California Regional Water Quality Control Board

Los Angeles Region

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ORDER NO. R4-2006-XXXX
NPDES NO. CA0053813

WASTE DISCHARGE REQUIREMENTS FOR THE
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(Joint Water Pollution Control Plant)
DISCHARGE TO THE PACIFIC OCEAN

R E V I S E D

T E N T A T I V E

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

Table 1. Discharger Information

Discharger	**County Sanitation Districts of Los Angeles County**
Name of Facility	**Joint Water Pollution Control Plant, Carson**
Facility Address	**24501 South Figueroa Street**
	Carson, CA 90745
	Los Angeles County

The discharge by the County Sanitation Districts of Los Angeles County 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
Serial No. 001	**Secondary treated wastewater**	**33 º, 41', 21" N**	**118 º, 19', 00" W**	**Pacific Ocean**
Serial No. 002	**Secondary treated wastewater**	**33 º, 42', 03" N**	**118 º, 20', 17" W**	**Pacific Ocean**
Serial No. 003	**Secondary treated wastewater**	**33 º, 42', 05" N**	**118 º, 20', 20" W**	**Pacific Ocean**
Serial No. 004	**Secondary treated wastewater**	**33 º, 41', 20" N**	**118 º, 19', 40" W**	**Pacific Ocean**

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	**April 6, 2006**
This Order shall become effective on:	**May, 25 2006**
This Order shall expire on	**May, 24 2011**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a major discharge.	
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.	

IT IS HEREBY ORDERED, that Order No. 97-090 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, Jonathan Bishop, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 6, 2006.

_____

Jonathan S. Bishop, Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 4, LOS ANGELES REGION

ORDER NO. R4-2006-XXX
NPDES NO. CA0053813

WASTE DISCHARGE REQUIREMENTS FOR THE
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(Joint Water Pollution Control Plant)
DISCHARGE TO THE PACIFIC OCEAN

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I. FACILITY INFORMATION

The following Discharger is authorized to discharge in` accordance with the conditions set forth in this Order:

Table 4. Facility Information

Discharger	**County Sanitation Districts of Los Angeles County**
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) 699-7411 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**

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II. FINDINGS

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

A. Background. The County Sanitation Districts of Los Angeles County (hereinafter Discharger or Districts) is currently discharging under Order No. 97-090 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0053813, which was adopted on June 16, 1997. The Discharger submitted a Report of Waste Discharge, dated November 9, 2001**,** 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 May 6, 2002**.**

Compliance with Consent Decree. On June 8, 1994, the Districts 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 Districts to construct additional secondary treatment facilities and achieve compliance with full secondary treatment at JWPCP by December 31, 2002. On January 7, 2003, the Districts informed the Regional Water Board that JWPCP had achieved full secondary treatment on November 8, 2002.

B. Facility Description. The Discharger owns and operates JWPCP. The secondary treated effluent, after traveling approximately 6 miles through tunnels, is discharged from Discharge Serial Nos. 001 and 002 to the Pacific Ocean, a water of the United States, at Whites Point within the Palos Verdes Peninsula Sub-Watershed that is part of the Santa Monica Bay Watershed.

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 dry weather average design treatment capacity of 400 million gallons per day (mgd) and a peak design capacity of 540 mgd. For the period from January 2003 (JWPCP in full secondary treatment mode) to August 2005, effluent discharge flow from JWPCP has averaged 322 mgd with a maximum daily flow of 492 mgd on February 21, 2005. JWPCP receives discharges from more than 1200 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 onsite. The digested solids are screened, and dewatered using scroll centrifuges. The dewatered cake contains approximately 25% solids (Class B biosolids). JWPCP generates approximately 11,000 wet tons of Class B biosolids per week. More than half of the biosolids are managed by composting operations in Riverside and Kern County. One quarter of the biosolids are sent to southwestern Arizon for air drying and direct land application. The remaining biosolids are lime stabilized for Class A land application in Kern County, incinerated in a cement kiln in San Bernardino County, and co-disposed with municipal solid waste in Los Angeles County.

Digester gas (containing approximately 65% methane), produced from anaerobic digestion of sludge, is used onsite to fuel a combined cycle power plant (gas turbines followed by boilers and a steam turbine) which generates 22 MW of electricity for plant equipment and steam for digester heating. The power plant allows JWPCP to be essentially self-sufficient with respect to its energy requirements and even produces surplus electricity for export to Southern California Edison Co. sufficient to power approximately 1,500 homes.

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

Discharge Points. JWPCP has fifteen discharge/bypass points (Discharge Serial Nos. 001 through 015). Four outfalls (Discharge Serial Nos. 001 through 004) are located at Whites Point, off the Palos Verdes Peninsula. Discharge Serial Nos. 001 and 002 are routinely used for discharge of treated wastewater. Discharge Serial No. 003 is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. Discharge Serial No. 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
Serial No. 001	**Whites Point 120-inch ocean outfall** This outfall routinely discharges approximately 65% of the effluent from the JWPCP. It discharges south of the shoreline off Whites 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.
Serial No. 002	**Whites Point 90-inch ocean outfall** This outfall routinely discharges approximately 35% of the effluent from the JWPCP. It discharges southwest of the shoreline off Whites 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.
Serial No. 003	**Whites Point 72-inch 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 Whites Point shoreline between Discharge Points 001 and 002 and about 160 ft below the ocean surface. The outfall is about 6500 ft long and connect to one of three legs of a y-shaped diffuser upstream of the y-intersection. Each leg is approximately 200 ft long.
Serial No. 004	**Whites Point 60-inch ocean outfall** This outfall is used as a standby to provide additional hydraulic relief during the heaviest flow. When used, it discharges off the Whites Point shoreline between

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	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 Serial Nos. 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 Serial Nos. 005, 007-012, 014, and 015).

Joint Outfall System. JWPCP is part of a Joint Outfall System with 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 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. There are approximately five million people in the Joint Outfall System 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 (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 of the CWC for discharges that are not subject to regulation under CWA section 402.

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available environmental information. Attachments F, which contain background information and rationale for Order requirements, is hereby incorporated into this Order and constitute part of the Findings for this Order. Attachments A through J and Appendices are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

F. Technology-based Effluent Limitations. The Code of Federal Regulations (CFR) at 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR 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 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) 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 USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

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H. Water Quality Control Plans. The Regional Water Board adopted a revised *Water Quality Control Plan, Los Angeles Region*: *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assigns the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to the Pacific Ocean (Point Vicente Beach, Royal Palms Beach, and Whites Point Beach) in the Palos Verdes Peninsula are as follows:

Table 6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
Serial Nos. 001, 002, 003, and 004	Point Vicente Beach, Royal Palms Beach, and Whites Point Beach	Existing: 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). Potential: 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)	Existing: 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).
	Offshore Zone	Existing: 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).

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.

On July 25, 2003, USEPA approved the State's 2002 list of impaired waterbodies prepared pursuant to CWA 303(d). The 303(d)list identifies waterbodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality-limited waterbodies).

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

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I. 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 Office of Administrative Law and USEPA Region 9 and became effective on July 15, 2003. In these TMDLs, waste load allocations (WLAs) are expressed as the number of sample days at a shoreline monitoring site that may exceed the single sample targets for total coliform, fecal coliform and enterococcus identified under "Numeric Target" in the TMDLs. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection at beaches. The final shoreline compliance point for the WLAs in the TMDLs is the wave wash where there is a freshwater outlet (i.e., publicly owned storm drain or natural creek) to the beach, or at ankle depth at beaches without a freshwater outlet. The Districts, as the owner of JWPCP, are 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.

J. Thermal Plan. 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) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters.

K. CWA 303(d) Listed Pollutants. Santa Monica Bay (Offshore and Nearshore) is on the 303(d) list for the following pollutants/stressors, from point and non-point sources: chlordane (sediment), DDT (tissue & sediment, centered on Palos Verdes Shelf), PAHs (sediment), PCBs (tissue & sediment), debris, sediment toxicity, and fish consumption advisory. The 303(d) list also includes the Pacific Ocean shoreline (Point Vicente Beach, Royal Palms Beach, and Whites Point Beach) within the Palos Verdes Hydrologic Subarea as impaired for beach closures. Both DDT (Fish consumption advisory for DDT) and PCBs (Fish consumption advisory for PCBs) are also listed as impairments for Royal Palms Beach, and Whites Point Beach. TMDLs for DDT, PCBs and PAHs have not been scheduled. A TMDL for chlordane is scheduled for 2006.

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 and was conveyed to JWPCP. The DDT was ultimately discharged to the ocean through the Whites Point outfalls. PCB's were also discharged from the Whites 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 Whites Point on the Palos Verdes Shelf. USEPA has considered the DDT/PCB contaminated area as a superfund site. It has been investigating the feasibility of various technologies for remediating the contaminated sediments. In August 2000, the USEPA initiated a pilot capping project in which they placed clean sediment over approximately 135 acres (1%) of the contaminated ocean floor. Currently, the results of the capping project are being evaluated by USEPA and their contractors to determine whether capping is an appropriate remediation approach.

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L. 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, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table 7. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
Serial Nos. 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.

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

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

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 (BOD), total suspended solids (TSS), and hydrogen ion concentration (pH). Restrictions on BOD, TSS and pH are specified in federal regulations as discussed in Finding F, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

O. Antidegradation Policy. Section 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 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet

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(Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.

P. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. 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. Monitoring and Reporting. Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. Standard and Special Provisions. Standard Provisions, which in accordance with 40 CFR Sections 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

S. Performance Goals. Chapter III, Section F.2, of the 2001 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) and 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).

T. 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 Serial Nos. 001 and 002 (see MRP – Attachment E). These mass

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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).

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

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

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III. DISCHARGE PROHIBITIONS

A. Wastes discharged from Discharge Serial Nos. 001 through 004 shall be limited to secondary treated wastewater.

B. Discharges not specifically authorized under this Order are prohibited.

C. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in Standard Provision I.G. of Attachment D.

D. The discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited.

E. The discharge of sludge digester supernatant and centrate directly to the ocean, or into a waste stream that discharges to the ocean without further treatment is prohibited.

F. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.

IV. DISCHARGE SPECIFICATIONS AND EFFLUENT LIMITATIONS

A. Discharge Specifications

The discharge of effluent through all discharge points shall comply with the following:

1. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

2. 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.

3. Waste effluents from the Facility shall be discharged in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment.

4. The locations of waste discharge from the Facility shall assure that:

   a. Pathogenic organism and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body contact sports.

   b. Natural water quality conditions are not altered in areas designated as being areas of special biological significance or areas that existing marine laboratories use as a source of seawater.

5. Maximum protection is provided to the marine environment.

6. The monthly average effluent dry weather discharge flow rate from the Facility shall not exceed 400 mgd.

B. Effluent Limitations and Performance Goals
(for footnotes, see pages 20 to 23)

1. The effluent limitations for Discharge Serial Nos. 001, 002, 003 and 004 are given below. The discharge of secondary treated effluent shall maintain compliance with the effluent limitations at Discharge Serial Nos. 001, 002, 003 and 004, with compliance measured at Monitoring Location M-001 and Manifold stations as described in the attached Monitoring and Reporting Program (Attachment E). The discharge of an effluent with constituents in excess of effluent limitations is prohibited.

2. The performance goals for Discharge Serial Nos. 001 and 002 are also given 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 persists in <u>three</u> successive monitoring periods, 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.

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a. Effluent Limitations for Major Wastewater Constituents for the discharge of effluent at **Discharge Serial Nos. 001, 002, 003 and 004**

(1) **Major Wastewater Constituents**

Discharge Serial Nos. 001, 002, 003 and 004

Parameter	Units	Effluent Limitations [1]				
		Average Monthly	Average Weekly	Maximum Daily [2]	Instantaneous Minimum [3]	Instantaneous Maximum [3]
Biochemical Oxygen Demand 5-day @ 20°C [4]	mg/L	30	45	--	--	--
	lbs/day	96,300	144,500	--	--	--
Total Suspended Solids [4]	mg/L	30	45	--	--	--
	lbs/day	96,300	144,500	--	--	--
PH [4, 6]	standard units	--	--	--	6.0	9.0
Oil and Grease	mg/L	15 [5]	22.5 [5]	45 [5]	--	75 [6]
	lbs/day	48,200	72,200	144,500	--	--
Settleable Solids	ml/L	0.5 [5]	0.75 [5]	1.5 [5]	--	3.0 [6]
Turbidity [6]	NTU	75	100	--	--	225

b. Effluent Limitations and Performance Goals for Toxic Materials for the discharge of effluent at **Discharge Serial Nos. 001 and 002.** (Initial dilution ratio = 166:1)

(1) **Marine Aquatic Life Toxicants**

Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]			Performance Goals [8]
		Average Monthly	Maximum Daily [2]	Instantaneous Maximum [3]	Average Monthly
Arsenic [9]	µg/L	[10]	[10]	[10]	2.0 [11]
Cadmium [9]	µg/L	[10]	[10]	[10]	1 [12]
Chromium (hexavalent) [9, 15]	µg/L	[10]	[10]	[10]	330 [14]
Copper [9, 16]	µg/L	[10]	[10]	[10]	12 [12]
Lead [9, 16]	µg/L	[10]	[10]	[10]	11 [12]
Mercury [9]	µg/L	[10]	[10]	[10]	2.5 [13]
Nickel [9]	µg/L	[10]	[10]	[10]	37 [12]

