential for the constituents to cause or contribute to an exceedance of water quality standards. Without reasonable potential, there is no longer a need to maintain prior WQBELs under NPDES regulations, antibacksliding provisions, and antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the Order/Permit will be reopened to incorporate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform to antidegradation policies and antibacksliding provisions.

9. **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 United States Code sections 1531 to 1544). This Order/Permit requires compliance with effluent limitations, receiving water limitations, 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.
10. **Monitoring and Reporting Requirements.** 40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. California Water Code sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

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

On June 28, 2007, the USEPA approved the State's 2006 303(d) List of Water Quality Limited Segments (hereinafter 303(d) list). The 303(d) list identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality limited water bodies).

Santa Monica Bay (Offshore and Nearshore) is on the 303(d) list for the following pollutants/stressors, from point and non-point sources: DDT (dichlorodiphenyltrichloroethane) (tissue & sediment), debris, fish consumption advisory, PCBs (polychlorinated biphenyls) (tissue & sediment), and sediment toxicity. Both DDT (Fish consumption advisory for DDT) and PCBs (Fish consumption advisory for PCBs) are also listed as impairments for Royal Palms Beach, and White Point Beach. TMDLs for pollutants/stressors on the 303(d) list for Santa Monica Bay, Royal Palms Beach, and White Point Beach are scheduled for 2019. Santa Monica Bay Beaches Bacteria TMDLs were approved by USEPA in 2003, as described in the following section.

E. Other Plans, Policies and Regulations

1. **Secondary Treatment Regulations.** 40 CFR part 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment at publicly owned treatment works. These technology-based effluent limitations, established by USEPA, are incorporated into this Order/Permit except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** Sewage treatment works with a design flow of 1.0 MGD or greater are required to comply with Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activity, Excluding Construction Activities. The Discharger shall file a Notice of Intent within 60 days of adoption of this Order (unless already submitted under the previous Order) and comply with Order No. 97-03-DWQ or the Discharger shall provide certification to the Regional Water Board that all storm water is captured and treated on-site and no storm water is discharged or allowed to run off-site from the Facility.
3. **Sanitary Sewer Overflows.** The State Water Board issued Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The amended General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The requirements contained in this Order are generally consistent with the requirements in the SSO WDR. The Discharger's collection system is part of the POTW that is subject to this Order. The Discharger must comply with both the General Order including its future amendments and this Order.
4. **Pretreatment.** Section 402 of the CWA and implementing regulations at 40 CFR part 403 establish pretreatment requirements for POTWs which receive pollutants from non-domestic users. This Order contains pretreatment program requirements pursuant to 40 CFR part 403 that are applicable to the Discharger. These regulations require dischargers to develop and implement pretreatment programs that impose limitations on industrial users of the POTW.
5. **Watershed Management.** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in Los Angeles and Ventura Counties. The approach is in accordance with USEPA guidance on *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective is to provide a comprehensive and integrated strategy resulting in water resource protection, enhancement and restoration, while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. The Watershed Management Approach emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order and the accompanying Monitoring and Reporting Program (Attachment E) fosters implementation of this approach. The Monitoring and Reporting Program requires the Discharger to participate in regional monitoring programs in the Southern California Bight.
6. **Santa Monica Bay Beaches Bacteria Total Maximum Daily Loads (TMDLs).** The Regional Water Board has adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches during dry and wet weather. The Regional Water Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002 and December 12, 2002, respectively (Resolution Nos. 2002-004 and 2002-022). These TMDLs were approved by the State Water Board, State OAL and USEPA Region 9 and became effective on July 15, 2003.

In these TMDLs, waste load allocations (WLAs) are expressed as the number of sample days at a shoreline monitoring site that may exceed the single sample targets for total coliform, fecal coliform and enterococcus identified under "Numeric Target" in the TMDLs. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection at beaches. The final

shoreline compliance point for the WLAs in the TMDLs is the wave wash where there is a freshwater outlet (i.e., publicly owned storm drain or natural creek) to the beach, or at ankle depth at beaches without a freshwater outlet.

The JWPCP which is owned and operated by JOS, is identified as a responsible jurisdiction in these TMDLs. In these TMDLs, JWPCP is assigned a WLA of zero days of exceedance of the single sample bacterial objectives during all three identified periods – summer dry weather, winter dry weather and wet weather. JWPCP's WLA of zero exceedance days requires that no discharge from its outfalls may cause or contribute to any exceedances of the single sample bacteria objectives at the shoreline compliance points identified in the TMDL and, subsequently, in the approved Coordinated Shoreline Monitoring Plan (dated April 7, 2004) submitted by responsible agencies and jurisdictions under the TMDLs.

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: 40 CFR part 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR part 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. Where numeric water quality objectives have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using one or more of the following options: 1) using USEPA criteria guidance under CWA section 304(a), 2) using a calculated numeric water quality criterion that may be derived using a proposed State criterion or a State policy or regulation interpreting narrative criterion supplemented with other relevant information, or 3) establishment of effluent limitations on an indicator parameter for the pollutant of concern.

A. Discharge Prohibitions

Discharge prohibitions in this Order are based on the requirements in Section III.I of the California Ocean Plan (2009).

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing regulations at 40 CFR part 125.3 require that NPDES permits include limitations which meet applicable technology-based requirements, at a minimum. The discharge authorized by this Order must meet minimum federal technology-based requirements for POTWs at 40 CFR 133 and other technology requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR part 125.3. A detailed discussion of technology-based effluent limitations development is included in this Fact Sheet (Attachment F).

2. Applicable Technology-Based Effluent Limitations

Pursuant to Section 301(b)(1)(B) and 304 (d)(1) of the CWA, USEPA has established standards of performance for secondary treatment at 40 CFR 133. Secondary treatment is defined in terms of three parameters – 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH. The following table summarizes the technology-based requirements for secondary treatment, which are applicable to the Facility:

Table 6. Summary of Technology-based Effluent Limitations for Secondary Treatment Facility by USEPA at 40 CFR part 133.102

Constituent	Average Monthly	Average Weekly	Percent Removal
BOD ₅	30 mg/L	45 mg/L	85%
TSS	30 mg/L	45 mg/L	85%
pH	6.0 to 9.0		

Also, Table A of the Ocean Plan (2009) also establishes the following technology-based effluent limitations for POTWs, which are applicable to the Facility:

Table 7. Summary of Technology-based Effluent Limitations for POTWs established by the Ocean Plan (2009)

Constituent	Average Monthly	Average Weekly	Instantaneous Maximum	Percent Removal
O&G	25 mg/L	40 mg/L	75 mg/L	--
TSS	--	--	--	75%*
Settleable Solids	1.0 ml/L	1.5 ml/L	3.0 ml/L	--
Turbidity	75 NTU	100 NTU	225 NTU	--
pH	6.0 to 9.0			

* Dischargers shall, as a monthly average, remove 75% of TSS from the influent stream before discharging to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L.

All technology-based effluent limitations from Order No. R4-2006-0042 for BOD₅, TSS, oil and grease, settleable solids, pH, and turbidity are retained by this Order. Limitations for BOD₅, TSS, and pH are based on secondary treatment standards established by the USEPA at 40 CFR part 133. The limitations for turbidity are based on limitations established by the 2009 Ocean Plan. Instantaneous maximum limitations of 3.0 ml/L for settleable solids and 75 mg/L for oil and grease are also prescribed in this Order based on the 2009 Ocean Plan. Since the average monthly, average weekly and maximum daily limitations for settleable solids and oil and grease in Order No. R4-2006-0042 are more stringent than those established by the 2009 Ocean Plan, these limitations in Order No. R4-2006-0042 are carried over to this Order (Antibacksliding policy). Each technology-based effluent limitation is independent of the dilution ratio for the discharge outfall. The following Table summarizes the technology-based effluent limitations for the discharge from the Facility:

Table 8. Summary of Technology-based Effluent Limitations - Discharge Points 001, 002, 003, and 004

Constituent	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Percent Removal
BOD ₅	30 mg/L	45 mg/L	--		85%
TSS	30 mg/L	45 mg/L	--		85%
Oil and Grease	15 mg/L	22.5 mg/L	45 mg/L	75 mg/L	--
Settleable Solids	0.5 ml/L	0.75 ml/L	1.5 ml/L	3.0 ml/L	--
Turbidity	75 NTU	100 NTU	--	225 NTU	--
pH	6.0 to 9.0				

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR part 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve water quality standards and State requirements. 40 CFR part 122.44(d)(1)(i) requires that permits include water quality-based effluent limitations (WQBELs) for all pollutants which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. USEPA has applied CWA section 403(c) and 40 CFR 125, Subpart M, following 40 CFR part 122.

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 standards contained in the Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and the Ocean Plan (2009) establish the beneficial uses for ocean waters of the State. The beneficial uses of the receiving waters affected by the discharge have been described previously in this Fact Sheet. The Ocean Plan contains water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. The Basin Plan also contains the bacteria objectives for water bodies designated for water contact recreation as amended by Resolution No. 01-018. Bacteria objectives from the Ocean Plan and the Basin Plan were included as receiving water limitations in this Order.

Table B of the Ocean Plan includes the numerical water quality objectives for toxic pollutants:

- a. 6-month median, daily maximum, and instantaneous maximum objectives for 21 chemicals and chemical characteristics, including total residual chlorine, acute and chronic toxicity, for the protection of marine aquatic life.
- b. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health.
- c. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.

3. Expression of WQBELs

Pursuant to 40 CFR part 122.45(d)(2), for POTW continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to include only average weekly and average monthly effluent limitations in the permit because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR 122.45(d), are included in the permit for certain constituents.

The WQBELs for marine aquatic life toxicants contained in this Order are based on water quality objectives contained in the 2009 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. However, in the existing permit (Order No. R4-2006-0042), the calculated effluent limitations based on 6-month median objectives

for the marine aquatic life toxicants in the 2001 Ocean Plan were prescribed as monthly average limitations. Applying the antibacksliding policy, this Order retains the same approach to set effluent limitations derived from six-month median water quality objectives for marine aquatic life toxicants in Table B of the 2009 Ocean Plan as monthly average limitations. In addition, to be consistent with the Ocean Plan, daily maximum and instantaneous maximum limitations are also prescribed in this Order for the marine aquatic life toxicants.