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Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]			Performance Goals [8]
		Average Monthly	Maximum Daily [2]	Instantaneous Maximum [3]	Average Monthly
Selenium [9]	µg/L	[10]	[10]	[10]	11 [11]
Silver [9, 16]	µg/L	[10]	[10]	[10]	12 [12]
Zinc [9, 16]	µg/L	[10]	[10]	[10]	32 [12]
Cyanide	µg/L	[10]	[10]	[10]	8 [12]
Chlorine Residual [18]	µg/L	330	1,300	10,000	300 [12]
	lbs/day	1,060	4,170	--	--
Ammonia as N	mg/L	[10]	[10]	[10]	36 [12]
Phenolic compounds [19] (non-chlorinated)	µg/L	[10]	[10]	[10]	250 [13]
Phenolic compounds [20] (chlorinated)	µg/L	[10]	[10]	[10]	167 [14]
Endosulfan [21]	µg/L	[10]	[10]	[10]	0.5 [13]
HCH [22]	µg/L	[10]	[10]	[10]	0.01 [12]
Endrin	µg/L	[10]	[10]	[10]	0.05 [13]
Acute toxicity [23]	TUa	---	5.3	---	---
Chronic toxicity [24]	TUc	---	167	---	---
Radioactivity [25]					
Gross alpha	PCi/L	N/A	15	N/A	N/A
Gross beta	PCi/L	N/A	50	N/A	N/A
Combined Radium-226 & Radium-228	PCi/L	N/A	5.0	N/A	N/A
Tritium	PCi/L	N/A	20,000	N/A	N/A
Strontium-90	PCi/L	N/A	8.0	N/A	N/A
Uranium	PCi/L	N/A	20	N/A	N/A

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(2) Human Health Toxicants – Non Carcinogens

Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]	Performance Goals [8]
		Average Monthly	Average Monthly
Acrolein	µg/L	[10]	100 [13]
Antimony [9]	µg/L	[10]	2.6 [12]
Bis(2-chloroethoxy) methane	µg/L	[10]	250 [13]
Bis(2-chloroisopropyl) ether	µg/L	[10]	100 [13]
Chlorobenzene	µg/L	[10]	5 [13]
Chromium (III) [9]	µg/L	[10]	22 [12]
Di-n-butyl-phthalate	µg/L	[10]	500 [13]
Dichlorobenzenes [26]	µg/L	[10]	100 [13]
Diethyl phthalate	µg/L	[10]	100 [13]
Dimethyl phthalate	µg/L	[10]	100 [13]
2-Methyl-4,6-dinitrophenol	µg/L	[10]	250 [13]
2,4-Dinitrophenol	µg/L	[10]	250 [13]
Ethyl benzene	µg/L	[10]	5 [13]
Fluoranthene	µg/L	[10]	50 [13]
Hexachlorocyclopentadiene	µg/L	[10]	250 [13]
Nitrobenzene	µg/L	[10]	50 [13]
Thallium [9]	µg/L	[10]	100 [13]
Toluene	µg/L	[10]	0.5 [12]
Tributyltin	µg/L	[10]	0.026 [12]
1,1,1-Trichloroethane	µg/L	[10]	5 [13]

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(3) Human Health Toxicants – Carcinogens

Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]	Performance Goals [8]
		Average Monthly	Average Monthly
Acrylonitrile	µg/L	[10]	17 [14]
Aldrin	µg/L	0.0037	[17]
	lbs/day	0.012	---
Benzene	µg/L	[10]	2.5 [13]
Benzidine	µg/L	0.012	[17]
	lbs/day	0.039	---
Beryllium [9]	µg/L	[10]	5 [13]
Bis(2-chloroethyl) ether	µg/L	[10]	7.5 [14]
Bis(2-ethylhexyl) phthalate	µg/L	[10]	20 [12]
Carbon tetrachloride	µg/L	[10]	2.5 [13]
Chlordane [27]	µg/L	0.0038	[17]
	lbs/day	0.012	---
Chlorodibromomethane	µg/L	[10]	2 [12]
Chloroform	µg/L	[10]	34 [12]
DDT [28]	µg/L	0.028	[17]
	lbs/day	0.090	---
1,4-Dichlorobenzene	µg/L	[10]	25 [13]
3,3'-Dichlorobenzidine	µg/L	[10]	0.7 [13]
1,2-Dichloroethane	µg/L	[10]	2.5 [13]
1,1-Dichloroethylene	µg/L	[10]	2.5 [13]
Bromodichloromethane	µg/L	[10]	6 [12]
Dichloromethane	µg/L	[10]	12 [11]
1,3-Dichloropropene	µg/L	[10]	2.5 [13]
Dieldrin	µg/L	0.0067	[17]
	lbs/day	0.022	---

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Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]	Performance Goals [8]
		Average Monthly	Average Monthly
2,4-Dinitrotoluene	µg/L	[10]	125 [13]
1,2-Diphenylhydrazine	µg/L	[10]	25 [13]
Halomethanes [29]	µg/L	[10]	2.6 [12]
Heptachlor	µg/L	0.0084	[17]
	lbs/day	0.027	---
Heptachlor epoxide	µg/L	0.0033	[17]
	lbs/day	0.011	---
Hexachlorobenzene	µg/L	0.035	[17]
	lbs/day	0.11	---
Hexachlorobutadiene	µg/L	[10]	25 [13]
Hexachloroethane	µg/L	[10]	25 [13]
Isophorone	µg/L	[10]	25 [13]
N-Nitrosodimethylamine	µg/L	[10]	125 [13]
N-Nitrosodi-N-propylamine	µg/L	[10]	63 [14]
N-Nitrosodiphenylamine	µg/L	[10]	25 [13]
PAHs [30]	µg/L	[10]	0.06 [12]
PCBs [31]	µg/L	0.0032	[17]
	lbs/day	0.010	---
TCDD equivalents [32]	**pg/L**	0.65	[17]
	lbs/day	2.1×10^{-6}	---
1,1,2,2-Tetrachloroethane	µg/L	[10]	2.5 [13]
Tetrachloroethylene	µg/L	[10]	7 [12]
Toxaphene	µg/L	0.035	[17]
	lbs/day	0.11	---
Trichloroethylene	µg/L	[10]	2.5 [13]
1,1,2-Trichloroethane	µg/L	[10]	2.5 [13]
2,4,6-Trichlorophenol	µg/L	[10]	48 [14]

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Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations [1, 7]	Performance Goals [8]
		Average Monthly	Average Monthly
Vinyl chloride	µg/L	[10]	2.5 [13]

c. Effluent Limitations for Toxic Materials for the discharge of effluent at **Discharge Serial No. 003.** (Initial dilution ratio = 150:1)

(1) **Marine Aquatic Life Toxicants**

Discharge Serial No. 003

Parameter	Units	Effluent Limitations [1, 7]		
		Average Monthly	Maximum Daily [2]	Instantaneous Maximum [3]
Chlorine Residual [18]	µg/L	300	1200	9100
Chronic toxicity [24]	TUc	---	151	---
Radioactivity [25]				
Gross alpha	PCi/L	N/A	15	N/A
Gross beta	PCi/L	N/A	50	N/A
Combined Radium-226 & Radium-228	PCi/L	N/A	5.0	N/A
Tritium	PCi/L	N/A	20,000	N/A
Strontium-90	PCi/L	N/A	8.0	N/A
Uranium	PCi/L	N/A	20	N/A

(2) **Human Health Toxicants – Carcinogens**

Discharge Serial No. 003

Parameter	Units	Effluent Limitations [1, 7]
		Average Monthly
Aldrin	µg/L	0.0033
Benzidine	µg/L	0.010
Chlordane [27]	µg/L	0.0034
DDT [28]	µg/L	0.026
Dieldrin	µg/L	0.0060

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Discharge Serial No. 003

Parameter	Units	Effluent Limitations [1, 7]
		Average Monthly
Heptachlor	µg/L	0.0076
Heptachlor epoxide	µg/L	0.0030
Hexachlorobenzene	µg/L	0.032
PCBs [31]	µg/L	0.0029
TCDD equivalents [32]	**pg/L**	0.59
Toxaphene	µg/L	0.032

d. Effluent Limitations for Toxic Materials for the discharge of effluent at **Discharge Serial No. 004.** (Initial dilution ratio = 115:1)

(1) **Marine Aquatic Life Toxicants**

Discharge Serial No. 004

Parameter	Units	Effluent Limitations [1, 7]		
		Average Monthly	Maximum Daily [2]	Instantaneous Maximum [3]
Chlorine Residual [18]	µg/L	230	930	7,000
Chronic toxicity [24]	TUc	---	116	---
Radioactivity [25]				
Gross alpha	PCi/L	N/A	15	N/A
Gross beta	PCi/L	N/A	50	N/A
Combined Radium-226 & Radium-228	PCi/L	N/A	5.0	N/A
Tritium	PCi/L	N/A	20,000	N/A
Strontium-90	PCi/L	N/A	8.0	N/A
Uranium	PCi/L	N/A	20	N/A

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(2) Human Health Toxicants – Carcinogens

Discharge Serial No. 004

Parameter	Units	Effluent Limitations [1, 7]
		Average Monthly
Aldrin	µg/L	0.0026
Benzidine	µg/L	0.008
Chlordane [27]	µg/L	0.0027
DDT [28]	µg/L	0.020
Dieldrin	µg/L	0.0046
Heptachlor	µg/L	0.0058
Heptachlor epoxide	µg/L	0.0023
Hexachlorobenzene	µg/L	0.024
PCBs [31]	µg/L	0.0022
TCDD equivalents [32]	pg/L	0.45
Toxaphene	µg/L	0.024
2,4,6-Trichlorophenol	µg/L	34

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Footnotes for Effluent Limitations and Performance Goals

[1] 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 maximum daily effluent concentration limit 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.

[3] The instantaneous maximum (minimum) shall apply to grab sample results.

[4] Effluent limits are based on secondary treatment standards, 40 CFR 133.102.

[5] Effluent limit is the same as that in Order No. 97-090 and is more stringent than the limit specified in the 2001

Ocean Plan. (Antibackliding Policy)

[6] Limits are based on Table A effluent limitations in the 2001 Ocean Plan.

[7] Effluent limitations for these constituents are based on Ocean Plan objectives using initial dilution ratios of 166, 150, and 115 parts of seawater to 1 part effluent for Discharge Serial Nos. 001 and 002, Discharge Serial No. 003, and Discharge Serial No. 004, respectively. However, for the calculation of the acute toxicity limitation, only 10% of the initial dilution ratio is used. Effluent limitations for radioactivity are not dependent on the initial dilution ratio with respect to each discharge point.

[8] The performance goals are based upon the actual performance data (November 2002 to August 2005) of JWPCP and are specified only as an indication of the treatment efficiency of the plant. They are not considered as 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.

[9] Concentration expressed as total recoverable.

[10] These constituents did not show reasonable potential to exceed Ocean Plan objectives, therefore, no numerical water quality based effluent limitations are prescribed.

[11] Numerical effluent quality performance goals are derived statistically using data reported by the Discharger from November 2002 to August 2005 when JWPCP was operating in full secondary treatment mode. Please refer to Fact Sheet (Attachment F) for calculation procedures.

[12] For the pollutant, the maximum detected effluent concentration (MDEC) from November 2002 to August 2005 is prescribed as the performance goal. . Please refer to Fact Sheet (Attachment F) for procedures.

[13] 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 minimum reporting limits in the 2004 annual report.

[14] These constituents were determined to have no reasonable potential to exceed the respective water quality objective. However, the calculated performance goal is greater than the respective calculated Ocean Plan effluent limit. Therefore, effluent limit is prescribed as the performance goal.

[15] The Discharger has the option to meet the hexavalent chromium performance goal with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium performance goal, it will be considered an exceedance unless an analysis has been made for hexavalent chromium in a replicate/split sample and the result has been shown to be in compliance with the hexavalent chromium performance goal.

[16] 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-monthe average mass emission benchmarks have been established in the MRP (Attachment E) for these pollutants of concern to serve same purpose.

[17] These constituents were determined to have reasonable potential to exceed the respective water quality objective. Therefore, effluent limits are prescribed for these constituents. Since the calculated performance goal is higher than the respective effluent limit, no performance goal is prescribed.

[18] 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:

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

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where: y = the water quality objective (in µg/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.3.a of the 2001 Ocean Plan. The minimum dilution ratios shall be 166:1 for Discharge Serial Nos. 001 and 002, 150:1 for Discharge Serial No. 003, and 115:1 for Discharge Serial No. 004.

[19] Nonchlorinated phenolic compounds shall mean the sum of Phenol, 2,4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol.

[20] Chlorinated phenolic compounds mean the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.

[21] Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

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

[23] 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.

[24] 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 test organisms as determined by the result of a critical life stage toxicity test, as required by this permit.

[25] Effluent limits for radioactivity are based on Maximum Contaminant Levels (MCLs) specified in Title 22, Chapter 15, Article 5, Section 64443, California Code of Regulations.

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

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

[28] 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.

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

[30] 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.

[31] PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-l232, Aroclor-1242, Aroclor-l248, Aroclor-1254 and Aroclor-1260.

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[32] 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
l,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDF	0.001

3. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

4. 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 [based on Basin Plan bacteria objectives for marine waters designated REC-1, see V.(Receiving Water Limitations).A.1.a. below] at shoreline compliance points, as specified in Regional Water Board Resolution Nos. 2002-004 and 2002-022.

5. The temperature of wastes discharged shall not exceed 100°F, which takes into account the very large dilution credit based upon BPJ.

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V. RECEIVING WATER LIMITATIONS

Unless specifically excepted by this Order, the discharge, shall not cause violation of the following water quality objectives. Compliance with these objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed.

A. Bacterial Characteristics

1. Water Contact Standards

   a. State/Regional Water Board Water Contact Standards

      In marine water designated for water contact recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water outside the initial dilution zone.

      Geometric Mean Limits
      (1) Total coliform density shall not exceed 1,000/100 ml.
      (2) Fecal coliform density shall not exceed 200/100 ml.
      (3) Enterococcus density shall not exceed 35/100 ml.

Single Sample Maximum (SSM)

(4) Total coliform density shall not exceed 10,000/100 ml.
(5) Fecal coliform density shall not exceed 400/100 ml.
(6) Enterococcus density shall not exceed 104/100 ml.
(7) Total coliform density shall not exceed 1,000/100 ml, when the fecal coliform/total coliform ratio exceeds 0.1.

In addition, total coliform density shall not exceed 1,000/100 ml for more than 20 percent of the samples at any sampling station in any 30-day period.

b. Department of Health Services (DHS) Standards

DHS has established minimum protective bacteriological standards for coast water 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, DHS 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 DHS 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, DHS imposes the same standards as contained in Title 17 and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

2. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the waste discharged shall not cause the following bacterial standards to be exceeded:

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 during any 6-month period shall exceed 230 per 100 ml.

3. Implementation Provisions for Bacterial Characteristics

a. At a minimum, weekly samples shall be collected from each site. The geometric mean values should be calculated using the five most recent sample results. If sampling occurs more frequently than weekly, all samples taken during the previous 30-day period shall be used to calculated the geometric mean.

b. If a single sample exceeds any of the single sample maximum (SSM) standards, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued until the sample result is less than the SSM standard or until the Regional Water Board requires the Discharger or appropriate agency to conduct a sanitary survey to determine the source of the high bacterial densities. A sanitary survey shall also be required if three out of four weekly samples exceed any SSM standard, or if 75 percent of the samples from more frequent testing during any 30-day period exceed any SSM standard.

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When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean.

c. It is state policy that the geometric mean bacterial objectives are strongly preferred for use in water body assessment decisions, for example, in developing the Clean Water Act section 303(d) list of impaired waters, because the geometric mean objectives are a more reliable measure of long-term water body conditions. In making assessment decisions on bacterial quality, single sample maximum data must be considered together with any available geometric mean data. The use of only single sample maximum bacterial data is generally inappropriate unless there is a limited data set, the water is subject to short-term spikes in bacterial concentrations, or other circumstances justify the use of only single sample maximum data.

B. Physical Characteristics

The waste discharged shall not:

1. Cause floating particulates and oil and grease to be visible;

2. Cause aesthetically undesirable discoloration of the ocean surface;

3. Significantly reduce the transmittance of natural light at any point outside the initial dilution zone; and,

4. Change the rate of deposition of inert solids and the characteristics of inert solids in ocean sediments such that benthic communities are degraded.

C. Chemical Characteristics

The waste discharged shall not:

1. Cause the dissolved oxygen concentration at any time to be depressed more than 10 percent from that which occurs naturally;

2. Change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally;

3. Cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions;

4. Contain individual pesticides or combinations of pesticides in concentrations that adversely affect beneficial uses;

5. Cause the concentration of substances set forth in Chapter II, Table B of the Ocean Plan, in marine sediments to increase to levels that would degrade indigenous biota;

6. Cause the concentration of organic materials in marine sediments to be increased to levels that would degrade marine life; and,

7. Contain nutrients at levels that will cause objectionable aquatic growths or degrade indigenous biota.

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D. Biological Characteristics

The waste discharged shall not:

1. Degrade marine communities, including vertebrate, invertebrate, and plant species;

2. Alter the natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption; and,

3. 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.

E. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

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VI. PROVISIONS

A. Standard Provisions

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

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. Neither the treatment nor the discharge of pollutants shall create a 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 permit 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 permit 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 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, 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

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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 permit.

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:

(1) Name and general composition of the chemical,

(2) Frequency of use,

(3) Quantities to be used,

(4) Proposed discharge concentrations, and

(5) USEPA registration number, if applicable.

B. Monitoring and Reporting Program Requirements

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

C. Special Provisions

1. **Reopener Provisions**

a. This Order may be modified, revoked and reissued, or terminated for cause, including, but not limited to:

(1) Violation of any term or condition contained in this Order;

(2) Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts;

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

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.

b. If applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

c. 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 .

d. 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 no adverse impacts would result from the increased flow rate.

e. This Order will be reopened in two years to include the recommendations of the required multi-agency workgroup on the Districts' Spill Contingency Plan for spills or overflows that impact dry channels and/or beach sands.

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

g. This Order may be modified, in accordance with the provisions set forth in 40 CFR 122 and 124, to include new Minimum Levels (ML).

h. 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.

i. 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.

j. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR 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.

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k. The waste discharged shall not cause a violation of any applicable water quality standard for receiving waters. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments, thereto, the Regional Water Board will revise and modify this Order in accordance with such standards.

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 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:

(1) The average daily flow for the month, the date on which the peak flow occurred, the rate of that peak flow, and the total flow for the day;

(2) The best estimate of when the monthly average daily dry-weather flow rate will equal or exceed the design capacity of the facilities; and

(3) A schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

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 but for which no such report has been previously submitted, such report shall be filed within 90 days of the issuance of this Order.

b. **Toxicity Reduction Requirements**.

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 initial investigation TRE 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).

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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 3 days of receipt of the test results exceeding the toxicity limitation.

If the results of any two of the six tests (any two tests in a 12-week period) exceed the limitation, the Discharger shall initiate a Toxicity Reduction Evaluation (TRE).

If results of the implementation of the facility's initial investigation TRE workplan (as described above) indicate the need to continue the TRE/TIE, 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.

Detailed toxicity testing and reporting requirements are contained in Section V of the MRP (Attachment E).

3. **Best Management Practices and Pollution Prevention**

a. **Storm Water Pollution Prevention Plan (SWPPP)**

Within 90 days of the effective date of this Order the Discharger shall submit an updated SWPPP that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State to the Regional Water Board. The SWPPP shall be developed in accordance with the requirements in *Storm Water Pollution Prevention Plan Requirements* (**Attachment H**). If all storm water is captured and treated on-site and no storm water is discharged or allowed to run off-site from the Facility, the Discharge shall provide certification with descriptions of on-site storm water management to the Regional Water Board.

b. **Spill Contingency Plan (SCP)**

The Discharger shall maintain a SCP for JWPCP and its sanitary sewage collection system in an up-to-date condition and shall amend the SCP 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 SCP as appropriate after each spill from JWPCP or in the service area of the Facility. Upon request of the Regional Water Board, the Discharge shall submit the SCP and any amendments to the Regional Water Board. The Discharger shall ensure that the up-to-date SPC is readily available to the sewage system personnel at all times and that the sewage system personnel are familiar with it.

Within ninety days of the adoption of this Order, the Discharger is required to submit a Contingency Plan for sewer overflows that reach water bodies, including dry channels and beach sands, where affected by the spill

Within six months of the adoption of this Order, the Discharger is required to convene a multi-agency workgroup to review the Contingency Plan and make their recommendations to the group for the most applicable containment, cleanup and monitoring of sewer overflows that reach dry channels and/or beach sands.

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Within eighteen months of the adoption of this Order, the Discharger should submit a revised Contingency Plan which provides the most applicable containment, cleanup and monitoring of sewer overflows that reach dry channels and/or beach sands.

c. **Pollutant Minimization Program (PMP)**

Reporting protocols in the Monitoring and Reporting Program, Attachment E, Section VIII.B.4 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:

(1) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML; or

(2) 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:

(1) 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;

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

(3) 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;

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

(5) 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);

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(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.

5. **Special Provisions for Municipal Facilities**

a. **Biosolids Requirements**

(1) The Discharger shall comply with the requirements of 40 CFR 503, in general, and in particular the requirements in **Attachment I** of this Order, [Biosolids/sludge Management]. These requirements are enforceable by USEPA.

(2) The Discharger shall ensure compliance with the requirements in SWRCB 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 Quality Control Board has placed under this general order, and with the requirements in individual Waste Discharge Requirements (WDRs) issued by a Regional Water Board for sites receiving the Discharger's biosolids.

(3) The Discharger shall comply, if applicable, with WDRs issued by other 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.

(4) The Discharger shall furnish this Regional Water Board with a copy of any report submitted to USEPA, State Board or other Regional Water Board, with respect to municipal sludge or biosolids.

b. **Pretreament Requirements**

(1) This Order includes the Discharger's approved Pretreatment Program as an enforceable condition. The Discharger is required to implement and enforce the pretreatment program in its entire service area.

(2) The Discharger shall evaluate whether its pretreatment local limits are adequate to meet the requirements of this Order. JWPCP is part of a Joint Outfall System, including six upstream

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water reclamation plants. In the reevaluation of local limits, the Discharger shall consider the effluent limitations contained in this Order, and other relevant factors due to the interconnectedness of the system and protection of the upstream plants. The Discharger shall submit by November 15, 2006 to the Regional Water Board the results of the evaluation indicating whether changes to the Discharger's local limits are needed. Any revised local limits shall be submitted to the Regional Water Board for approval under 40 CFR 403.18 by November 15, 2007. In addition, the Discharger shall consider collection system overflow protection from such constituents as oil and grease, etc. Lack of adequate local limits shall not be a defense against liability for violations of effluent limitations and overflow prevention requirements contained in this Order.

(3) 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 shall not become effective until Regional Water Board approval is obtained.

(4) The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the CWA with timely, appropriate, and effective enforcement actions. The Discharger shall require all nondomestic users subject to the federal categorical standards to comply with those standards and shall take enforcement actions against those users who do not comply with the standards. Such enforcement actions shall be consistent with an enforcement response plan, developed pursuant to 40 CFR 403.8(f)(5). The Discharger shall ensure that all nondomestic users subject to the federal categorical standards achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

(5) The Discharger shall perform the pretreatment functions as required in Federal Regulations 40 CFR 403 including, but not limited to:

(a) Implement the necessary legal authorities as provided in 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 provided in 40 CFR 403.8(f)(2); and
(d) Provide the requisite funding and personnel to implement the Pretreatment Program as provided in 40 CFR 403.8(f)(3).

(6) The Discharger shall submit semiannual and annual reports to the Regional Water Board, describing the Discharger's pretreatment activities over the period. The annual and semiannual reports shall contain, but not be limited to, the information required in the attached *Pretreatment Reporting Requirements* (**Attachment J**), or an approved revised version thereof. A full scan of the priority pollutants for the influent and effluent should be conducted at least annually in August. If the Discharger is not in compliance with any conditions or requirements of this Order, the Discharger shall include the reasons for noncompliance and shall state how and when the Discharger will comply with such conditions and requirements.

(7) The Discharger shall be responsible and liable for the performance of all control authority pretreatment requirements contained in 40 CFR 403, including subsequent regulatory revisions thereof. Where Part 403 or subsequent revision places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall complete the required actions within six months from the effective date of this Order or the effective date of Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies by the Regional Water Board, USEPA, or other appropriate parties, as

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provided in the CWA. 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.

c. **Spill Reporting Requirements**

(1) The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or treatment plant. This record shall be made available to the Regional Water Board and USEPA upon request. On the first day of February, May, Augustand November (one month after the end of the fiscal quarter) of each year, the Discharger shall submit to the Regional Water Board and USEPA a report listing all spills, overflows or bypasses occurring during the previous quarter. The reports shall provide:

- the date and time of each spill, overflow or bypass;
- the location of each spill, overflow or bypass;
- the estimated volume of each spill, overflow or bypass including gross volume, amount recovered and amount not recovered;
- the cause of each spill, overflow or bypass;
- whether each spill, overflow or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;
- mitigation measures implemented; and
- corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.

(2) For certain spills, overflows and bypasses, the Discharger shall make reports and conduct monitoring as required below:

(a) For any spills or overflows of any volume, the Discharger shall immediately notify Department of Health Services and the local health agency.

(b) For spills, overflows or bypasses of any volume that flowed to receiving waters or entered a shallow ground water aquifer or has public exposure, the Discharger shall report such spills to the Regional Water Board, by telephone or electronically as soon as possible but not later than 24 hours of knowledge of the incident. The following information shall be included in the report: location; date and time of spill; volume and nature of the spill; cause(s) of the spill; mitigation measures implemented; and corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.

(c) For any spills or overflows of 1000 gallons or more, the Discharger shall immediately notify the State Office of Emergency Services.

(d) For spills, overflows or bypasses of any volume that reach receiving waters, the Discharger shall obtain and analyze grab samples for total and fecal coliforms or E. coli, and enterococcus, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible and safe) in order to define the geographical extent of impact of the spill. This monitoring shall be on a daily basis from time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to

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the background level or cessation of monitoring is authorized by the County Department of Health Services.

(e) For spills, overflows or bypasses of any volume that flowed to receiving waters or entered a shallow ground water aquifer, and all spills, overflows and bypasses of 1,000 gallons or more, the Discharger shall analyze a grab sample of the spill or overflow for total and fecal coliforms or E. coli, and enterococcus, and relevant pollutants of concern depending on the area and nature of spills or overflows if feasible, accessible and safe.

(f) The Regional Water Board notification shall be followed by a written preliminary report five working days after verbal notification of the incident. Within 30 days after submitting preliminary report, the Discharger shall submit the final written report to this Regional Water Board. The written report shall document the information required in subparagraphs (b) and (d) above, monitoring results and any other information required in Provision V.E.1 of the Standard Provisions (Attachment D). An extension for submittal of the final written report can be granted by the Executive Officer for just cause.

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VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of 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. Dischargers shall be deemed out of compliance with effluent limitations if the concentration of the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

B. Multiple Sample Data Reduction

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

C. Average Monthly Effluent Limitation (AMEL).

If the average 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). The

average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger shall collect up to four additional weekly samples. All analytical results shall be reported in the monitoring report for that month, or the subsequent month. The concentration of pollutant (an arithmetic mean or a median) estimated from the "Multiple Sample Data Reduction" Section above, will be used for compliance determination.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

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D. 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, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

A calendar week will begin on Sunday and end on Saturday. Partial weeks consisting of four or more days at the end of any month will include the remaining days of the week, which occur in the following month in order to calculate a consecutive seven-day average. This value will be reported as a weekly average or seven-day average on the SMR for the month containing the partial week of four or more days. Partial calendar weeks consisting of less than four days at the end of any month will be carried forward to the succeeding month and reported as a weekly average or a seven-day average for the calendar week that ends with the first Saturday of that month.

E. Maximum Daily Effluent Limitation (MDEL).

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

F. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g.,

the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation.

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

H. 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.

I. Percent Removal.

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

Percent Removal (%) = $[1-(C_{Effluent}/C_{Influent})] \times 100\ \%$

When preferred, the Discharger may substitute mass loadings and mass emissions for the concentrations.

J. Mass and Concentration Limitations

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

K. Compliance with single constituent effluent limitations

Dischargers are out of compliance with the effluent limitation if the concentration of the pollutant (see Section B "Multiple Sample Data Reduction" above)in the monitoring sample is greater than the effluent limitation and greater than or equal to the RML.