4. Determining the Need for WQBELs

Order No. R4-2006-0042 contains effluent limitations for non-conventional and toxic pollutant parameters in Table B of the Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table B of the 2009 Ocean Plan was reevaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in Appendix VI of the 2009 Ocean Plan. This statistical RPA method (RCalc version 2.0) accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific effluent data. The program calculates the upper confidence bound (UCB) of an effluent population percentile after complete mixing. In the evaluation employed in this Order, the UCB is calculated as the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. The calculated $UCB_{95/95}$ is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have an insufficient number of monitoring data or have a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. As suggested by the Ocean Plan, existing effluent limitations for these constituents are retained in the new permit. In addition, the MRP (Attachment E) of this Order also requires the Discharger to continue to monitor for these constituents for the determination of reasonable potential for these constituents in future permit renewals and/or updates.

Using this statistical procedure, in combination with effluent data provided by the Discharger from May 2006 to August 2010, and minimum initial dilution ratios of 166:1 for Discharge Points 001 and 002, 150:1 for Discharge Point 003 and 115:1 for Discharge Point 004 as well as implementing Best Professional Judgment (BPJ), Regional Water Board staff has determined that the following pollutants, when discharged through the specified outfall, either have reasonable potential to exceed Ocean Plan objectives or have inconclusive results after running the RPA, and, therefore, require effluent limitations:

Discharge Points 001 and 002

Chlorine residual, acute toxicity, chronic toxicity, benzidine, chlordane, DDT, 3,3'-dichlorobenzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene.

Discharge Point 003

Chlorine residual, acute toxicity, chronic toxicity, benzidine, chlordane, DDT, 3,3'-dichlorobenzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene.

Discharge Point 004

Chlorine residual, acute toxicity, chronic toxicity, benzidine, chlordane, DDT, 3,3'-dichlorobenzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene.

Additional analysis for chlorine residual: Wastewater disinfection with chlorine usually produces the chlorine residual and the byproducts of chlorination are highly toxic to aquatic life. Although the RPA determination based on daily chlorine residual data shows no RP for chlorine residual, the daily maximum and instantaneous maximum limitations for chlorine residual are prescribed in this Order based on the facts that effluent from JWPCP is routinely chlorinated before discharge and there is the potential of having the effluent concentration of chlorine residual being higher than the water quality objectives for chlorine residual in the Ocean Plan.

In general, for constituents that have been determined to have no reasonable potential to cause or contribute to excursions of water quality objectives, no numerical effluent limitations are prescribed; instead, a narrative statement to comply with all Ocean Plan requirements is provided and the Discharger is required to monitor for these constituents to gather data for use in reasonable potential analyses for future permit renewals and/or updates.

5. 303(d) Listed Constituents and Discharge Limitations – DDT and PCBs

At various locations in Santa Monica Bay, DDT and PCBs are found in sediments at levels that can be harmful to marine organisms. In addition, DDT and PCBs are found in certain Bay-captured seafood species at levels posing potential health risks to humans. A brief description of these pollutants and their occurrence in Santa Monica Bay is given below.

In the U.S., DDT, an organochlorine insecticide, was widely used in agricultural and urban settings until they were banned in 1973. PCBs, a large group of industrial and commercial chemicals, were widely used as coolants and lubricants in transformers, capacitors and other electronic equipment until the late 1970s when their manufacture was banned. Because of their stable properties, DDT and PCBs persist in the environment, the result of historical uses which no longer occur. They have low water solubility and are generally found in sediments and fish tissue.

Bight '98 surveys included efforts to assess the spatial extent of anthropogenic contaminant accumulation in benthic sediments and their effects on marine biota in the Southern California Bight. These surveys showed that while elevated levels of DDT and PCBs continue to be measured in sediments near JWPCP outfalls, much of this is reflective of historical deposition and not the levels of contaminants associated with recent discharges. These surveys also concluded that DDT and PCBs in sediments are a dominant source of contaminant exposure levels in bottom living fish.

DDT continues to be found in fish tissue at levels of concern throughout the Bight, although these levels are declining over time. Monitoring data show that effluent levels of DDT and PCBs discharged from the JWPCP outfalls remain at non-detect concentrations.

Nearshore and offshore waters of Santa Monica Bay are on California's 2006 CWA 303(d) list of water quality limited segments for DDT (sediment and tissue, centered on Palos Verdes Shelf) and PCBs (sediment and tissue). TMDLs for DDT and PCBs will be established by the USEPA by March 2012 per the LA Region Consent. As TMDLs for these two constituents have not been completed, the Order continues forward mass emission and concentration WQBELs contained in the 2006 Order. These limits are based on Ocean Plan water quality objectives and effluent limitation calculation procedures, and, for Discharge Points 001 through 004, the average design flow rate (385 MGD) of the JWPCP in 1997. Current performance for DDT and PCBs in the JWPCP effluent are set at non-detect concentrations. The Ocean Plan RPA result for PCBs is inconclusive. The prescription of DDT effluent limitations are based on BPJ.

DDT	Effluent Concentration (ug/L)	Effluent Limitation (ug/L) carried over from R4-2006-0042
Outfalls 001 and 002	<0.003	0.028
Outfall 003	<0.003	0.026
Outfall 004	<0.003	0.020

PCBs	Effluent Concentration (ug/L)	Effluent Limitation (ug/L) carried over from R4-2006-0042
Outfalls 001 and 002	<0.1 - <0.3	0.0032
Outfall 003	<0.1 - <0.3	0.0029
Outfall 004	<0.1 - <0.3	0.0022

6. WQBEL Calculations

From the Table B water quality objectives in the Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable):

$$C_e = C_o + D_m(C_o - C_s)$$

where

C_e = the effluent limitation ($\mu\text{g/L}$)

C_o = the water quality objective to be met at the completion of initial dilution ($\mu\text{g/L}$)

C_s = background seawater concentration ($\mu\text{g/L}$) (see Table below)

D_m = minimum probable initial dilution expressed as parts seawater per part wastewater

The D_m is based on observed waste flow characteristics, receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Prior to issuance of the existing Order (Order No. R4-2006-0042), staff of the State Water Board had determined the minimum probable initial dilution for Discharge Points 001 and 002 to be 166 to 1. In the permits prior to Order R4-2006-0042, same dilution ratio of 166:1 has also been applied to Discharge Points 003 and 004. However, there is no document to support this application in the file. As requested by the Regional Water Board, the Discharger recalculated initial dilution ratio for Discharge Points 003 and 004 using the EPA computer model package Visual Plumes with the UM3 model and submitted the results to the State Water Board for review and approval. In September 2005, the State Water Board approved the minimum probable initial dilution for Discharge Points 003 and 004 to be 115 to 1. On December 8, 2005, due to the mistakes in the depth of the port on Discharge Point 003 in the previous dilution report, the Discharger submitted a revised dilution report to the Regional Water Board for approval. The new calculations based on the same computer model resulted in a new dilution ratio of 150:1 for Discharge Point 003. Regional Water Board staff reviewed the calculations and approved this new dilution ratio (150:1) for Discharge Point 003.

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally. As site-specific water quality data is not available,

in accordance with Table B implementing procedures, Cs equals zero for all pollutants, except the following:

Table 9. Pollutants with Background Seawater Concentrations

Constituent	Background Seawater Concentration (Cs)
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

As examples, WQBELs for copper (no effluent limitation in this Order), chlorine residual, and chronic toxicity are calculated as follows:

Table 10. Ocean Plan Water Quality Objectives (Co) for Copper, Chlorine Residual, and Chronic Toxicity

Constituents	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Average
Copper	3 µg/L	12 µg/L	30 µg/L	--
Chlorine residual	2 µg/L	8 µg/L	60 µg/L	--
Chronic toxicity	N/A	1 TUc	N/A	--

Using the equation, $C_e = C_o + D_m(C_o - C_s)$, effluent limitations are calculated as follows before rounding to two significant digits. All calculations are based on discharge through Discharge Points 001 and 002 and, therefore, a dilution ratio (Dm) of 166:1 is applied.

Copper (not a prescribed effluent limitation in this Order, for showing calculations only)

$$C_e = 3 + 166(3-2) = 169 \text{ µg/L (prescribed as Monthly Average, see Section 3 above)}$$

$$C_e = 12 + 166(12-2) = 1,672 \text{ µg/L (Daily Maximum)}$$

$$C_e = 30 + 166(30-2) = 4,678 \text{ µg/L (Instantaneous Maximum)}$$

Chronic Toxicity

$$C_e = 1 + 166(1-0) = 167 \text{ TUc (Daily Maximum)}$$

Chlorine Residual

$$C_e = 2 + 166(2-0) = 334 \text{ µg/L (prescribed as Monthly Average, see Section 3 above)}$$

$$C_e = 8 + 166(8-0) = 1,336 \text{ µg/L (Daily Maximum)}$$

$$C_e = 60 + 166(60-0) = 10,020 \text{ µg/L (Instantaneous Maximum)}$$

Based on the implementing procedures described above, effluent limitations have been calculated for all Table B pollutants (excluding acute toxicity) from the Ocean Plan and incorporated into this Order when applicable.

Based on the results of the Reasonable Potential Analysis, many WQBELs established in Order No. R4-2006-0042 are not retained in this Order.

7. Whole Effluent Toxicity (WET)

This Order includes water quality-based effluent limitations for acute toxicity and chronic toxicity at Discharge Points 001 through 004. While the 2009 Ocean Plan specifies that the Discharger must conduct chronic toxicity testing for ocean water discharges with minimum initial dilution ratios ranging from 100:1 to 350:1, it also allows the Regional Water Board to require acute toxicity testing to be conducted by that discharger for the protection of beneficial uses of ocean water. Since the applicable dilution ratios (166:1, 150:1, and 115:1) for the JWPCP outfalls are within this range, this Order requires the Discharger to conduct both acute and chronic toxicity tests.

In view of the nature of industrial discharges into the JWPCP sewershed, it is possible that other toxic constituents could be present in the JWPCP effluent, or could have synergistic or additive effects. Also, the JWPCP effluent usually shows a relatively high ammonia concentration and is consistently chlorinated before discharge. Both ammonia and chlorine are very toxic to aquatic organisms. Although RP for acute toxicity is only present for the discharge from Discharge Point 004 that has a dilution ratio of 115:1, the Regional Water Board has determined that the JWPCP discharge may have reasonable potential to exceed the Ocean Plan objective for acute toxicity based on the above discussions. Furthermore, because numeric limitations for certain toxic constituents that did not show RP have been removed, the acute toxicity limitation provides a backstop to preventing the discharge of toxic pollutants in toxic amounts. Therefore, in addition to the daily maximum chronic toxicity effluent limitations, this Order also includes daily maximum acute toxicity effluent limitations and testing protocols consistent with the 2009 Ocean Plan for Discharge Points 001 through 004.

Using the objective of 0.3 TUa for the daily maximum and 10% of the dilution ratio (as the acute toxicity mixing zone), the daily maximum acute toxicity limitation for Discharge Points 001 and 002 is calculated as follows:

$$C_e = C_a + (0.1) D_m (C_a)$$

where

C_e = the effluent daily maximum limit for acute toxicity.

C_a = the concentration (water quality objective) to be met at the edge of the acute mixing zone.

D_m = minimum probable initial dilution expressed as parts seawater per part wastewater (166:1 for Discharge Points 001 and 002) (This equation applies only when $D_m > 24$)

Acute Toxicity Limit for Discharge at Discharge Points 001 and 002

$$C_e = 0.3 + (0.1)(166)(0.3) = 5.28$$

D. Final Effluent Limitations

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. The effluent limitations of the following marine aquatic life toxicants, and non-carcinogenic and carcinogenic human health toxicants have been deleted because they did not show reasonable potential to cause or contribute to an excursion above the respective water quality objectives for: (1) Discharge Points 001 and 002 – radioactivity, aldrin, dieldrin, heptachlor, and heptachlor epoxide; (2) Discharge Point 003 – radioactivity, aldrin, dieldrin, heptachlor, and

heptachlor epoxide; and (3) Discharge Point 004 – radioactivity, aldrin, dieldrin, heptachlor, heptachlor epoxide and 2,4,6-trichlorophenol. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

2. Satisfaction of Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution No. 68-16, Maintaining High Quality Water, which established an antidegradation policy for State and Regional Water Boards. The State Water Board has, in State Water Board Order No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Similarly, CWA sections 402(o)/303(d)(4) and USEPA regulations at 40 CFR part 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the State and federal policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The provisions of this Order/Permit are consistent with the antidegradation policies.

This Order is consistent with State and federal antidegradation policies in that it does not authorize any increase in pollutant mass emission rates, nor does it authorize a relaxation in the manner of treatment of the discharge. Pollutant limit mass emission rates continue to be based on the design flow rate of the treatment plant under the 1997 permit of 385 mgd. Although the design flow rate (monthly average daily dry weather flow) of the treatment plant has increased to 400 mgd, this increase has been accompanied by a significant improvement in the level of effluent treatment necessary to achieve full secondary treatment. As a result, both the quantity of discharged pollutants and quality of the discharge are expected to remain relatively constant or improve during this permit term, consistent with antidegradation policies. In conformance with reasonable potential analysis procedures identified in the Ocean Plan, effluent limitations for some constituents are not carried forth in this Order because there is not presently reasonable potential for the constituents to cause or contribute to an exceedance of water quality standards. Without reasonable potential, there is no longer a need to maintain prior WQBELs under WQBEL regulations, antibacksliding provisions, or antidegradation policies. The accompanying MRP (Attachment E) requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the permit will be reopened to incorporate appropriate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conforms to antidegradation policies and antibacksliding provisions.

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 BOD₅, TSS, and pH. Restrictions on BOD₅, TSS, and pH are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating individual water quality-based effluent limitations for priority pollutants are based on the 2009 Ocean Plan, which was approved by USEPA on October 8, 2010. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and approved by USEPA. Collectively, this Order's restrictions on individual pollutants

are no more stringent than required to implement the requirements of the CWA and applicable water quality standards.

The following tables list the effluent limitations established by this Order. Effluent limitations were determined according to the standards and equations provided in the Ocean Plan (2009). The mass emission limitations established for Discharge Points 001 and 002 have been derived based on the average design flow of 385 mgd in the 1997 JWPCP permit.

Table 11. Summary of Final Effluent Limitations for Discharge Points 001 and 002
(Footnotes are specified on pages F-31 through F-33 of this Fact Sheet)

Discharge Points 001 and 002 (dilution ratio = 166:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--		--	--	
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--		--	--	
pH ^{5, 6, 7}	standard units	6.0 (instantaneous min.) – 9.0 (instantaneous max.)				--	Existing/ Secondary treatment standard/ Ocean Plan
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	75	--	Existing/ Carry-over/ Ocean Plan
	lbs/day	48,200	72,200	144,500	--	--	
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	3.0	--	Existing/ Carry-over/ Ocean Plan
Turbidity ⁷	NTU	75	100	--	225	--	Existing/ Carry-over/ Ocean Plan
Marine Aquatic Life Toxicants⁹							
Arsenic ^{10, 11}	µg/L	--	--	--	--	2.5 ^a	No RP
Cadmium ^{10, 11}	µg/L	--	--	--	--	0.1 ^b	No RP
Chromium (VI) ^{10, 11}	µg/L	--	--	--	--	1.5 ^b	No RP
Copper ^{10, 11, 12}	µg/L	--	--	--	--	4.9 ^a	No RP
Lead ^{10, 11, 12}	µg/L	--	--	--	--	0.4 ^a	No RP
Mercury ^{10, 11}	µg/L	--	--	--	--	0.04 ^c	No RP
Nickel ^{10, 11}	µg/L	--	--	--	--	13 ^c	No RP
Selenium ^{10, 11}	µg/L	--	--	--	--	7.6 ^c	No RP

Discharge Points 001 and 002 (dilution ratio = 166:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Silver ^{10, 11, 12}	µg/L	--	--	--	--	0.2 ^b	No RP
Zinc ^{10, 11, 12}	µg/L	--	--	--	--	37 ^a	No RP
Cyanide ¹¹	µg/L	--	--	--	--	19 ^a	No RP
Chlorine Residual ¹³ (at Manifold Stations)	µg/L	330	--	1,300	10,000	196 ^a	RP by BPJ/ Ocean Plan
	lbs/day	1,060	--	4,170	--	--	
Ammonia as N ¹¹	mg/L	--	--	--	--	40 ^c	No RP
Phenolic compounds (non-chlorinated) ^{11, 14}	µg/L	--	--	--	--	3.6 ^c	No RP
Phenolic compounds (chlorinated) ^{11, 15}	µg/L	--	--	--	--	1.9 ^b	No RP
Endosulfan ^{11, 16}	µg/L	--	--	--	--	0.015 ^b	No RP
HCH ^{11, 17}	µg/L	--	--	--	--	0.015 ^b	No RP
Endrin ¹¹	µg/L	--	--	--	--	0.01 ^b	No RP
Acute toxicity ¹⁸	TUa	--	--	5.3	--	--	RP by BPJ/ Ocean Plan
Chronic toxicity ¹⁹	TUc	--	--	167	--	--	RP by BPJ/ Ocean Plan
Radioactivity							
Gross alpha	pCi/L	--	--	--	--	6.3 ^a	No RP
Gross beta	pCi/L	--	--	--	--	29 ^a	No RP
Human Health Toxicants – Non Carcinogens ⁹							
Acrolein ¹¹	µg/L	--	--	--	--	5.2 ^b	No RP
Antimony ^{10,11}	µg/L	--	--	--	--	9.8 ^c	No RP
Bis(2-chloroethoxy) methane ¹¹	µg/L	--	--	--	--	1.3 ^b	No RP
Bis(2-chloroisopropyl) ether ¹¹	µg/L	--	--	--	--	1.6 ^b	No RP
Chlorobenzene ¹¹	µg/L	--	--	--	--	1.2 ^b	No RP
Chromium (III) ^{10,11}	µg/L	--	--	--	--	3.3 ^a	No RP
Di-n-butyl-phthalate ¹¹	µg/L	--	--	--	--	4.4 ^c	No RP
Dichlorobenzenes ^{11, 20}	µg/L	--	--	--	--	0.5 ^c	No RP
Diethyl phthalate ¹¹	µg/L	--	--	--	--	2.1 ^b	No RP
Dimethyl phthalate ¹¹	µg/L	--	--	--	--	1.9 ^b	No RP
2-Methyl-4,6-dinitrophenol ¹¹	µg/L	--	--	--	--	13 ^b	No RP
2,4-Dinitrophenol ¹¹	µg/L	--	--	--	--	17 ^b	No RP
Ethyl benzene ¹¹	µg/L	--	--	--	--	1.9 ^b	No RP
Fluoranthene ¹¹	µg/L	--	--	--	--	1.9 ^b	No RP
Hexachlorocyclopentadiene ¹¹	µg/L	--	--	--	--	7.5 ^b	No RP
Nitrobenzene ¹¹	µg/L	--	--	--	--	2.2 ^b	No RP
Thallium ^{10, 11}	µg/L	--	--	--	--	0.6 ^b	No RP
Toluene ¹¹	µg/L	--	--	--	--	0.5 ^c	No RP
Tributyltin ¹¹	ng/L	--	--	--	--	0.01 ^b	No RP