L. Compliance with effluent limitations expressed as a 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

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limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

M. Mass Emission Rate.

The mass emission rate shall be obtained from the following calculation for any calendar day:

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

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

in which 'N' is the number of samples analyzed in any calendar day. 'Qi' and 'Ci' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be taken in any calendar day. If a composite sample is taken, 'Ci' is the concentration measured in the composite sample and 'Qi' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

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

in which 'N' is the number of component waste streams. 'Qi' and 'Ci' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Qt' is the total flow rate of the combined waste streams.

N. Bacterial Standards and Analysis.

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

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

   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 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) shall be those presented in Table 1A of 40 CFR 136 (revised May 14, 1999), unless alternate methods have been approved by USEPA pursuant to 40 CFR 136, or improved methods have been determined by the Executive Officer and/or USEPA.

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4. Detection methods used for enterococcus shall be those presented in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

O. 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 Provision V.E.2(b) of 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).

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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 2001 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.

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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.

Annual Average is the arithmetic mean of daily concentrations, or of daily "mass emission rates", over the specified 365-day period.

$$\text{Average} = \frac{1}{N}\sum_{i=1}^{N} X_i$$

in which 'N' is the number of days samples were analyzed during the period and 'Xi' is either the constituent concentration (mg/L) or "mass emission rate" (kg/day or lb/day) for each day sampled.

Anti-Backsliding. Provisions in the Clean Water Act and USEPA regulations [CWA 303(d)(4); CWA 402(c); CFR 122.44(1)] that require a reissued permit to be as stringent as the previous permit with some exceptions.

Antidegradation. Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation plans are adopted by the State to minimize adverse effects on water.

Applicable Standards and Limitations mean all State, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the CWA, including

effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under sections 301, 302, 303, 304, 306, 307, 316, 403 and 405 of CWA.

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

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

Best Management Practice (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ). The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

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

Bioassay. A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biochemical Oxygen Demand (BOD). A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Biosolids. Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill.

Bypass means the intentional diversion of waste streams from any portion of a treatment (or pretreatment) facility whose operation is necessary to maintain compliance with the terms and conditions of this order and permit.

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

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)

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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 2001 Ocean Plan.

Clean Water Act (CWA). The Clean Water Act is an act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 US.C. 1251 et. seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Code of Federal Regulation (CFR). A codification of the final rules published daily in the *Federal Register.* Title 40 of the CFR contains the environmental regulations.

Composite Sample means, for flow rate measurements, 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 means, for other than flow rate measurement,

a. A combination of at least eight individual portions obtained at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.

OR

b. A combination of at least eight individual portions of equal volume obtained over a 24-hour period. The time interval will vary such that the volume of wastewater discharged between sampling remains constant.

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

Conventional Pollutants. Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined at 40 CFR 401.16 as BOD, TSS, fecal coliform bacteria, oil and grease, and pH.

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

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

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

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.

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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 and -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 is defined as any individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the maximum daily effluent limitations and the instantaneous maximum effluent limitations.

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

Hazardous Substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act and/or a hazardous waste, as defined in 40 CFR 261.3.

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

Indirect Discharger means the introduction of pollutants into a municipal sewage treatment system from any nondomestic source (i.e., any industrial or commercial facility) regulated under section 307(b), (c), or (d) of the CWA.

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

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the discharge ceases to produce significant mixing of the waste, or the diluting plum 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).

Interference Discharge which, alone or in conjunction with discharges from other sources, inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal and is a cause of a violation of the POTW's NPDES permit or prevents lawful sludge use or disposal.

Kelp Beds, for purposes of the bacteriological standards of this order, are significant aggregations of marine algae of the genus 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.

Land Application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Local Limits. 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 highest 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 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 concentrations 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. The reported Minimum Level (RML) is derived from the ML chosen by the Discharger for reporting and compliance determination from the

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MLs listed in Appendix II of the 2001 Ocean Plan with the application of additional factors, if any, resulting from deviation from the method-specific analytical procedures and/or the sample preparation protocol.

Monthly Average is the arithmetic mean of daily concentrations, or of daily "mass emission rates", over the specified monthly period:

$$\text{Average} = \frac{1}{N}\sum_{i=1}^{N} X_i$$

in which 'N' is the number of days samples were analyzed during the period and 'X_i' is either the constituent concentration (mg/L) or mass emission rate (kg/day or lb/day) for each sampled day.

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 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.

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.

Pass Through is defined as the discharge through the POTW to navigable waters which, alone or in conjunction with discharges from other sources, is a cause of a violation of POTW's NPDES permit.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-l232, Aroclor-1242, Aroclor-l248, Aroclor-1254 and Aroclor-1260.

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

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.

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Publicly Owned Treatment Works (POTW). A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality. 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 [40 CFR 403.3].

Sanitary Sewer. A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

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: BOD_5, total suspended solids (TSS), and pH (except as provided for special considerations and treatment equivalent to secondary treatment).

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 which can reasonably be expected to occur in the absence of a "bypass" or "overflow." It does not mean economic loss caused by delays in production.

Shellfish are organisms identified by the California Department of Health Services 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 No.s 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.

Statistical analyses that are useful in determining temporal and spatial trends in the marine environment include, but are not limited to, the following:

a Mean and standard deviation (x ± s.d.)

b Regression analyses (univariate and multivariate)
[e.g., correlation coefficients (r)]

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c Parametric statistics
[e.g., Student's t-test, analysis of variance (ANOVA), Student-Newman-Keuls test (SNK), t-test for paired comparisons]

d Nonparametric statistics
[e.g., Mann-Whitney U-test, Kruskal-Wallis one-way ANOVA, Friedman two-way ANOVA, chi-square test (or G-test)]

e Multivariate techniques
[e.g., discriminant analysis, classification analyses (cladistic/parsimony analysis of endemicity, or phenetic clustering), non-metric multidimensional scaling (NMDS), principal component analysis (PCA), principal coordinate analysis (PCOA), and/or multivariate ANOVA (MANOVA)]

f Biological indices
[e.g., species richness (S), Margalef (d), Shannon-Wiener (H'), Brillouin (H), Simpson (SI), Gleason, Infaunal Trophic Index (ITI), evenness, Benthic Response Index (BRI), phylogenetic diversity, and taxonomic distinctiveness]

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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:

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

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.

Toxic Pollutant. Pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly - from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of USEPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. Toxic pollutants also include those pollutants listed by the Administrator under CWA Section 307(a)(l) or any pollutant listed under Section 405 (d) which relates to sludge management

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.

Weekly Average is the arithmetic mean of daily concentrations, or of daily mass emission rates, over the specified weekly period:

$$\text{Average} = \frac{1}{N}\sum_{i=1}^{N} X_i$$

in which "N" is the number of days samples were analyzed during the period and "X_i" is either the constituent concentration (mg/L) or mass emission rate (kg/day or lb/day) for each sampled day.

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.

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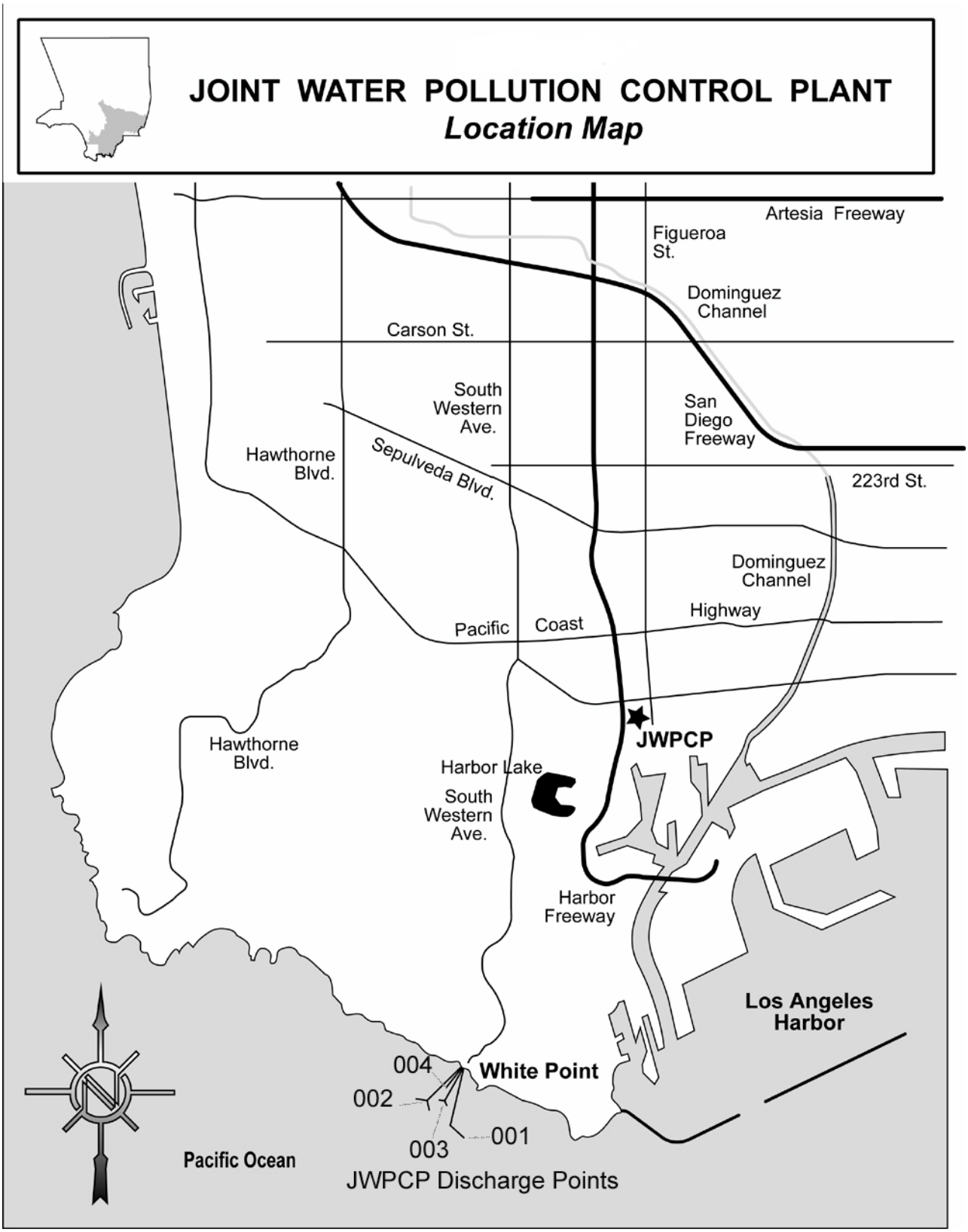
ATTACHMENT B – LOCATION MAP



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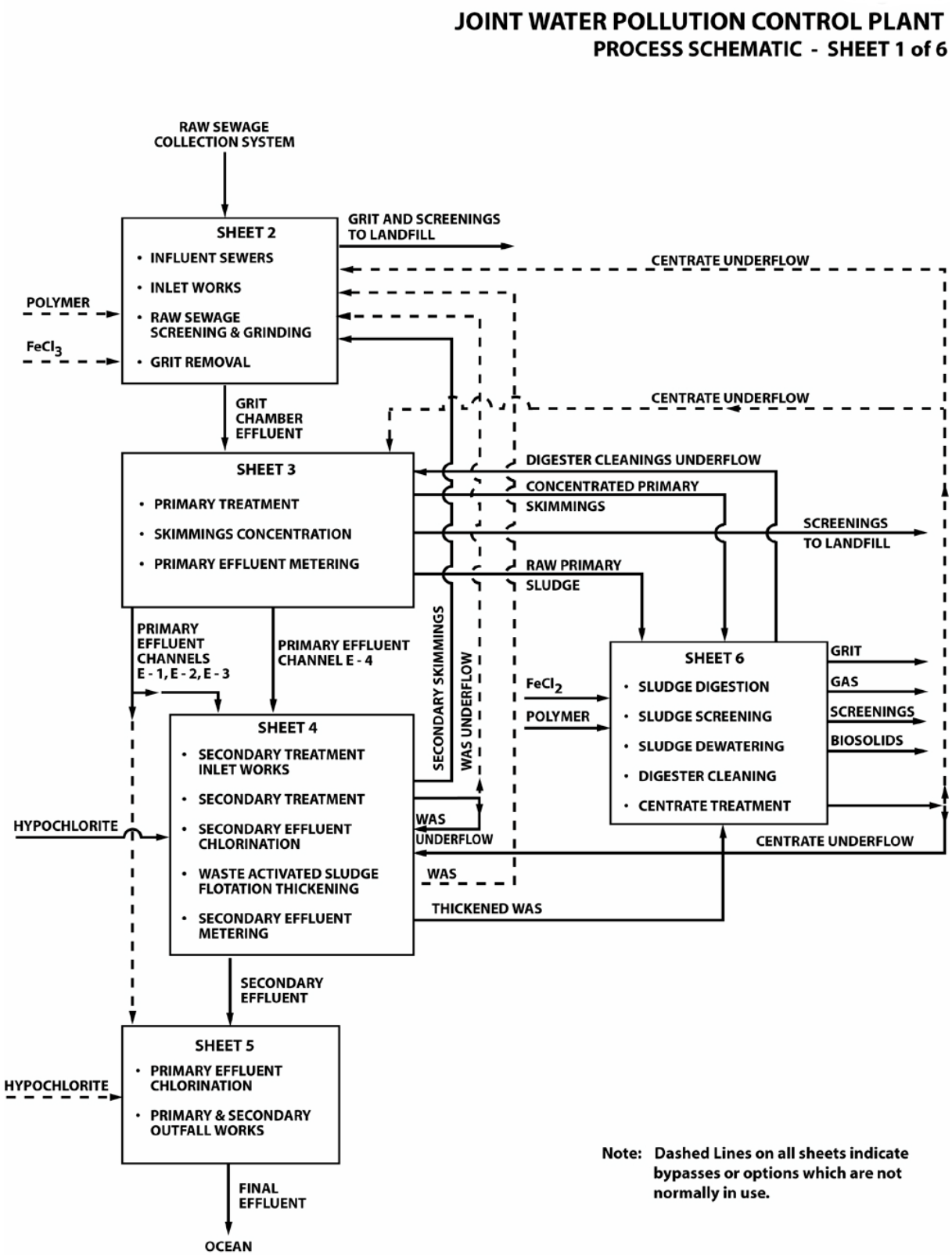
ATTACHMENT C – FLOW SCHEMATIC



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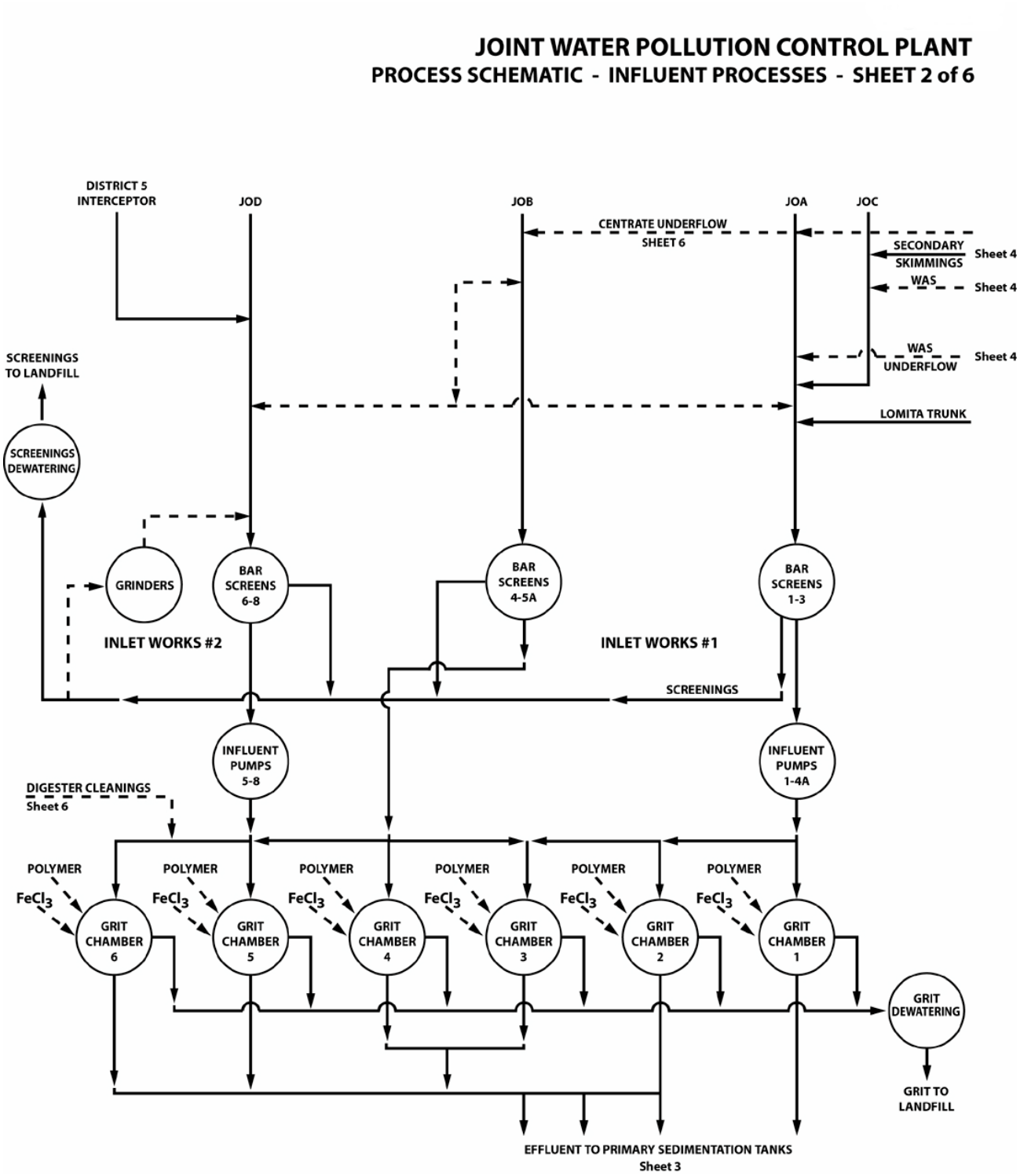
ATTACHMENT C – FLOW SCHEMATIC (Contd.)



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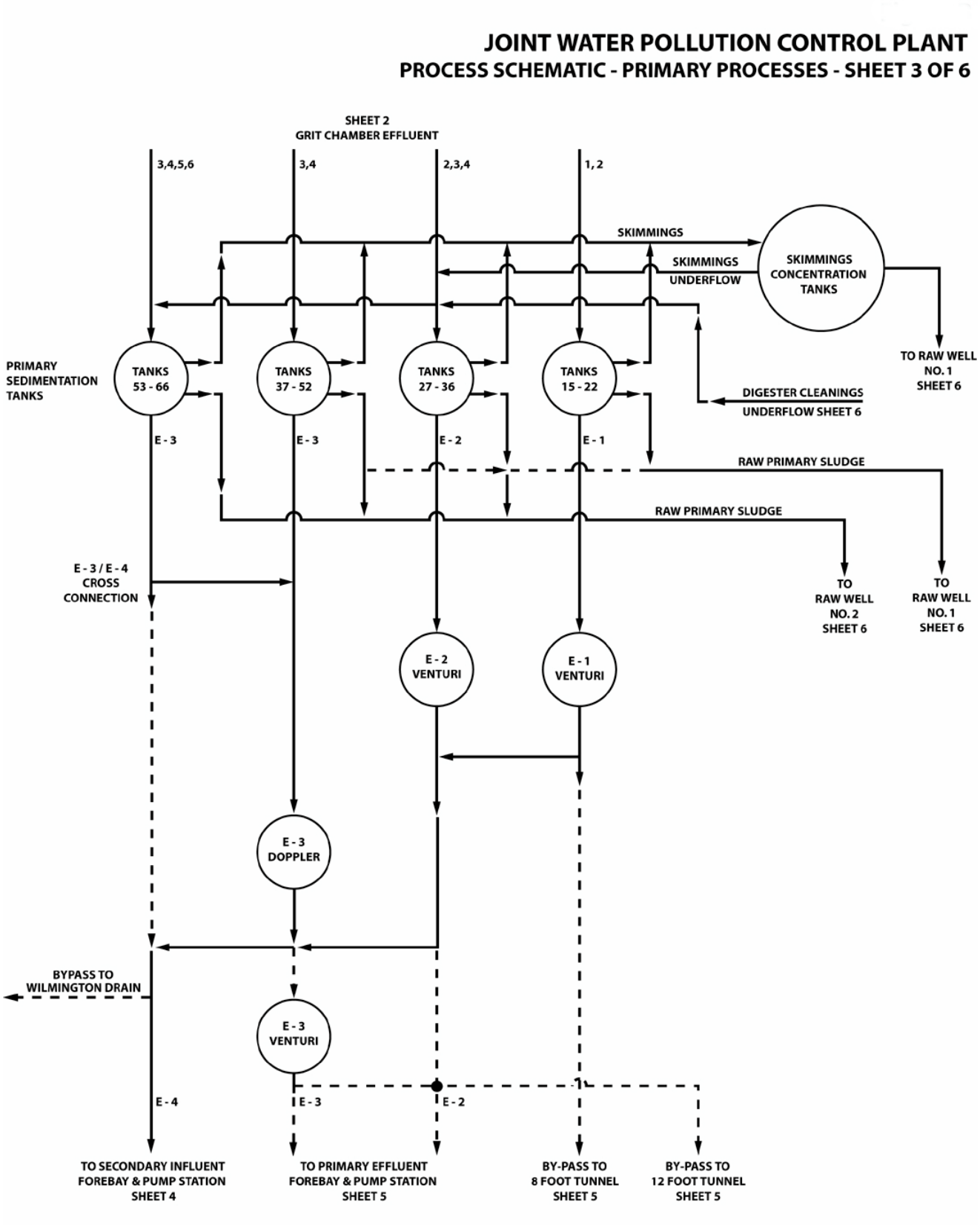

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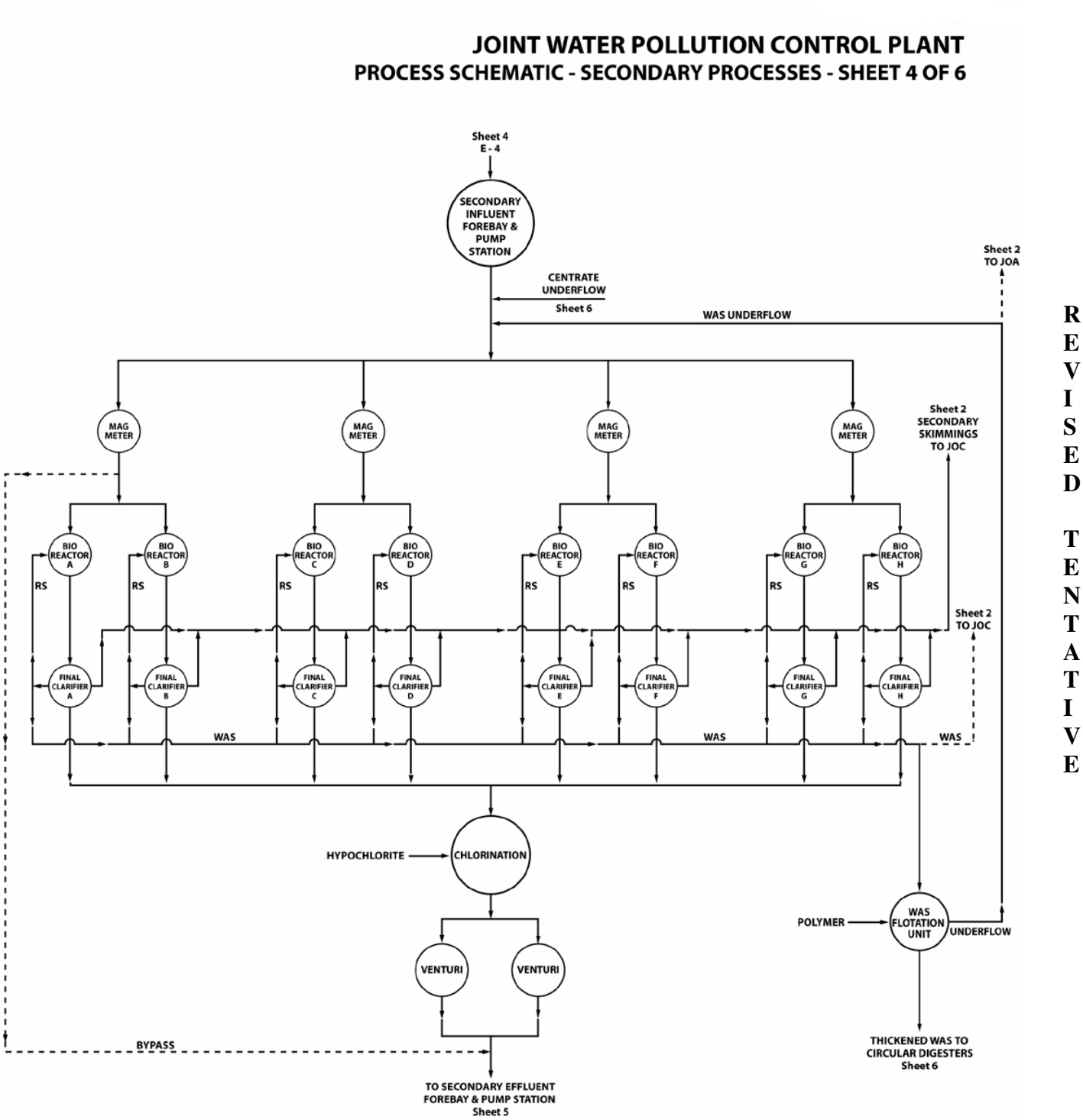

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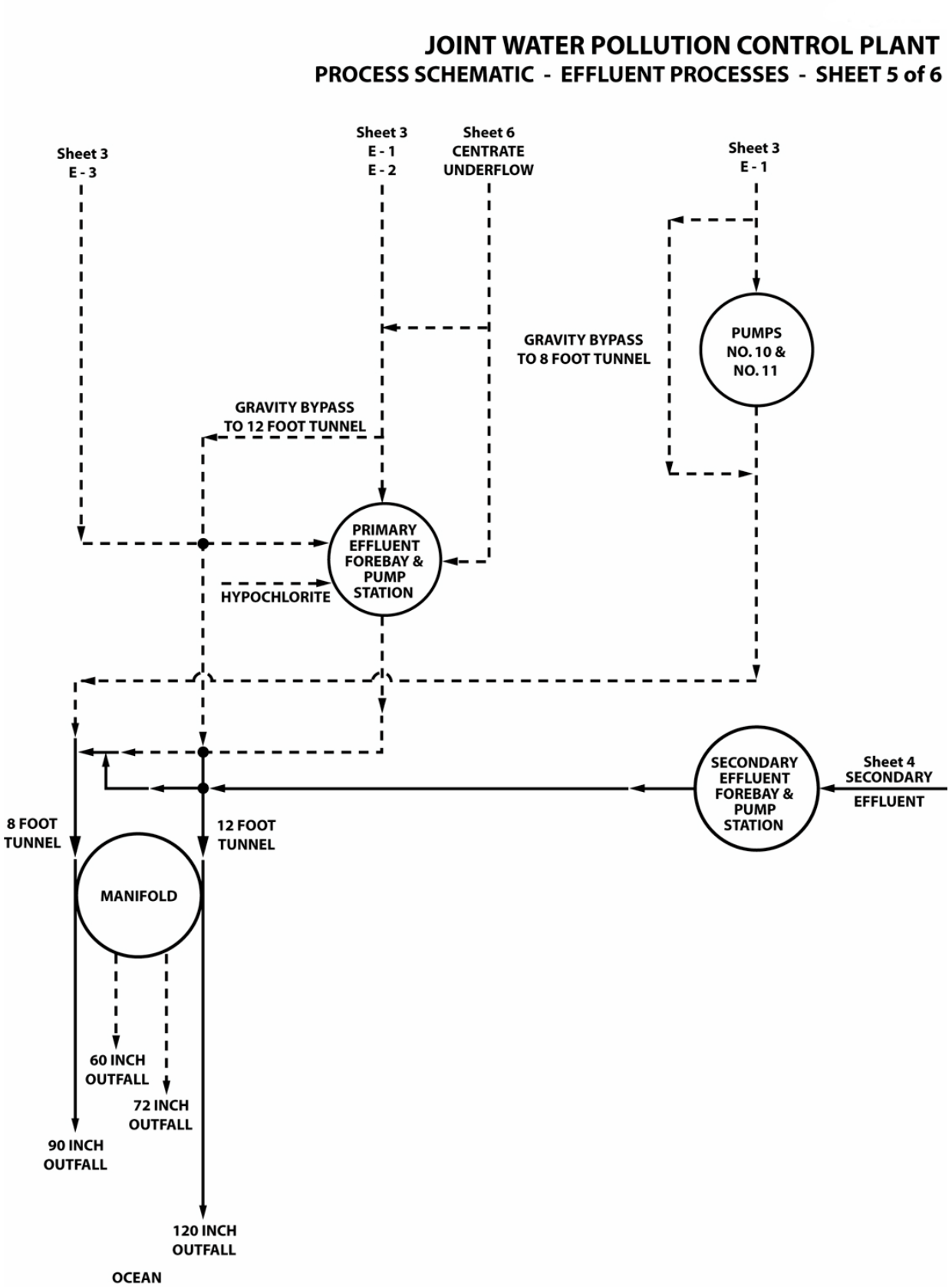
ATTACHMENT C – FLOW SCHEMATIC (Contd.)