Discharge Points 001 and 002 (dilution ratio = 166:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
1,1,1-Trichloroethane ¹¹	µg/L	--	--	--	--	1.8 ^b	No RP
Human Health Toxicants – Carcinogens⁹							
Acrylonitrile ¹¹	µg/L	--	--	--	--	2.7 ^b	No RP
Aldrin ¹¹	µg/L	--	--	--	--	0.0037 ^d	No RP
Benzene ¹¹	µg/L	--	--	--	--	0.75 ^b	No RP
Benzidine	µg/L	0.012	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	0.039	--	--	--	--	
Beryllium ^{10, 11}	µg/L	--	--	--	--	0.15 ^b	No RP
Bis(2-chloroethyl) ether ¹¹	µg/L	--	--	--	--	0.95 ^b	No RP
Bis(2-ethylhexyl) phthalate ¹¹	µg/L	--	--	--	--	17 ^c	No RP
Carbon tetrachloride ¹¹	µg/L	--	--	--	--	1 ^b	No RP
Chlordane ²¹	µg/L	0.0038	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	0.012	--	--	--	--	
Chlorodibromomethane ¹¹	µg/L	--	--	--	--	0.6 ^c	No RP
Chloroform ¹¹	µg/L	--	--	--	--	30 ^c	No RP
DDT ²²	µg/L	0.028	--	--	--	0.015 ^b	Existing/BPJ/ Carry-over/ Ocean Plan
	lbs/day	0.090	--	--	--	--	
1,4-Dichlorobenzene ¹¹	µg/L	--	--	--	--	1 ^c	No RP
3,3'-Dichlorobenzidine	µg/L	1.4	--	--	--	^e	Ocean Plan
	lbs/day	4.5	--	--	--	--	
1,2-Dichloroethane ¹¹	µg/L	--	--	--	--	0.6 ^c	No RP
1,1-Dichloroethylene ¹¹	µg/L	--	--	--	--	1.1 ^b	No RP
Bromodichloromethane ¹¹	µg/L	--	--	--	--	2 ^c	No RP
Dichloromethane ¹¹	µg/L	--	--	--	--	3 ^c	No RP
1,3-Dichloropropene ¹¹	µg/L	--	--	--	--	0.65 ^b	No RP
Dieldrin ¹¹	µg/L	--	--	--	--	0.005 ^b	No RP
2,4-Dinitrotoluene ¹¹	µg/L	--	--	--	--	1 ^b	No RP
1,2-Diphenylhydrazine ¹¹	µg/L	--	--	--	--	0.65 ^b	No RP
Halomethanes ^{11, 23}	µg/L	--	--	--	--	1 ^c	No RP
Heptachlor ¹¹	µg/L	--	--	--	--	0.005 ^b	No RP
Heptachlor epoxide ¹¹	µg/L	--	--	--	--	0.0033 ^d	No RP
Hexachlorobenzene	µg/L	0.035	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	0.11	--	--	--	--	
Hexachlorobutadiene ¹¹	µg/L	--	--	--	--	0.7 ^b	No RP
Hexachloroethane ¹¹	µg/L	--	--	--	--	0.7 ^b	No RP
Isophorone ¹¹	µg/L	--	--	--	--	0.65 ^b	No RP
N-Nitrosodimethylamine ¹¹	µg/L	--	--	--	--	0.7 ^b	No RP

Discharge Points 001 and 002 (dilution ratio = 166:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
N-Nitrosodi-N-propylamine ¹¹	µg/L	--	--	--	--	0.6 ^b	No RP
N-Nitrosodiphenylamine ¹¹	µg/L	--	--	--	--	0.75 ^b	No RP
PAHs ^{11,24}	µg/L	--	--	--	--	0.95 ^b	No RP
PCBs ²⁵	µg/L	0.0032	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	0.010	--	--	--	--	
TCDD equivalents ²⁶	pg/L	0.65	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	2.1x 10 ⁻⁶	--	--	--	--	
1,1,2,2-Tetrachloroethane ¹¹	µg/L	--	--	--	--	0.4 ^b	No RP
Tetrachloroethylene ¹¹	µg/L	--	--	--	--	20 ^a	No RP
Toxaphene	µg/L	0.035	--	--	--	^e	Existing/ Carry-over/ Ocean Plan
	lbs/day	0.11	--	--	--	--	
Trichloroethylene ¹¹	µg/L	--	--	--	--	0.85 ^b	No RP
1,1,2-Trichloroethane ¹¹	µg/L	--	--	--	--	0.45 ^b	No RP
2,4,6-Trichlorophenol ¹¹	µg/L	--	--	--	--	0.6 ^b	No RP
Vinyl chloride ¹¹	µg/L	--	--	--	--	1.3 ^b	No RP

Table 12. Summary of Final Effluent Limitations for Discharge Point 003
(Footnotes are specified on pages F-31 through F-33 of this Fact Sheet.)

Discharge Point 003 (dilution ratio = 150:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--	--	--	--	
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--	--	--	--	
pH ^{5,67}	standard units	6.0 (instantaneous min.) – 9.0 (instantaneous max.)				--	Existing/ Secondary treatment standard/ Ocean Plan

Discharge Point 003 (dilution ratio = 150:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	Basis
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	75	--	Existing/ Carry-over/ Ocean Plan
	lbs/day	48,200	72,200	144,500	--	--	
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	3.0	--	Existing/ Carry-over/ Ocean Plan
Turbidity ⁷	NTU	75	100	--	225	--	Existing/ Carry-over/ Ocean Plan
Marine Aquatic Life Toxicants ⁹							
Chlorine Residual ¹³	µg/L	300	--	1,200	9,100	--	RP by BPJ/ Ocean Plan
Acute toxicity ¹⁸	TUa	--	--	4.8	--	--	RP by BPJ/ Ocean Plan
Chronic toxicity ¹⁹	TUc	--	--	151	--	--	RP by BPJ/ Ocean Plan
Human Health Toxicants – Carcinogens ⁹							
Benzidine	µg/L	0.010	--	--	--	--	Existing/ Carry-over/ Ocean Plan
Chlordane ²¹	µg/L	0.0034	--	--	--	--	Existing/ Carry-over/ Ocean Plan
DDT ²²	µg/L	0.026	--	--	--	--	Existing/BPJ/ Carry-over/ Ocean Plan
3,3'-Dichlorobenzidine	µg/L	1.2	--	--	--	--	Ocean Plan
Hexachlorobenzene	µg/L	0.032	--	--	--	--	Existing/ Carry-over/ Ocean Plan
PCBs ²⁵	µg/L	0.0029	--	--	--	--	Existing/ Carry-over/ Ocean Plan
TCDD equivalents ²⁶	pg/L	0.59	--	--	--	--	Existing/ Carry-over/ Ocean Plan
Toxaphene	µg/L	0.032	--	--	--	--	Existing/ Carry-over/ Ocean Plan

Table 13. Summary of Final Effluent Limitations for Discharge Point 004
(Footnotes are specified on pages F-31 through F-33 of this Fact Sheet.)

Discharge Point 004 (dilution ratio = 115:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Major Wastewater Constituents							
Biochemical Oxygen Demand 5-day @ 20°C ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--		--	--	
Total Suspended Solids ⁶	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day	96,300	144,500	--	--	--	
	% removal	85	--		--	--	
pH ^{5,6,7}	standard units	6.0 (instantaneous min.) – 9.0 (instantaneous max.)				--	Existing/ Secondary treatment standard/ Ocean Plan
Oil and Grease ⁷	mg/L	15 ⁸	22.5 ⁸	45 ⁸	75	--	Existing/ Carry-over/ Ocean Plan
	lbs/day	48,200	72,200	144,500	--	--	
Settleable Solids ⁷	ml/L	0.5 ⁸	0.75 ⁸	1.5 ⁸	3.0	--	Existing/ Carry-over/ Ocean Plan
Turbidity ⁷	NTU	75	100	--	225	--	Existing/ Carry-over/ Ocean Plan
Marine Aquatic Life Toxicants⁹							
Chlorine Residual ¹³	µg/L	230	--	930	7,000	--	RP by BPJ/ Ocean Plan
Acute toxicity ¹⁸	TUa	--	--	3.8	--	--	RP/ Ocean Plan
Chronic toxicity ¹⁹	TUc	--	--	116	--	--	RP by BPJ/ Ocean Plan
Human Health Toxicants – Carcinogens⁹							
Benzidine	µg/L	0.008	--	--	--	--	Existing/ Carry-over/ Ocean Plan
Chlordane ²¹	µg/L	0.0027	--	--	--	--	Existing/ Carry-over/ Ocean Plan
DDT ²²	µg/L	0.020	--	--	--	--	Existing/BPJ Carry-over/ Ocean Plan
3,3'-Dichlorobenzidine	µg/L	0.93	--	--	--	--	Ocean Plan

Discharge Point 004 (dilution ratio = 115:1)							
Parameter	Units	Effluent Limitations ^{1,3}				Performance Goals ²	
		Average Monthly	Average Weekly	Maximum Daily ⁴	Instantaneous Maximum ⁵	Average Monthly	
Hexachlorobenzene	µg/L	0.024	--	--	--	--	Existing/ Carry-over/ Ocean Plan
PCBs ²⁵	µg/L	0.0022	--	--	--	--	Existing/ Carry-over/ Ocean Plan
TCDD equivalents ²⁶	pg/L	0.45	--	--	--	--	Existing/ Carry-over/ Ocean Plan
Toxaphene	µg/L	0.024	--	--	--	--	Existing/ Carry-over/ Ocean Plan

Footnotes (Tables 11, 12 and 13)

1. Effluent limitations for conventional, nonconventional, and toxic pollutants were calculated based on effluent limitations in *Table A* and water quality objectives in *Table B* of the Ocean Plan. The minimum dilution ratios used to calculate effluent limitations for nonconventional and toxic pollutants based on water quality objectives in *Table B* of the Ocean Plan are 166:1 (i.e., 166 parts seawater to one part effluent) for Discharge Points 001 and 002, 150:1 for Discharge Point 003 and 115:1 for Discharge Point 004, respectively.

The daily mass emission calculations are based on the average design flow rate of 385 million gallons per day (mgd) specified in the 1997 Joint Water Pollution Control Plant (JWPCP) permit according to the Ocean Plan equation: lbs/day = 0.00834 x Ce (effluent concentration, ug/L) x Q (flow rate, mgd). During storm events when flow exceeds the dry weather design capacity, the mass emission rate limits shall not apply. Only the concentration limits shall apply.

2. The performance goals are based upon the actual performance data (May 2006 to August 2010) of the JWPCP and are specified only as an indication of the treatment efficiency of the plant. They are not considered effluent limitations or standards for the treatment plant. JWPCP shall make best efforts to maintain, if not improve, the effluent quality at the level of these performance goals. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted. Please refer to Fact Sheet for procedures.