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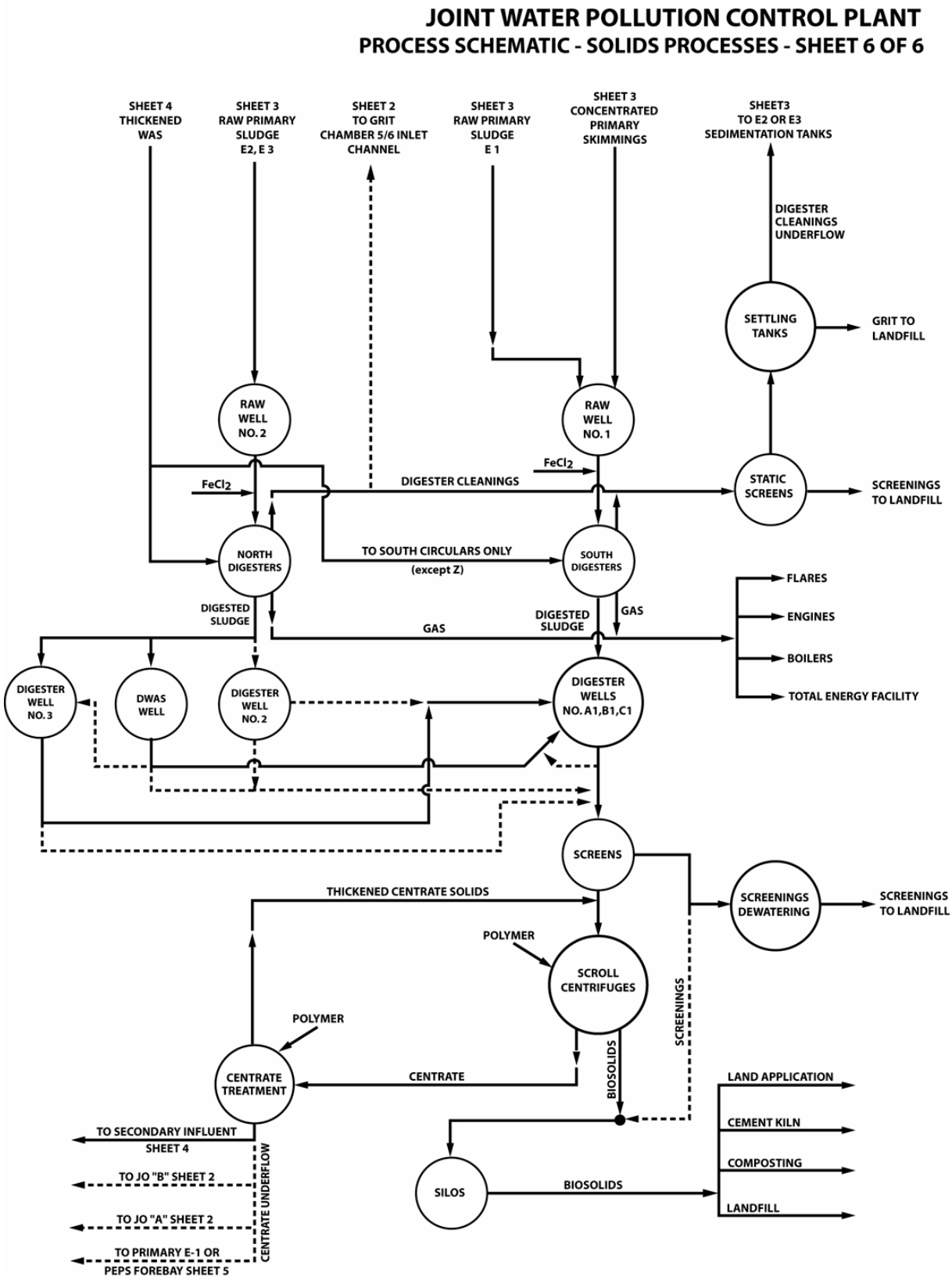
ATTACHMENT C – FLOW SCHEMATIC (Contd.)



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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

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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)*];

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)*].

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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)*].

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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*].

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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)*].

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)*].

R E V I S E D T E N T A T I V E

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)*].

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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 [*40 CFR 122.41(l)(7)*].

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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.

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)*].

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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

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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 Los Angeles County Sanitation Districts (Discharger or Districts) 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 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 (For example, endocrine disruptors and their effect on fish populations) to the Regional Water Board by December 15, 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 by the Discharger 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. The conceptual framework for the SMBRP Comprehensive Monitoring Program was 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 and Bight'03) and annual kelp bed monitoring. However, other elements of the program have yet to be developed, including:

- rocky intertidal monitoring
- resident fish monitoring
- pelagic ecosystem monitoring
- wetlands monitoring
- hard bottom benthos monitoring
- bird and mammal monitoring
- commercial shellfish monitoring
- stormwater mass emission loading and plume tracking monitoring.

The Santa Monica Bay Restoration Commission's Technical Advisory Committee has agreed to develop a detailed workplan outlining the monitoring surveys required to complete implementation of the Comprehensive Monitoring Program framework developed in 1993. This workplan should include formulation of management goals and objectives, identification of suitable monitoring indicators, detailed sampling designs, and cost estimates for each monitoring component. Upon completion of this workplan, USEPA, the Regional Water Board, affected NPDES permit holders, and other interested agencies and stakeholders will develop implementation plans to collaboratively fund these programs and determine each party's level of participation. It is anticipated that funding for these programs from the Districts will be supplied through a combination of modifications to the Joint Water Pollution Control Plant's (JWPCP)

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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 are subject to a hearing before the Regional Water Board.

F. In an attempt to bridge the foregoing gap in information, this monitoring program for JWPCP 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.

G. Discharger participation in regional monitoring programs is required as a condition of this permit. 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 and 2003. 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 Orange County Sanitation District, County Sanitation Districts of Los Angeles County, City of Los Angeles and City of Oxnard through appropriate agencies for water quality monitoring.

H. 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 third regional monitoring program (Bight'03) occurred during summer 2003 and winter 2003-4. The next (fourth) regional monitoring program (Bight'08) is expected to take place during 2008. While participation in regional programs is required under this permit, revisions to the JWPCP's monitoring program 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.

I. 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.

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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		
--	M-INF	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 where representative samples of the influent can be obtained.
Effluent Monitoring Station		
Discharge Serial Nos. 001, 002, 003, and 004	M-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 Serial Nos. 001, 002, 003, and 004	M-002A M-002B	This effluent sampling stations shall be located at the outfall manifold at Whites Point. Samples taken at monitoring location M-002A shall be considered representative of discharges from Discharge Serial Nos. 001 and 003. Samples taken at monitoring location M-002B shall be considered representative of discharges from Discharge Serial Nos. 002 and 004.
Receiving Water Monitoring Stations		
- Shoreline Monitoring Stations -		
	R-M-SB	Bluff Cove, 33° 47.52', 118° 23.76'
	R-M-SM	Malaga Cove, 33° 48.22', 118° 24.44'
	R-M-S1	Long Point, 33° 44.22', 118° 23.62'
	R-M-S2	Abalone Cove, 33° 44.44', 118° 22.18'
	R-M-S3	Portuguese Bend, 33° 44.02', 118° 21.40'
	R-M-S5	White Point, 33° 43.12', 118° 19.35'
	R-M-S6	Wilder Addition Park, 33° 42.59', 118° 17.95'
	R-M-S7	Cabrillo Beach, 33° 42.50', 118° 16.86'
- Inshore Monitoring Stations -		
	R-M-IL2	Long Point, 33° 44.20', 118° 24.15'
	R-M-IL3	Portuguese Point, 33° 44.25', 118° 22.67'
	R-M-IL4	Bunker Point, 33° 43.46', 118° 21.09'
	R-M-IL5	Royal Palms, 33° 42.91', 118° 19.85'
	R-M-IL6	West of Point Fermin, 33° 42.44', 118° 18.53'
	R-M-IL7	Cabrillo Beach, 33° 42.20', 118° 17.04'
- Nearshore/Offshore Monitoring Stations -		
	R-M-6C	6C, 33° 42.47’, 118° 21.24’
	R-M-8C	8C, 33° 41.91’, 118° 20.14’
	R-M-9C	9C, 33° 41.32’, 118° 19.10’
	R-WQ-2501	10 meter depth, 33° 07.22', 118° 43.67'
	R-WQ-2502	20 meter depth, 33° 07.67', 118° 41.94'
	R-WQ-2503	26 meter depth, 33° 08.12', 118° 40.21'

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	R-WQ-2504	33 meter depth, 33° 08.57', 118° 38.48'
	R-WQ-2505	44 meter depth, 33° 09.02', 118° 36.75'
	R-WQ-2506	60 meter depth, 33° 09.54', 118° 34.86'
	R-WQ-2601	19 meter depth, 33° 11.06', 118° 43.23'
	R-WQ-2602	23 meter depth, 33° 11.43', 118° 41.64'
	R-WQ-2603	23 meter depth, 33° 11.80', 118° 40.05'
	R-WQ-2604	32 meter depth, 33° 12.18', 118° 38.46'
	R-WQ-2605	47 meter depth, 33° 12.55', 118° 36.88'
	R-WQ-2606	62 meter depth, 33° 12.93', 118° 35.29'
	R-WQ-2701	26 meter depth, 33° 14.80', 118° 42.46'
	R-WQ-2702	26 meter depth, 33° 15.07', 118° 41.32'
	R-WQ-2703	28 meter depth, 33° 15.34', 118° 40.17'
	R-WQ-2704	50 meter depth, 33° 15.60', 118° 39.02'
	R-WQ-2705	100 meter depth, 33° 15.87', 118° 37.88'
	R-WQ-2706	80 meter depth, 33° 16.14', 118° 36.73'
	R-WQ-2801	10 meter depth, 33° 17.06', 118° 42.17'
	R-WQ-2802	30 meter depth, 33° 17.34', 118° 41.60'
	R-WQ-2803	60 meter depth, 33° 17.81', 118° 40.11'
	R-WQ-2804	100 meter depth, 33° 18.08', 118° 39.46'
	R-WQ-2805	100 meter depth, 33° 18.24', 118° 38.91'
	R-WQ-2806	100 meter depth, 33° 18.55', 118° 38.22'
	R-WQ-2901	10 meter depth, 33° 19.41', 118° 42.86'
	R-WQ-2902	30 meter depth, 33° 19.79', 118° 42.42'
	R-WQ-2903	60 meter depth, 33° 20.14', 118° 41.91'
	R-WQ-2904	100 meter depth, 33° 20.34', 118° 41.27'
	R-WQ-2905	100 meter depth, 33° 20.77', 118° 40.26'
	R-WQ-2906	100 meter depth, 33° 21.26', 118° 39.24'
	R-WQ-3001	10 meter depth, 33° 21.62', 118° 43.93'
	R-WQ-3002	30 meter depth, 33° 21.79', 118° 43.34'
	R-WQ-3003	60 meter depth, 33° 21.96', 118° 42.88'
	R-WQ-3004	100 meter depth, 33° 22.28', 118° 42.06'
	R-WQ-3005	100 meter depth, 33° 22.86', 118° 41.10'
	R-WQ-3006	100 meter depth, 33° 23.44', 118° 40.01'
	R-WQ-3051	13 meter depth, 33° 23.66', 118° 44.18'
	R-WQ-3052	30 meter depth, 33° 24.03', 118° 43.99'
	R-WQ-3053	60 meter depth, 33° 24.15', 118° 43.80'
	R-WQ-3054	100 meter depth, 33° 24.66', 118° 43.14'
	R-WQ-3055	100 meter depth, 33° 25.32', 118° 42.30'
	R-WQ-3056	100 meter depth, 33° 25.99', 118° 41.38'
	R-WQ-3101	10 meter depth, 33° 25.81', 118° 46.26'
	R-WQ-3102	30 meter depth, 33° 26.12', 118° 45.90'
	R-WQ-3103	60 meter depth, 33° 26.46', 118° 45.44'
	R-WQ-3104	100 meter depth, 33° 26.99', 118° 44.72'
	R-WQ-3105	100 meter depth, 33° 27.67', 118° 43.73'
	R-WQ-3106	100 meter depth, 33° 28.53', 118° 42.76'

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
- Nearshore Light Energy Monitoring Stations -		
	R-WQ-L1	Palos Verdes Point, 33° 46.12', 118° 25.82'
	R-WQ-L2	Long Point, 33° 44.09', 118° 24.22'
	R-WQ-L3	Portuguese Point, 33° 44.06', 118° 22.72'
	R-WQ-L4	Bunker Point, 33° 43.40', 118° 21.12'
	R-WQ-L5	Royal Palms, 33° 42.85', 118° 19.93'
	R-WQ-L6	West of Point Fermin, 33° 42.36', 118° 18.53'
	R-WQ-L7	Cabrillo Beach, 33° 41.83', 118° 17.10'
- Bottom Monitoring Stations -		
	R-B-0A	305 meter depth, 33° 49.10', 118° 27.25'
	R-B-0B	152 meter depth, 33° 48.70', 118° 26.50'
	R-B-0C	61 meter depth, 33° 48.43', 118° 25.83'
	R-B-0D	30 meter depth, 33° 48.17', 118° 25.36'
	R-B-1A	305 meter depth, 33° 44.72', 118° 26.99'
	R-B-1B	152 meter depth, 33° 44.97', 118° 26.81'
	R-B-1C	61 meter depth, 33° 45.44', 118° 26.46'
	R-B-1D	30 meter depth, 33° 45.90', 118° 26.12'
	R-B-2A	305 meter depth, 33° 43.62', 118° 25.72'
	R-B-2B	152 meter depth, 33° 43.95', 118° 25.55'
	R-B-2C	61 meter depth, 33° 44.26', 118° 25.39'
	R-B-2D	30 meter depth, 33° 44.47', 118° 25.28'
	R-B-3A	305 meter depth, 33° 43.14', 118° 24.66'
	R-B-3B	152 meter depth, 33° 43.43', 118° 24.44'
	R-B-3C	61 meter depth, 33° 43.80', 118° 24.15'
	R-B-3D	30 meter depth, 33° 43.99', 118° 24.03'
	R-B-4A	305 meter depth, 33° 42.70', 118° 23.38'
	R-B-4B	152 meter depth, 33° 43.00', 118° 23.24'
	R-B-4C	61 meter depth, 33° 43.40', 118° 23.08'
	R-B-4D	30 meter depth, 33° 43.91', 118° 22.83'
	R-B-5A	305 meter depth, 33° 42.06', 118° 22.28'
	R-B-5B	152 meter depth, 33° 42.54', 118° 22.08'
	R-B-5C	61 meter depth, 33° 42.88', 118° 21.96'
	R-B-5D	30 meter depth, 33° 43.34', 118° 21.79'
	R-B-6A	305 meter depth, 33° 41.99', 118° 21.56'
	R-B-6B	152 meter depth, 33° 42.18', 118° 21.35'
	R-B-6C	61 meter depth, 33° 42.47', 118° 21.24'
	R-B-6D	30 meter depth, 33° 42.98', 118° 20.91'
	R-B-7A	305 meter depth, 33° 41.86', 118° 21.19'
	R-B-7B	152 meter depth, 33° 42.05', 118° 21.09'
	R-B-7C	61 meter depth, 33° 42.31', 118° 20.92'
	R-B-7D	30 meter depth, 33° 42.76', 118° 20.61'
	R-B-8A	305 meter depth, 33° 41.27', 118° 20.34'
	R-B-8B	152 meter depth, 33° 41.53', 118° 20.24'
	R-B-8C	61 meter depth, 33° 41.91', 118° 20.14'
	R-B-8D	30 meter depth, 33° 42.42', 118° 19.79'

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	R-B-9A	305 meter depth, 33° 40.58', 118° 19.46'
	R-B-9B	152 meter depth, 33° 40.89', 118° 19.31'
	R-B-9C	61 meter depth, 33° 41.32', 118° 19.10'
	R-B-9D	30 meter depth, 33° 41.97', 118° 18.78'
	R-B-10A	305 meter depth, 33° 39.46', 118° 18.08'
	R-B-10B	152 meter depth 33° 39.73', 118° 17.90'
	R-B-10C	61 meter depth, 33° 40.11', 118° 17.81'
	R-B-10D	30 meter depth, 33° 41.60', 118° 17.34'
	R-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-Z2	Intermediate zone: inshore of the 150 meter depth contour and between a line bearing 160° magnetic off Long Point and a line bearing 245° magnetic off Point Vicente.
	R-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-T-T0/23	23 meter depth, 33° 48.19', 118° 25.04' (trawl mid-point)
	R-T-T0/61	61 meter depth, 33° 48.57', 118° 25.84' (trawl mid-point)
	R-T-T0/137	137 meter depth, 33° 48.83', 118° 26.36' (trawl mid-point)
	R-T-T0/305	305 meter depth, 33° 49.23', 118° 27.09' (trawl mid-point)
	R-T-T1/23	26 meter depth, 33° 44.65', 118° 25.09' (trawl mid-point)
	R-T-T1/61	61 meter depth, 33° 44.16', 118° 25.23' (trawl mid-point)
	R-T-T1/137	137 meter depth, 33° 44.84', 118° 25.34' (trawl mid-point)
	R-T-T1/305	305 meter depth, 33° 43.55', 118° 25.64' (trawl mid-point)
	R-T-T4/23	27 meter depth, 33° 42.79', 118° 20.48' (trawl mid-point)
	R-T-T4/61	61 meter depth, 33° 42.33', 118° 20.92' (trawl mid-point)
	R-T-T4/137	137 meter depth, 33° 44.06', 118° 21.05' (trawl mid-point)
	R-T-T4/305	305 meter depth, 33° 42.00', 118° 21.49' (trawl mid-point)
	R-T-T5/23	23 meter depth, 33° 42.29', 118° 18.98' (trawl mid-point)
	R-T-T5/61	61 meter depth, 33° 41.45', 118° 19.31' (trawl mid-point)
	R-T-T5/137	137 meter depth, 33° 41.11', 118° 19.61' (trawl mid-point)
	R-T-T5/305	305 meter depth, 33° 40.85', 118° 19.85' (trawl mid-point)

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CORE MONITORING

III. INFLUENT MONITORING REQUIREMENTS

(for footnotes, see 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 (M-INF)

1. The Discharger shall establish a sampling station at each point of inflow to the sewage treatment plant. The sampling stations shall be located upstream of any in-plant return flows and where representative samples of the influent can be obtained. The Discharger shall monitor influent to the facility at influent monitoring station(s) M-INF as follows:

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Table 2. Influent Monitoring

Influent Monitoring Program			
Parameter	**Units**	**Sample Type** [1]	**Minimum Sampling Frequency**
Flow	mgd	recorder/totalizer	continuous
BOD_5 20°C	mg/L	24-hr composite	daily
Suspended solids	mg/L	24-hr composite	daily
pH	pH units	grab	daily
COD	mg/L	24-hr composite	daily
Oil and grease	mg/L	grab [3]	monthly
Ammonia nitrogen	mg/L	24-hr composite	monthly
Cyanide	µg/L	grab	monthly
Nitrate nitrogen	mg/L	24-hr composite	quarterly
Nitrite nitrogen	mg/L	24-hr composite	quarterly
Organic nitrogen	mg/L	24-hr composite	quarterly
Radioactivity [4] (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
Tributyltin	ng/L	24-hr composite	quarterly
Aldrin	µg/L	24-hr composite	quarterly
Chlordane & related compounds [5]	µg/L	24-hr composite	quarterly
DDT [6]	µg/L	24-hr composite	quarterly
Dieldrin	µg/L	24-hr composite	quarterly

Influent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency**
Endosulfan [7]	µg/L	24-hr composite	quarterly
Endrin	µg/L	24-hr composite	quarterly
HCH [8]	µg/L	24-hr composite	quarterly
Heptachlor	µg/L	24-hr composite	quarterly
Heptachlor epoxide	µg/L	24-hr composite	quarterly
PCBs [9]	µg/L	24-hr composite	quarterly
Toxaphene	µg/L	24-hr composite	quarterly
2,4-Dinitrophenol	µg/L	24-hr composite	quarterly
2,4,6-Trichlorophenol	µg/L	24-hr composite	quarterly
4,6-Dinitro-2-methyl-phenol	µg/L	24-hr composite	quarterly
Phenolic compounds (chlorinated) [11]	µg/L	24-hr composite	quarterly
Phenolic compounds (non-chlorinated) [12]	µg/L	24-hr composite	quarterly
Bis(2-chloro-ethoxy) methane	µg/L	24-hr composite	quarterly
Bis(2-chloro-isopropyl) ether	µg/L	24-hr composite	quarterly
Di-n-butylphthalate	µg/L	24-hr composite	quarterly
Dichlorobenzenes [13]	µg/L	24-hr composite	quarterly
Diethylphthalate	µg/L	24-hr composite	quarterly
Dimethylphthalate	µg/L	24-hr composite	quarterly
Fluoranthene	µg/L	24-hr composite	quarterly
Hexachlorocyclopentadiene	µg/L	24-hr composite	quarterly
Isophorone	µg/L	24-hr composite	quarterly
Nitrobenzene	µg/L	24-hr composite	quarterly
Benzidine	µg/L	24-hr composite	quarterly
Bis(2-chloroethyl) ether	µg/L	24-hr composite	quarterly
Bis(2-ethylhexyl) phthalate	µg/L	24-hr composite	quarterly
1,4-Dichlorobenzene	µg/L	24-hr composite	quarterly
3,3-Dichlorobenzidine	µg/L	24-hr composite	quarterly
2,4-Dinitrotoluene	µg/L	24-hr composite	quarterly
1,2-Diphenylhydrazine	µg/L	24-hr composite	quarterly
Hexachlorobenzene	µg/L	24-hr composite	quarterly
Hexachlorobutadiene	µg/L	24-hr composite	quarterly
Hexachloroethane	µg/L	24-hr composite	quarterly

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Influent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency**
N-Nitrosodimethylamine	µg/L	24-hr composite	quarterly
N-Nitrosodi-n-propylamine	µg/L	24-hr composite	quarterly
N-Nitrosodiphenylamine	µg/L	24-hr composite	quarterly
PAHs [14]	µg/L	24-hr composite	quarterly
TCDD equivalents]15]	pg/L	24-hr composite	quarterly
Acrolein	µg/L	grab	quarterly
Acrylonitrile	µg/L	grab	quarterly
Benzene	µg/L	grab	quarterly
Carbon tetrachloride	µg/L	grab	quarterly
Chlorobenzene	µg/L	grab	quarterly
Chlorodibromomethane	µg/l	grab	quarterly
Chloroform	µg/L	grab	quarterly
Dichlorobromomethane	µg/l	grab	quarterly
Dichloromethane	µg/L	grab	quarterly
1,1-Dichloroethylene	µg/L	grab	quarterly
1,2-Dichloroethane	µg/L	grab	quarterly
1,3-Dichloropropene	µg/L	grab	quarterly
Ethylbenzene	µg/L	grab	quarterly
Halomethanes [16]	µg/L	grab	quarterly
Methyl-tert-butyl-ether	µg/l	grab	quarterly
Toluene	µg/L	grab	quarterly
1,1,2,2-Tetrachloroethane	µg/L	grab	quarterly
1,1,1-Trichloroethane	µg/L	grab	quarterly
1,1,2-Trichloroethane	µg/L	grab	quarterly
Tetrachloroethylene	µg/L	grab	quarterly
Trichloroethylene	µg/L	grab	quarterly
Vinyl chloride	µg/L	grab	quarterly
Antimony	µg/L	24-hr composite	quarterly
Arsenic	µg/l	24-hr composite	monthly
Beryllium	µg/L	24-hr composite	quarterly
Cadmium	µg/L	24-hr composite	monthly
Chromium (III)	µg/L	24-hr composite	quarterly

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Influent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency**
Copper	µg/L	24-hr composite	monthly
Hexavalent chromium [17]	µg/L	24-hr composite	monthly
Lead	µg/L	24-hr composite	monthly
Mercury	µg/L	24-hr composite	monthly
Nickel	µg/L	24-hr composite	monthly
Selenium	µg/L	24-hr composite	monthly
Silver	µg/L	24-hr composite	monthly
Thallium	µg/L	24-hr composite	quarterly
Zinc	µg/L	24-hr composite	monthly

R E V I S E D T E N T A T I V E

IV. EFFLUENT MONITORING REQUIREMENTS

(for footnotes, see 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 (M-001, and Manifold Stations: M-002A and M-002B)

1. The Discharger shall establish sampling locations representative of each point of discharge. The sampling stations shall be located downstream of any in-plant return flows where representative samples of the effluent can be obtained. The Discharger shall monitor secondary effluent at effluent monitoring location M-001 for all parameters except chlorine residual and bacteria. The chlorine residual and bacteria samples shall be collected at effluent manifold monitoring M-002A and M-002B. Effluent limitations for chlorine residual and bacteria applicable to discharges through Discharge Serial Nos. 001 and 003 shall apply at manifold monitoring location M-002A. Effluent limitations for chlorine residual and bacteria applicable to discharges through Discharge Serial Nos. 002 and 004 shall apply at manifold monitoring location M-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]**
Flow	mgd	recorder/totalizer	continuous
BOD_5 20°C	mg/L	24-hr composite	daily
Suspended solids	mg/L	24-hr composite	daily
pH	pH units	grab	daily

Effluent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency [2]**
Oil and grease	mg/L	grab [3]	daily
Temperature	°C	grab	daily
Settleable solids	ml/L	grab	daily
Total chlorine residual (at manifold station)	mg/L	grab	daily
Turbidity	NTU	24-hr composite	daily
Total coliform (at manifold station)	CFU/100 ml or MPN/100 ml	grab	daily
Enterococcus (at manifold station)	CFU/100 ml or MPN/100 ml	grab	daily
Fecal coliform (at manifold station)	CFU/100 ml or MPN/100 ml	grab	5 times/month
COD	mg/L	24-hr composite	daily
TOC	mg/L	24-hr composite	monthly
Ammonia nitrogen	mg/L	24-hr composite	monthly
Toxicity, acute	TUa	24-hr composite	monthly
Toxicity, chronic	TUc	24-hr composite	monthly
Cyanide	µg/L	grab	monthly
Nitrate nitrogen	µg/L	24-hr composite	quarterly
Nitrite nitrogen	µg/L	24-hr composite	quarterly
Organic nitrogen	mg/L	24-hr composite	quarterly
Radioactivity [4] (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
Tributyltin	ng/L	24-hr composite	quarterly
Aldrin	µg/L	24-hr composite	quarterly
Chlordane & related compounds [5]	µg/L	24-hr composite	quarterly
DDT [6]	µg/L	24-hr composite	quarterly
Dieldrin	µg/L	24-hr composite	quarterly
Endosulfan [7]	µg/L	24-hr composite	quarterly
Endrin	µg/L	24-hr composite	quarterly
HCH [8]	µg/L	24-hr composite	quarterly
Heptachlor	µg/L	24-hr composite	quarterly
Heptachlor epoxide	µg/L	24-hr composite	quarterly