3. See section VII of this Order and Attachment A for definition of terms.

4. The maximum daily effluent concentration limitation shall apply to flow-weighted 24-hour composite samples. It may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of the instability of the constituents.

5. The instantaneous maximum (minimum) effluent limitations shall apply to grab sample results.

6. The effluent limitations are based on secondary treatment standards, 40 CFR 133.102.

7. Based on Ocean Plan Table A effluent limitations.

8. Effluent limitation is the same as that in Order No. R4-2006-0042 and is more stringent than the limitation specified in the Ocean Plan (Antibacksliding Policy).

9. Effluent limitations for these constituents are based on Ocean Plan Table B objectives using initial dilution ratios of 166:1 (i.e., 166 parts of seawater to 1 part effluent) for Discharge Points 001 and 002, 150:1 for Discharge Point 003, and 115:1 for Discharge Point 004, respectively.
10. Represents total recoverable metal value.
11. These constituents did not show reasonable potential to exceed Ocean Plan Table B objectives; therefore, no numerical water quality-based effluent limits are prescribed.
12. These constituents are pollutants of concern identified by the Santa Monica Bay Restoration Plan that are causing or could cause deterioration of designated beneficial uses in Santa Monica Bay. Mass emission performance caps were set in Order No. 97-090. In this Order, 12-month average mass emission benchmarks have been established in the MRP (Attachment E) for these pollutants of concern to serve same purpose.
13. These total chlorine residual limits shall only apply to continuous discharge exceeding two hours.

For intermittent discharges not exceeding two hours, water quality objectives for total chlorine residual shall be determined through the use of the following equation:

$$\log y = -0.43(\log x) + 1.8$$

where: y = the water quality objective (in $\mu\text{g/L}$) to apply when chlorine is being discharged;
 x = the duration of uninterrupted chlorine discharge in minutes.

For intermittent discharges not exceeding two hours, the applicable total chlorine residual limit (daily maximum) shall then be calculated using the above calculated water quality objective according to procedures outlined in Section III.C.4.a of the 2009 Ocean Plan. The minimum dilution ratios shall be 166:1 for Discharge Points 001 and 002, 150:1 for Discharge Point 003, and 115:1 for Discharge Point 004.

14. Nonchlorinated phenolic compounds shall mean the sum of Phenol, 2,4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 2-Methyl-4,6-dinitrophenol.
15. Chlorinated phenolic compounds mean the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.
16. Endosulfan shall mean the sum of endosulfan-alpha, endosulfan-beta, and endosulfan sulfate.
17. HCH shall mean the sum of alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.
18. Expressed as Acute Toxicity Units (TUa)

$$\text{TUa} = 100/\text{LC50}$$

Where:

Lethal Concentration, 50 Percent (LC50) is expressed as the estimate of the percent effluent concentration that causes death in 50% of the test population, in the time period prescribed by the toxicity test, as required by this permit.

When it is not possible to measure the LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$\text{TUa} = \log (100-s)/1.7$$

Where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

19. Expressed as Chronic Toxicity Units (TUc)

$$\text{TUc} = 100/\text{NOEC}$$

where:

NOEC (No Observed Effect Concentration) is expressed as the maximum percent effluent that causes no observable effect on a test organism as determined by the result of a critical life stage toxicity test, as required by this permit.

20. Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.
21. Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma and oxychlordane.
22. DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
23. Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).
24. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]-fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1, 2, 3-cd]pyrene, phenanthrene and pyrene.
25. PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
26. TCDD equivalents shall mean the sum of the concentration of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

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

- a. Numerical effluent quality performance goals are derived statistically using data reported by the Discharger from May 2006 to August 2010. Please refer to Fact Sheet (Attachment F) for calculation procedures.
- b. More than 80 percent of the monitoring data for these constituents were not detected. Performance goals are set at five times (for carcinogens and marine aquatic life toxicants) or ten times (for noncarcinogens) the method detection limits in the 2010 monitoring reports.
- c. For this pollutant, the maximum detected effluent concentration (MDEC) from May 2006 to August 2010 is prescribed as the performance goal. Please refer to Fact Sheet (Attachment F) for procedures.
- d. These constituents were determined to have no reasonable potential to exceed the respective water quality objectives. However, the calculated performance goals are greater than the respective calculated Ocean Plan effluent limitations. Therefore, calculated effluent limitations are prescribed as the performance goals.
- e. These constituents were determined to have reasonable potential to exceed the respective water quality objectives. Therefore, effluent limitations are prescribed for these constituents. Since the calculated performance goals are greater than the respective effluent limitations, no performance goals are prescribed.

E. Performance Goals

Chapter III, Section F.1, of the 2009 Ocean Plan allows the Regional Water Board to establish more restrictive water quality objectives and effluent limitations than those set forth in the Ocean Plan as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A final report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force, September 30, 1993*) that was adopted by the Regional Water Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order. This approach is consistent with the antidegradation policy in that it requires the Discharger to maintain its treatment level and effluent quality, recognizing normal variations in treatment efficiency and sampling and analytical techniques. However, this approach does not address substantial changes in treatment plant operations that could significantly affect the quality of the treated effluent.

While performance goals were previously placed in many POTW permits in the Region, they have not been continued for discharges that are to inland surface waters. For inland surface waters, the California Toxics Rule (40 CFR 131.38) has resulted in effluent limits as stringent as many performance goals. However, the Ocean Plan allows for significant dilution, and the continued use of performance goals serves to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies.

The performance goals are based upon the actual performance of JWPCP and are specified only as an indication of the treatment efficiency of the facility. Performance goals are intended to minimize pollutant loading (primarily for toxics), while maintaining the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered as enforceable limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted.

Procedures for the Determination of Performance Goals

1. For constituents that have been routinely detected in the effluent (at least 20 percent detectable data), performance goals are based on the one-sided, upper 95 percent confidence bound ($UCB_{95/95}$) of the 95th percentile of May 2006 through August 2010 performance data using the RPA protocol contained in the 2009 Ocean Plan. Effluent data are assumed lognormally distributed. Performance goals are calculated according to the equation $C_{PG} = C_o + D_m(C_o - C_s)$ in the Ocean Plan and by setting $C_o = UCB_{95/95}$.
 - a. If the maximum detected effluent concentration is greater than the calculated performance goal, then the calculated performance goal is used as the performance goal.
 - b. If the maximum detected effluent concentration is less than the calculated performance goal, the maximum detected effluent concentration is used as the performance goal.

For example, the performance goal for arsenic at Discharge Points 001 and 002 is calculated as follows:

Arsenic

$$C_o = UCB_{95/95} = 2.9973; \quad D_m = 166; \quad C_s = 3$$
$$C_{PG} = \text{Performance Goal} = 2.9973 + 166(2.9973-3) = 2.5491 \mu\text{g/L}$$

2. For constituents where monitoring data have consistently shown nondetectable levels (less than 20 percent detectable data), performance goals are set at five times (for carcinogens and marine aquatic life toxicants) or ten times (for noncarcinogens) the method detection limit (MDL) reported in the 2010 Annual Report. However, if the maximum detected effluent concentration is less than the calculated value based on MDL, the maximum detected effluent concentration is used as the performance goal.
3. For constituents with no effluent limitations, if the performance goal derived from above steps exceeds the respective calculated Ocean Plan effluent limitation, then the calculated effluent limitation is prescribed as the performance goal for that constituent.
4. For constituents with effluent limitations, if the performance goal derived from above steps exceeds the respective effluent limitation, then the performance goal is not prescribed.

The performance goals for Discharge Points 001 and 002 are prescribed in this Order. The listed performance goals are not enforceable effluent limitations or standards. However, the Discharger shall maintain, if not improve, its treatment efficiency. Any exceedance of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance occurs three times or more in five successive monitoring periods or any single exceedance occurs for aldrin and heptachlor, the Discharger shall submit a written report to the Regional Water Board on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation, if necessary.

F. Mass Emission Benchmarks

To address relative changes in toxic pollutant loadings from the JWPCP discharge to the marine environment during the five-year permit term, and to collect information that can be used to determine compliance with State and federal antidegradation requirements when a subsequent permit is re-issued to the JWPCP, 12-month average mass emission benchmarks have been established for effluent discharged through Discharge Points 001 and 002. The mass emission benchmarks (in metric tons per year; MT/yr) for the JWPCP discharge were determined using November 2002 through August 2005 effluent concentrations and the Discharger's projected end-of-permit (2006) flow of 338 MGD (Q). If more than 80 percent of effluent data were nondetect, the pollutant concentration (C_e) associated with the reporting limit reported in the 2004 Annual Report was used to calculate the mass emission benchmark. If 20 percent or more of effluent data were detected, the pollutant concentration (C_e) associated with the 95th percentile (at upper 95 percent confidence bound) was used to calculate the mass emission benchmark. The following equation is used for the calculation:

$$\text{MT/yr} = (C_e \text{ ug/L}) \times (Q \text{ } 10^6 \text{ gal/day}) \times (3.785 \text{ L/gal}) \times (365 \text{ days/yr}) \times (1 \text{ MT}/10^{12} \text{ ug})$$

These mass emission benchmarks are not enforceable WQBELs. They may be re-evaluated and revised during the five-year permit term.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan and applicable TMDLs.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Part 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, 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 Monitoring and Reporting Program for this facility.

A. Influent Monitoring

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program

Influent monitoring in this Order follows the influent monitoring requirements in the previous Order.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit limitations and conditions. Monitoring requirements are specified in the Monitoring and Reporting Program (Attachment E). This Order requires compliance with the Monitoring and Reporting Program, and is based on 40 CFR parts 122.48, 122.44(i), and 122.41(j). The Monitoring and Reporting Program is a standard requirement in almost all NPDES permits (including this Order) issued by the Regional Water Board or USEPA. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board and USEPA policies. The Monitoring and Reporting Program also contains sampling program specific for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

The effluent monitoring in this Order follows the effluent monitoring requirements in the previous Order.

Discharge Points 001 and 002: JWPCP has been operating in full secondary treatment mode since January 2003. The reasonable potential analyses on the monitoring data reported during the last permit term did not show RP for any parameter (except acute toxicity for Discharge Point 004) and only had inconclusive results for seven parameters (benzidine, chlordane, hexachlorobenzene, PCBs, TCDD equivalents, 3,3'-dichlorobenzene, and toxaphene). Therefore, this Order retains all monitoring frequency requirements in the previous Order. The minimum monitoring frequency is quarterly. However, some metals require monthly monitoring because they were consistently detected in the effluent. In addition, to facilitate interpretation of sediment/fish tissue data and TMDL development, PCB congeners are continuously required to be analyzed annually in this Order.

This Order prescribes both acute and chronic toxicity limits for the discharge from Discharge Points 001 and 002, thus it requires monitoring for both acute and chronic toxicity.

Discharge Points 003 and 004: These two outfalls are used for hydraulic relief during times of heavy rains or unusual high flow. The minimum monitoring frequency is once per discharge, but no more than one analysis need be done during the required monitoring period that is similar to the monitoring requirements for Discharge Points 001 and 002. Since both acute toxicity and chronic toxicity effluent limitations are prescribed for these outfalls, both acute and chronic toxicity testings are required for these two outfalls.

Toxicity Monitoring (Discharge Points 001, 002, 003, and 004): Since both chronic and acute toxicity effluent limitations are prescribed for these outfalls, both acute and chronic toxicity monitoring are required for these four outfalls. However, to be representative of the effluent discharged to the ocean, this Order retains the current practice of dechlorination of the effluent sample prior to toxicity testing. The Discharger has been chlorinating JWPCP effluent since the 1960's. At that time, only primary treatment was provided and the outfalls were located in shallower water and closer to shore, with lower dilution, so there were instances of high shoreline bacteria counts due to the discharge of JWPCP effluent. Although the Discharger has constructed upgrades to JWPCP and its outfalls that reduced its impact on the shoreline, chlorination of JWPCP effluent has continued to provide an additional degree of public health protection.

Chlorine is added to the effluent as it leaves the treatment facility and enters the 6-mile tunnels that convey it to a manifold on White Point. The effluent then travels through the Dischargers' 1.5-mile long outfall structure before being released to the ocean. During conveyance, the chlorine reacts with organic matter in the wastewater and in the conveyance structure. Due to practical considerations, analysis of chronic and acute toxicity is conducted on treated effluent before it is released to the tunnels. Because samples are collected before the chlorine in the effluent has had an opportunity to react with any organic matter, the samples are dechlorinated prior to analysis for toxicity. This allows the actual toxicity of the samples, exclusive of any toxicity caused by the temporary presence of chlorine, to be determined.

However, since chlorine is such a strong toxicant, separate standards have been established under the Ocean Plan to specifically address chlorine residual. The Discharger is required to conduct daily grab sample testing for chlorine residual at the last accessible point prior to discharge, the manifold at White Point, which is still prior to the 1.5-mile outfall structure. At the manifold, although there is typically a small chlorine residual present, the effluent fully meets the Ocean Plan chlorine residual standards. Since chlorine residual is monitored and reported daily, any exceedance of the protective chlorine residual limit will be identified and reported so dechlorination of the effluent sample prior to toxicity testing will not result in a failure to report chlorine residual-related toxicity.

C. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Ocean Plan and Basin Plan. The conceptual framework for the receiving water monitoring program has three components that comprise a range of spatial and temporal scales: (a) core monitoring; (b) regional monitoring; and (c) special studies.

- a. Core monitoring is local in nature and focused on monitoring trends in quality and effects of the point source discharge. This includes effluent monitoring as well as many aspects of receiving

water monitoring. In the monitoring program described below these core components are typically referred to as local monitoring.

- b. Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all contaminant sources, and protection of beneficial uses. The final design of regional monitoring programs is developed by means of steering committees and technical committees comprised of participating agencies and organizations, and is not specified in this permit. Instead, for each regional component, the degree and nature of participation of the Discharger is specified. For this permit, these levels of effort are based upon past participation of the Discharger in regional monitoring programs.

The Discharger shall participate in regional monitoring activities coordinated by the SCCWRP or any other appropriate agency approved by the Regional Water Board. The procedures and timelines for the Regional Water Board approval shall be the same as detailed for special studies, described below.

- c. Special studies are focused on refined questions regarding specific effects or development of monitoring techniques and are anticipated to be of short duration and/or small scale, although multiyear studies also may be needed. Questions regarding effluent or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core or regional monitoring, may be pursued through special studies. These studies are by nature ad hoc and cannot be typically anticipated in advance of the five-year permit cycle.

The Discharge and the Regional Water Board shall consult annually to determine the need for special studies. Each year, the Discharger shall submit proposals for any proposed special studies to the Regional Water Board by December 31, for the following year's monitoring effort (July through June). The following year, detailed scopes of work for proposals, including reporting schedules, shall be presented at a Spring Regional Water Board meeting, to obtain the Regional Water Board approval and to inform the public. Upon approval by the Regional Water Board, the Discharger shall implement its special study or studies. (Note: The CEC and Nutrient special studies have different deadlines for submitting a Workplan.)

- d. The receiving water monitoring program contains the following components:
 - i. Shoreline/Inshore/Offshore Microbiological Monitoring: Shoreline monitoring is designed to address the question: "Are densities of bacteria in water contact zones below those that ensure public safety?" The inshore and offshore monitoring addresses the question: "Are Ocean Plan compliance standards for bacteriological contamination being met?"
 - ii. Nearshore/Offshore Water Quality Monitoring: This monitoring addresses the question: "Are Ocean Plan and Basin Plan objectives for physical and chemical parameters being met?" This monitoring also contributes to a regional understanding of seasonal patterns in nearshore water column structure.
 - iii. Benthic Sediments Monitoring: The local trends survey addresses the question: "Are benthic conditions under the influence of the discharge changing over time?" The regional

survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in soft-bottom habitats within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure?

- iv. Fish and Invertebrate Monitoring: The local survey addresses the question: "Is the health of demersal fish and epibenthic invertebrate communities in the vicinity of the discharge changing over time?" The regional survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in demersal fish and epibenthic communities within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure? The local bioaccumulation trends survey addresses the questions: "Is fish tissue contamination in the vicinity of the outfall changing over time?" The local seafood survey addresses the questions: 1) Where seafood consumption advisories exist locally, do tissue concentrations of contaminants continue to exceed the Advisory Tissue Concentration?, and 2) What are the tissue contaminant trends relative to the Advisory Tissue Concentration in other species not currently subject to local consumption advisories? The regional seafood safety survey addresses the question: "Are seafood tissue levels within the Southern California Bight below levels that ensure public safety?" A regional predator risk survey addresses the question: "Are fish body burdens within the Southern California Bight a health risk to higher trophic levels in the marine food web?"
- v. Kelp Bed Monitoring: This regional survey addresses the question: "Is the extent of kelp beds in the Southern California Bight changing over time and are some beds changing at rates different than others?"

D. Other Monitoring Requirements

1. Outfall and Diffuser Inspection

The annual inspection is required to ensure a periodic assessment of the integrity of the outfall pipes and ballasting system.

2. Biosolids and Sludge Management

Attachment H establishes monitoring and reporting requirements for the storage, handling and disposal practices of biosolids/sludge generated from the operation of this POTW.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR part 122.41, and additional conditions applicable to specified categories of NPDES permits in accordance with 40 CFR part 122.42, are provided in Attachment D to the Order/Permit. 40 CFR part 122.41(a) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions are incorporated into this Order/Permit expressly.

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR part 123.25. The Regional Water Board may reopen the Permit to modify conditions and requirements. Causes for modifications can include, but are not limited to, the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Ocean Plan and Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Treatment Plant Capacity

The treatment plant capacity study required by this Order shall serve as an indicator for the Regional Water Board regarding the Facility's increasing hydraulic capacity and growth in the service area.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP)

CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR 122.26 that established requirements for storm water discharges under an NPDES permit. To facilitate compliance with federal regulations, on November 1991, the State Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 as State Board Order No. 97-03-DWQ. JWPCP is covered under this general permit and an updated SWPPP is required.

b. Spill Clean-up Contingency Plan (SCCP)

Since spills or overflows are a common event in the POTW and its service areas, this Order requires the Discharger to review and update, if necessary, SCCP after each incident. The Discharger shall ensure that the up-to-date SCCP is readily available to the sewage system personnel at all times and that the sewage personnel are familiar with it.

c. Pollutant Minimization Program (PMP)

This provision is based on the requirements of section III.C.9 of the Ocean Plan.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR part 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities

a. Sludge (Biosolids) Requirements

Section 405 of the CWA and implementing regulations at 40 CFR 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This permit contains sewage sludge/biosolids requirements that are applicable to the Discharger. The Discharger is also responsible for compliance with WDRs

and NPDES permits for the generation, transport and application of biosolids issued by the State Water Board, other Regional Water Boards, Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the JWPCP biosolids will be transported and applied.

b. Pretreatment Requirements for POTWs

Section 402 of the CWA and implementing regulations at 40 CFR part 403 establish pretreatment requirements for POTWs which receive pollutants from non-domestic users. This permit contains pretreatment program requirements that are applicable to the Discharger.

c. Spill Reporting Requirements

This permit established a reporting protocol for how different types of spills, overflows, and bypasses of raw or partially treated sewage from the POTW shall be reported to regulatory agencies.

In addition, the State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The amended General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The Discharger's collection system is part of the POTW that is subject to this Order. The Discharger must comply with both the General Order and this permit.

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 the Joint Water Pollution Control Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the newspapers and by letter mailed to interested parties.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to 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 should be received at the Regional Water Board offices by 5:00 p.m. on **June 15, 2011**.

C. Public Hearing

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

Date: September 1, 2011
Time: 9:00 am
Location: Metropolitan Water District, Board Room
700 N. Alameda Street
Los Angeles, California

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

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

D. Nature of Hearing

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

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Board must be directed to staff.

E. Parties to the Hearing

The following are the parties to this proceeding:

1. The applicant/permittee

Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business June 15, 2011. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

G. Hearing Procedure

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

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

H. Waste Discharge Requirements Petitions

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

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

I. Information and Copying

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

J. Register of Interested Persons

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

K. Additional Information

Requests for additional information or questions regarding this Order should be directed to Jau Ren Chen at (213) 576-6656.

ATTACHMENT G – GENERIC TOXICITY REDUCTION EVALUATION (TRE) WORKPLAN (POTW)

1. Information and Data Acquisition

a. Operations and performance review

- i. NPDES permit requirements
 - (1) Effluent limitations
 - (2) Special conditions
 - (3) Monitoring data and compliance history
- ii. POTW design criteria
 - (1) Hydraulic loading capacities
 - (2) Pollutant loading capacities
 - (3) Biodegradation kinetics calculations/assumptions
- iii. Influent and effluent conventional pollutant data
 - (1) Biochemical oxygen demand (BOD₅)
 - (2) Chemical oxygen demand (COD)
 - (3) Suspended solids (SS)
 - (4) Ammonia
 - (5) Residual chlorine
 - (6) pH
- iv. Process control data
 - (1) Primary sedimentation - hydraulic loading capacity and BOD₅ and SS removal
 - (2) Activated sludge - Food-to-microorganism (F/M) ratio, mean cell residence time (MCRT), mixed liquor suspended solids (MLSS), sludge yield, and BOD₅ and COD removal
 - (3) Secondary clarification - hydraulic and solids loading capacity, sludge volume index and sludge blanket depth
- v. Operations information
 - (1) Operating logs
 - (2) Standard operating procedures
 - (3) Operations and maintenance practices
- vi. Process sidestream characterization data
 - (1) Sludge processing sidestreams
 - (2) Tertiary filter backwash
 - (3) Cooling water
- vii. Combined sewer overflow (CSO) bypass data
 - (1) Frequency
 - (2) Volume
- viii. Chemical coagulant usage for wastewater treatment and sludge processing
 - (1) Polymer
 - (2) Ferric chloride
 - (3) Alum

- b. POTW influent and effluent characterization data**
 - i. Toxicity
 - ii. Priority pollutants
 - iii. Hazardous pollutants
 - iv. SARA 313 pollutants
 - v. Other chemical-specific monitoring results
- c. Sewage residuals (raw, digested, thickened and dewatered sludge and incinerator ash) characterization data**
 - i. EP toxicity
 - ii. Toxicity Characteristic Leaching Procedure (TCLP)
 - iii. Chemical analysis
- d. Industrial waste survey (IWS)**
 - i. Information on IUs with categorical standards or local limits and other significant non-categorical IUs
 - ii. Number of IUs
 - iii. Discharge flow
 - iv. Standard Industrial Classification (SIC) code
 - v. Wastewater flow
 - (1) Types and concentrations of pollutants in the discharge
 - (2) Products manufactured
 - vi. Description of pretreatment facilities and operating practices
 - vii. Annual pretreatment report
 - viii. Schematic of sewer collection system
 - ix. POTW monitoring data
 - (1) Discharge characterization data
 - (2) Spill prevention and control procedures
 - (3) Hazardous waste generation
 - x. IU self-monitoring data
 - (1) Description of operations
 - (2) Flow measurements
 - (3) Discharge characterization data
 - (4) Notice of sludge loading
 - (5) Compliance schedule (if out of compliance)
 - xi. Technically based local limits compliance reports
 - xii. Waste hauler monitoring data manifests
 - xiii. Evidence of POTW treatment interferences (i.e., biological process inhibition)

ATTACHMENT H

BIOSOLIDS/SLUDGE MANAGEMENT

(Note: "Biosolids" refers to non-hazardous sewage sludge, as defined at 40 CFR 503.9. Sewage sludge that is hazardous, as defined at 40 CFR 261, must be disposed of in accordance with the Resource Conservation and Recovery Act (RCRA).)

I. General Requirements

- A. All biosolids generated by the Discharger at the Joint Water Pollution Control Plant (JWPCP) shall be used or disposed of in compliance with applicable portions of Clean Water Act and Safe Drinking Water Act, including: 40 CFR 503—for biosolids that are land applied, placed in a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated; 40 CFR 258—for biosolids disposed of in a municipal solid waste landfill (with other materials); and 40 CFR 257—for all biosolids use and disposal practices not covered under 40 CFR 258 or 503.

40 CFR 503, Subpart B (land application), sets forth requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation. 40 CFR 503, Subpart C (surface disposal), sets forth requirements for biosolids that are placed on land for the purpose of disposal.

The Discharger is responsible for assuring that all biosolids produced at JWPCP are used or disposed of in accordance with these rules, whether the Discharger uses or disposes of the biosolids itself, or transfers the biosolids to another party for further treatment, use, or disposal. The Discharger is responsible for informing subsequent preparers, applicators, and disposers of the requirements that they must meet under these rules.

- B. Duty to Mitigate: The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.
- C. No biosolids shall be allowed to enter wetlands or other waters of the United States.
- D. Biosolids treatment, storage, use or disposal shall not contaminate groundwater.
- E. Biosolids treatment, storage, use or disposal shall not create a nuisances such as objectionable odors or flies.
- F. The Discharger shall assure that haulers transporting biosolids off-site for treatment, storage, use, or disposal take all necessary measures to keep the biosolids contained. Trucks hauling biosolids shall be cleaned as necessary after loading and after unloading, so as to have no biosolids on the exterior of the truck or wheels. Trucks hauling biosolids out of Los Angeles County shall be tarped. All haulers must have spill clean-up procedures. Trucks hauling biosolids shall not be used for hauling food or feed crops after unloading the biosolids unless the Discharger submits a hauling description, to be approved by USEPA, describing how trucks will be thoroughly cleaned prior to adding food or feed.

- G. If biosolids are stored for over two years from the time they are generated by the Discharger or their contractor, the permittee must ensure compliance with all the requirements for surface disposal under 40 CFR 503 Subpart C, or must submit a written notification to EPA with the information in 503.20 (b), demonstrating the need for longer temporary storage.
- H. Any biosolids treatment, disposal, or storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and the highest tidal stage which may occur.
- I. There shall be adequate screening at the plant headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass and other inert objects with a diameter greater than 3/8 inches are removed.
- J. Sewage sludge containing more than 50 mg/kg PCBs shall be disposed of in accordance with 40 CFR 761.
- K. The Discharger shall ensure compliance with the requirements in State Water Board Order No. 2004-10-DWQ, "General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural and Land Reclamation Activities" for those sites receiving the Discharger's biosolids which a Regional Water Board has placed under this general order, or the requirements in individual Waste Discharge Requirements (WDRs) issued by a Regional Water Board for sites receiving the Discharger's biosolids, where the Regional Water Board has named the Discharger as a responsible party. The Discharger shall require biosolids management agents/contractors to comply with the above-mentioned requirements for those sites where the biosolids management agent/contractor is the named responsible party pursuant to the general order or individual WDRs.
- L. The Discharger shall comply if named as a party, or require its biosolids management agents/contractors to comply if they are the named party, with WDRs issued by Regional Water Boards to which jurisdiction the biosolids are transported and applied, and with the State of Arizona's biosolids rule for biosolids transported to Arizona for treatment and/or use.

II. Inspection and Entry:

The Regional Water Board, Arizona Department of Environmental Quality (ADEQ), USEPA, or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger, directly or through contractual arrangements with their biosolids management contractors, to:

- A. Enter upon all premises where biosolids produced by the Discharger are treated, stored, used, or disposed of, either by the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal,
- B. Have access to and copy any records that must be kept by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal, under the conditions of this Order or 40 CFR 503.

- C. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in biosolids treatment, storage, use, or disposal by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal.

III. Monitoring:

- A. Biosolids shall be monitored for the following constituents, at the frequency stipulated in Table 1 of 40 CFR 503.16: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, organic nitrogen, ammonia nitrogen, and total solids. If biosolids are removed for use or disposal on a routine basis, sampling should be scheduled at regular intervals throughout the year. If biosolids are stored for an extended period prior to use or disposal, sampling may occur at regular intervals, or samples of the accumulated stockpile may be collected prior to use or disposal, corresponding to the tons accumulated in the stockpile over that period.

Monitoring shall be conducted using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), or as otherwise required under 40 CFR 503.8(b). All results must be reported on a 100% dry weight basis and records of all analyses must state on each page of the analytical results whether the reported results are expressed on an "as-is" or a "100% dry weight" basis.

- B. The Discharger shall sample biosolids twice per year for the pollutants listed under CWA section 307(a) using best practicable detection limits.

For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan, which addresses the number and location of sampling points, and collect representative samples.

Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for Organic-N, ammonium-N, and nitrate-N at the frequencies required above.

- C. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and Federal facilities with >5 mgd influent flow shall sample biosolids for pollutants listed under Section 307(a) of the Clean Water Act (as required in the pretreatment section of the permit for POTWs with pretreatment programs.) Class 1 facilities and Federal facilities with >5 mgd influent flow shall test dioxins/dibenzofurans using a method detection limit of <1 pg/g during their next sampling period if they have not done so within the past 5 years and once per 5 years thereafter.

- D. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance with California Law.

IV. Pathogen and Vector Control

- A. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed under 40 CFR 503.32.

- B. Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels pathogen reduction levels, or ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Further Reduce Pathogens" or one of the "Processes to Significantly Reduce Pathogens", the Discharger shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliform and/or pathogens, samples must be collected at the frequency specified in Table 1 of 40 CFR 503.16. If Class B is demonstrated using fecal coliform, at least seven grab samples must be collected during each monitoring period and a geometric mean calculated from these samples.

The following holding times between sample collection and analysis shall not be exceeded:

- fecal coliform – 6 hours when cooled to <4 degrees C (extended to 24 hours when cooled to <4 degrees C for Class A composted, Class B aerobically digested, and Class B anaerobically digested sample types);
 - Salmonella spp. Bacteria – 24 hours when cooled to <4 degrees C (unless using Method 1682- 6 hours when cooled to <10 degrees C);
 - enteric viruses – 6 hours when cooled to <10 degrees C (extended to 24 hours when cooled to <4 degrees C or 2 weeks when frozen);
 - helminth ova – 6 hours when cooled to <10 degrees C (extended to one month when cooled to <4 degrees C).
- C. For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in under 40 CFR 503.33 (b).

V. Surface Disposal

If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

VI. Landfill Disposal

Biosolids placed in a municipal landfill shall be tested by the Paint Filter Test (SW-846, Method 9095) at the frequency specified in Table 1 of 40 CFR 503.16, or more often if necessary to demonstrate that there are no free liquids.

VII. Notifications

The Discharger either directly or through contractual arrangements with their biosolids management contractors shall comply with the following notification requirements:

- A. Notification of non-compliance:

The Discharger shall notify USEPA and the State (for both Discharger and use or disposal site) of any non-compliance within 24 hours, if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall notify USEPA and the State of the non-compliance in writing within 5 working days of becoming aware of the non-

compliance. The Discharger shall require their biosolids management contractors to notify USEPA and the State of any non-compliance within these same time-frames.

B. Interstate Notification

If biosolids are shipped to another State or Tribal Land, the Discharger shall send 60 days prior notice of the shipment to the permitting authorities in the receiving State or Tribal Land, and the USEPA Regional Office.

C. Land Application Notification

Prior to using any biosolids from this facility (other than composted biosolids) at a new or previously unreported site, the Discharger shall notify USEPA and the State. This notification shall include a description and topographic map of the proposed site(s), names and addresses of the applicator and site owner, and a listing of any State or local permits which must be obtained. It shall also include a description of the crops or vegetation to be grown, proposed loading rates, and a determination of agronomic rates.

Within a given monitoring period, if any biosolids do not meet the applicable metals concentration limits specified under 40 CFR 503.13, then the Discharger (or its contractor) must pre-notify USEPA, and determine the cumulative metals loading at that site to date, as required by 40 CFR 503.12.

D. Surface Disposal Notification

Prior to disposal at a new or previously unreported site, the Discharger shall notify USEPA and the State. The notice shall include a description and topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator and site owner, and any State or local permits. It shall also describe procedures for ensuring grazing and public access restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

VIII. Reporting

The Discharger shall furnish this Regional Water Board with a copy of any report submitted to USEPA, State Water Board or other Regional Water Board, with respect to municipal sludge or biosolids. The Discharger shall submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator and the State by February 19 of each year for the period covering the previous calendar year. The report shall include:

- A. The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.
- B. Results of all pollutant monitoring required under Monitoring above. Results must be reported on a 100% dry weight basis.
- C. Demonstrations of pathogen and vector attraction reduction methods, as required under 40 CFR 503.17 and 503.27, and certifications.
- D. Names, mailing addresses, and street addresses of persons who received biosolids for storage,

further treatment, disposal in a municipal landfill, deep well injection, or other use or disposal method not covered above, and tonnage delivered to each.

E. The following information must be submitted by the Discharger, unless the Discharger requires its biosolids management contractors to report this information directly to the USEPA Region 9 Biosolids Coordinator.

1. For land application sites:

- Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner.
- Volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen.
- Crops planted, dates of planting and harvesting.
- For biosolids exceeding 40 CFR 503.13 Table 3 metals concentrations, the locations of sites where the biosolids were applied and cumulative metals loading at the sites to date.
- Certifications of management practices at 40 CFR 503.14.
- Certifications of site restrictions at 40 CFR 503(b)(5).

2. For surface disposal sites:

- Locations of sites, site operator and site owner, size of parcel on which biosolids were disposed.
- Results of any required groundwater monitoring.
- Certifications of management practices at 40 CFR 503.24.

3. For closed sites, the date of site closure and certifications of management practices for three years following site closure.

F. All Reports shall be submitted to:

Regional Biosolids Coordinator
U.S. Environmental Protection Agency
CWA Compliance Office (WTR-7)
75 Hawthorne Street
San Francisco, CA 94105-3901

Biosolids Program Coordinator
Arizona Department of Environmental Quality
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, AZ 85007

ATTACHMENT I

PRETREATMENT PROGRAM REQUIREMENTS

1. The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR 403, including any subsequent revisions to that part. Where 40 CFR 403 or subsequent revisions place mandatory actions upon the Discharger, as Control Authority, but do not specify a timetable for completion, the Discharger shall complete the mandatory actions within 180 days of the effective date of this Order, or the effective date of the revisions to 40 CFR 403, whichever is later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the USEPA, the Regional Water Board, or other appropriate parties as provided in the CWA and/or the California Water Code. The Regional Water Board or USEPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements, as provided in the CWA and/or the California Water Code.
2. The Discharger shall implement and enforce in its entire service area, including contributing jurisdictions, its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order. The Discharger shall enforce the requirements promulgated pursuant to CWA sections 307(b), 307(c), 307(d), and 402(b) with timely, appropriate, and effective enforcement actions. The Discharger shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements, or, in the case of a new nondomestic user, upon commencement of discharge.
3. The Discharger shall perform the pretreatment functions required by 40 CFR 403, including, but not limited to:
 - a. Implement the necessary legal authorities as required by 40 CFR 403.8(f)(1);
 - b. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;
 - c. Implement the programmatic functions as required by 40 CFR 403.8(f)(2); and
 - d. Provide the requisite funding and personnel to implement the pretreatment program as required by 40 CFR 403.8(f)(3).
4. By **March 1** of each year, the Discharger shall submit an annual report to the Regional Water Board and USEPA describing its pretreatment activities over the previous calendar year (January through December 31). In the event the Discharger is not in compliance with any condition or requirement of this Order, or any pretreatment compliance inspection/audit requirements, the Discharger shall include the reasons for noncompliance and state how and when it will comply with such conditions and requirements. The annual report shall contain, but not be limited to, the following information:
 - a. A summary of analytical results from representative flow-proportioned 24-hour composite sampling of the Discharger's influent and effluent for those pollutants USEPA has identified under CWA section 307(a) which are known or suspected to be discharged by nondomestic users. Representative grab sampling shall be employed for pollutants that may degrade after collection, or where the use of automatic sampling equipment may otherwise result in unrepresentative sampling. Such pollutants include, but are not limited to, cyanide, oil and grease, volatile organic compounds, chlorine, phenol, sulfide, pH, and temperature. This will

consist of an annual full priority pollutant scan in August. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the MRP (Attachment E). The Discharger shall also provide influent and effluent monitoring data for non-priority pollutants, which the Discharger believes may be causing or contributing to interference or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed elsewhere in this Order. Wastewater sampling and analysis shall be performed in accordance with 40 CFR 136.

- b. A discussion of upset, interference, or pass through, if any, at the Discharger's facilities, which the Discharger knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible nondomestic user(s). The discussion shall also include a review of the applicable local pollutant limitations to determine whether any additional limitations or changes to existing limitations, are necessary to prevent pass-through, interference, or noncompliance with sludge disposal requirements.
- c. An updated list of the Discharger's SIUs including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The Discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations.
- d. The Discharger shall characterize the compliance status of each SIU by providing a list or table for the following:

Name of SIU;

Category, if subject to categorical standards;

Type of wastewater treatment or control processes in place;

Number of samples taken by SIU during the year;

Number of samples and inspections by Discharger during the year;

For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;

A list of pretreatment standards (categorical or local) violated during the year, or any other violations;

SIUs in significant noncompliance (SNC) as defined at 40 CFR 403.8(f)(2)(viii), at any time during the year;

A summary of enforcement actions or any other actions taken against SIUs during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing SIUs into compliance.

- e. A brief description of any programs the Discharger implements to reduce pollutants from nondomestic users not classified as SIUs;
- f. A brief description of any significant changes in operating the pretreatment program which differ from the previous year, including, but not limited to, changes in the program's

administrative structure, local limits, monitoring program, legal authority, enforcement policy, funding, and staffing levels;

- g. A summary of the annual pretreatment program budget, including the cost of pretreatment program functions and equipment purchases;
 - h. A summary of activities to involve and inform the public of the pretreatment program, including a copy of the newspaper notice, if any, required by 40 CFR 403.8(f)(2)(vii);
 - i. A description of any changes in sludge disposal methods;
 - j. A discussion of any concerns not described elsewhere in the annual report.
5. Any substantial modifications to the approved Pretreatment Program, as defined in 40 CFR 403.18(b), shall be submitted in writing to the Regional Water Board and USEPA and shall not become effective until Regional Water Board and USEPA approval is obtained.

6. Semiannual SIU Status Report

The Discharger shall submit a semiannual SIU noncompliance status report to the Regional Water Board, State Water Board, and USEPA. The report shall cover the period of January 1 through June 30 and shall be submitted no later than September 1. (All required information for semiannual SIU noncompliance status reporting covering the period July 1 through December 31 shall be included in the annual report that is due March 1.) The report shall contain:

- a. The names and addresses of all SIUs which violated any discharge or reporting requirements during the semi-annual reporting period;
 - b. A description of the violations, including whether the discharge violations were for categorical standards or local limits;
 - c. A description of the enforcement actions or other actions taken to remedy the noncompliance;
 - d. The status of enforcement actions or other actions taken in response to SIU noncompliance identified in previous reports.
7. The Discharger is required to describe in the annual report any programs the POTW implements to reduce pollutants from non-domestic sources.

8. Nonindustrial Source Control and Public Education Programs

The Discharger shall continue to develop and implement its nonindustrial source control program and public education program. The purpose of these programs is to reduce nonindustrial toxic pollutants and pesticides into the POTW. These programs shall be periodically reviewed and addressed in the annual report.

9. Signatory Requirements and Report Submittal

- a. The semi-annual and annual reports must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for the overall operation of the POTW. Any person signing these reports must make the following certification (40 CFR 403.6(a)(2)(ii)):

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.

- b. An original copy of the Annual Report and Semi-Annual Report must be sent to the Pretreatment Program Coordinator of the Regional Water Board and the duplicate copies of the Reports must be sent to USEPA through the following addresses:

Information and Technology Unit
Attn: Pretreatment Program Coordinator
California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Pretreatment Program
U.S. Environmental Protection Agency, Region 9
CWA Compliance Office (WTR-7)
75 Hawthorne Street
San Francisco, CA 94105-3901