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Effluent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency [2]**
PCBs [9]	µg/L	24-hr composite	quarterly
PCBs congeners [10]	µg/L	24-hr composite	annually
Toxaphene	µg/L	24-hr composite	quarterly
2,4-Dinitrophenol	µg/L	24-hr composite	quarterly
2,4,6-Trichlorophenol	µg/L	24-hr composite	quarterly
4,6-Dinitro-2-methyl-phenol	µg/L	24-hr composite	quarterly
Phenolic compounds (chlorinated) [11]	µg/L	24-hr composite	quarterly
Phenolic compounds (non-chlorinated) [12]	µg/L	24-hr composite	quarterly
Bis(2-chloro-ethoxy) methane	µg/L	24-hr composite	quarterly
Bis(2-chloro-isopropyl) ether	µg/L	24-hr composite	quarterly
Di-n-butylphthalate	µg/L	24-hr composite	quarterly
Dichlorobenzenes [13]	µg/L	24-hr composite	quarterly
Diethylphthalate	µg/L	24-hr composite	quarterly
Dimethylphthalate	µg/L	24-hr composite	quarterly
Fluoranthene	µg/L	24-hr composite	quarterly
Hexachlorocyclopentadiene	µg/L	24-hr composite	quarterly
Isophorone	µg/L	24-hr composite	quarterly
Nitrobenzene	µg/L	24-hr composite	quarterly
Benzidine	µg/L	24-hr composite	quarterly
Bis(2-chloroethyl) ether	µg/L	24-hr composite	quarterly
Bis(2-ethylhexyl) phthalate	µg/L	24-hr composite	quarterly
1,4-Dichlorobenzene	µg/L	24-hr composite	quarterly
3,3-Dichlorobenzidine	µg/L	24-hr composite	quarterly
2,4-Dinitrotoluene	µg/L	24-hr composite	quarterly
1,2-Diphenylhydrazine	µg/L	24-hr composite	quarterly
Hexachlorobenzene	µg/L	24-hr composite	quarterly
Hexachlorobutadiene	µg/L	24-hr composite	quarterly
Hexachloroethane	µg/L	24-hr composite	quarterly
N-Nitrosodimethylamine	µg/L	24-hr composite	quarterly
N-Nitrosodi-n-propylamine	µg/L	24-hr composite	quarterly
N-Nitrosodiphenylamine	µg/L	24-hr composite	quarterly
PAHs [14]	µg/L	24-hr composite	quarterly

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Effluent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency [2]**
TCDD equivalents [15]	pg/L	24-hr composite	quarterly
Acrolein	µg/L	grab	quarterly
Acrylonitrile	µg/L	grab	quarterly
Benzene	µg/L	grab	quarterly
Carbon tetrachloride	µg/L	grab	quarterly
Chlorobenzene	µg/L	grab	quarterly
Chlorodibromomethane	µg/l	grab	quarterly
Chloroform	µg/L	grab	quarterly
Dichlorobromomethane	µg/l	grab	quarterly
Dichloromethane	µg/L	grab	quarterly
1,1-Dichloroethylene	µg/L	grab	quarterly
1,2-Dichloroethane	µg/L	grab	quarterly
1,3-Dichloropropene	µg/L	grab	quarterly
Ethylbenzene	µg/L	grab	quarterly
Halomethanes [16]	µg/L	grab	quarterly
Methyl-tert-butyl-ether	µg/l	grab	quarterly
Toluene	µg/L	grab	quarterly
1,1,2,2-Tetrachloroethane	µg/L	grab	quarterly
1,1,1-Trichloroethane	µg/L	grab	quarterly
1,1,2-Trichloroethane	µg/L	grab	quarterly
Tetrachloroethylene	µg/L	grab	quarterly
Trichloroethylene	µg/L	grab	quarterly
Vinyl chloride	µg/L	grab	quarterly
Antimony	µg/L	24-hr composite	quarterly
Arsenic	µg/l	24-hr composite	monthly
Beryllium	µg/L	24-hr composite	quarterly
Cadmium	µg/L	24-hr composite	monthly
Chromium (III)	µg/L	24-hr composite	quarterly
Copper	µg/L	24-hr composite	monthly
Hexavalent chromium [17]	µg/L	24-hr composite	monthly
Lead	µg/L	24-hr composite	monthly
Mercury	µg/L	24-hr composite	monthly

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Effluent Monitoring Program			
Parameter	**Units**	**Sample Type [1]**	**Minimum Sampling Frequency [2]**
Nickel	µg/L	24-hr composite	monthly
Selenium	µg/L	24-hr composite	monthly
Silver	µg/L	24-hr composite	monthly
Thallium	µg/L	24-hr composite	quarterly
Zinc	µg/L	24-hr composite	monthly

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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 Serial Nos. 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] Grease and oil monitoring in the influent and effluent shall consist of a single grab sample at peak flow over a 24-hour period.

[4] 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 the stipulated criteria, analyze for Tritium, Strontium-90 and uranium.

[5] *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.

[6] *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.

[7] *Endosulfan* shall meanSum of endosulfan-alpha and –beta and endosulfan sulfate.

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

[9] *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.

[10] 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.

[11] *Chlorinated phenolic compounds* shall mean the sum of 2-Chlorophenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, and Pentachlorophenol.

[12] *Nonchlorinated phenolic compounds* shall mean the sum of Phenol, 2,4-Dimethylphenol, 2-Nitrophenol, and 4-Nitrophenol, 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol.

[13] *Dichlorobenzenes* shall mean the sum of 1,2- and 1,3-dichlorobenzene.

[14] *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.

[15] *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:

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

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

[17] Discharger may, at its option, meet the hexavalent chromium limitation by analyzing for total chromium rather than hexavalent chromium.

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B. Mass Emission Benchmarks

The following Mass Emission Benchmarks, in metric tons per year (MT/yr), have been established for the discharge (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 (hexavalent)	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
Chlorobenzene	0.23
Chromium (III)	5.60
Di-n-butyl-phthalate	23.35
Dichlorobenzenes	4.67
Diethyl phthalate	4.67

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Ocean Plan Constituent	12-month Average Mass Emission Benchmarks (MT/yr)
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	.84
Dichloromethane	5.38
1,3-Dichloropropene	0.23
Dieldrin	N/a
2,4-Dinitrotoluene	11.67
1,2-Diphenylhydrazine	2.33

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Ocean Plan Constituent	12-month Average Mass Emission Benchmarks (MT/yr)
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

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V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

1. **Methods and test species**. Test Species and Methods for Discharge Serial Nos. 001 and 002. 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 a 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 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 2006. 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, TUa, 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 24-hour composite effluent samples in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, 1995, (EPA/600/R-95/136). Pursuant to the 2005 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 Serial No. 003 or 004, the 96-hour acute toxicity statistical endpoint shall also be reported as LC50 and TUa, 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 2006. 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.

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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.

R E V I S E D T E N T A T I V E

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 Serial Nos. 001 and 002 is 19% effluent. The chronic IWC for Discharge Serial Nos. 001 and 002 is 0.60% effluent; the chronic IWC for Discharge Serial No. 003 is 0.66% effluent; the chronic IWC for Discharge Serial No. 004 is 0.86% effluent

5. Because this permit requires sublethal hypothesis testing endpoints from the 1995 West Coast marine and estuarine WET test methods manual and the 2002 East Coast marine and estuarine WET test methods manual, with-in test variability must be reviewed and variability criteria [e.g., Minimum Significance Difference (MSD) bound, Percent ., Minimum Significance Difference (PMSD) bounds] must be applied, as specified in the test methods manuals. The calculated MSD (or PMSDs) for both reference toxicant test and effluent toxicity test results must meet the MDS bound (or PMSD bounds) variability criteria specified in the test methods manuals.

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, the Discharger may resume regular monthly testing.

2. If the result of any of the six additional tests exceeds the 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 tests (any two tests in a 12-week period) exceed the limitation, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) and implement the initial investigation Toxicity Reduction Evaluation (TRE) Workplan.

4. If implementation of the initial investigation TRE workplan (see item 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 TRE 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 MRP Section V.F.3 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, 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.

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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.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there are no longer toxicity violations.

3. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/R-96-054 (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.

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.

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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.4, 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. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the toxicity limit.

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

   a. sample date(s)

   b. test initiation date

   c. test species

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

   e. LC_{50} value(s) in percent effluent

   f. TUa value(s) $\left(TU_a = \frac{100}{LC50}\right)$

   g. NOEC value(s) in percent effluent

   h. TUc values $\left(TU_c = \frac{100}{NOEC}\right)$

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

   j. IC/EC_{25} values(s) in percent effluent

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Inhibition Concentration (IC_P) is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological endpoint (e.g., reproduction, growth) calculated from a continuous model (e.g., EPA Interpolation Model).

Effective Concentration (EC_P) is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a quantal biological measurement (e.g., development, survival) calculated from a continuous model (e.g., Probit).

k. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)

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

4. The Discharger shall provide a compliance summary that includes a summary table of toxicity data from at least eleven of the most recent samples.

5. The Discharger shall notify this Regional Water Board immediately of any toxicity exceedance and in writing 14 days after the receipt of the results of an effluent limit. 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.

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VI. RECEIVING WATER MONITORING REQUIREMENTS

(for footnotes, see page E-43)

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

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 <u>six inshore stations</u> 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	R-M-IL2	Long Point, 33° 44.20', 118° 24.15'
Inshore Station	R-M-IL3	Portuguese Point, 33° 44.25', 118° 22.67'
Inshore Station	R-M-IL4	Bunker Point, 33° 43.46', 118° 21.09'
Inshore Station	R-M-IL5	Royal Palms, 33° 42.91', 118° 19.85'

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Station Type	Monitoring Location Name	Monitoring Location Description
Inshore Station	R-M-IL6	West of Point Fermin, 33° 42.44', 118° 18.53'
Inshore Station	R-M-IL7	Cabrillo Beach, 33° 42.20', 118° 17.04'

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, provided that such omissions do not occur in consecutive weeks or in more than four weeks in a calendar year. 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	R-M-6C	6C, 33° 42.47', 118° 21.24'
Offshore Station	R-M-8C	8C, 33° 41.91', 118° 20.14'
Offshore Station	R-M-9C	9C, 33° 41.32', 118° 19.10'

as follows:

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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.

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B. Nearshore/Offshore Water Quality Monitoring

This monitoring addresses the question: Are Ocean Plan limits for dissolved oxygen and pH being met? Data collected 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 200 kilometers of coast in Ventura, Los Angeles and Orange Counties from the nearshore zone to approximately 10 kilometers offshore. This cooperative program contributes to a regional understanding of seasonal patterns in 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	R-WQ-2501	10 meter depth, 33° 07.22', 118° 43.67'
Nearshore/Offshore Station	R-WQ-2502	20 meter depth, 33° 07.67', 118° 41.94'
Nearshore/Offshore Station	R-WQ-2503	26 meter depth, 33° 08.12', 118° 40.21'
Nearshore/Offshore Station	R-WQ-2504	33 meter depth, 33° 08.57', 118° 38.48'
Nearshore/Offshore Station	R-WQ-2505	44 meter depth, 33° 09.02', 118° 36.75'
Nearshore/Offshore Station	R-WQ-2506	60 meter depth, 33° 09.54', 118° 34.86'
Nearshore/Offshore Station	R-WQ-2601	19 meter depth, 33° 11.06', 118° 43.23'
Nearshore/Offshore Station	R-WQ-2602	23 meter depth, 33° 11.43', 118° 41.64'
Nearshore/Offshore Station	R-WQ-2603	23 meter depth, 33° 11.80', 118° 40.05'
Nearshore/Offshore Station	R-WQ-2604	32 meter depth, 33° 12.18', 118° 38.46'

Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	R-WQ-2605	47 meter depth, 33° 12.55', 118° 36.88'
Nearshore/Offshore Station	R-WQ-2606	62 meter depth, 33° 12.93', 118° 35.29'
Nearshore/Offshore Station	R-WQ-2701	26 meter depth, 33° 14.80', 118° 42.46'
Nearshore/Offshore Station	R-WQ-2702	26 meter depth, 33° 15.07', 118° 41.32'
Nearshore/Offshore Station	R-WQ-2703	28 meter depth, 33° 15.34', 118° 40.17'
Nearshore/Offshore Station	R-WQ-2704	50 meter depth, 33° 15.60', 118° 39.02'
Nearshore/Offshore Station	R-WQ-2705	100 meter depth, 33° 15.87', 118° 37.88'
Nearshore/Offshore Station	R-WQ-2706	80 meter depth, 33° 16.14', 118° 36.73'
Nearshore/Offshore Station	R-WQ-2801	10 meter depth, 33° 17.06', 118° 42.17'
Nearshore/Offshore Station	R-WQ-2802	30 meter depth, 33° 17.34', 118° 41.60'
Nearshore/Offshore Station	R-WQ-2803	60 meter depth, 33° 17.81', 118° 40.11'
Nearshore/Offshore Station	R-WQ-2804	100 meter depth, 33° 18.08', 118° 39.46'
Nearshore/Offshore Station	R-WQ-2805	100 meter depth, 33° 18.24', 118° 38.91'
Nearshore/Offshore Station	R-WQ-2806	100 meter depth, 33° 18.55', 118° 38.22'
Nearshore/Offshore Station	R-WQ-2901	10 meter depth, 33° 19.41', 118° 42.86'
Nearshore/Offshore Station	R-WQ-2902	30 meter depth, 33° 19.79', 118° 42.42'
Nearshore/Offshore Station	R-WQ-2903	60 meter depth, 33° 20.14', 118° 41.91'
Nearshore/Offshore Station	R-WQ-2904	100 meter depth, 33° 20.34', 118° 41.27'
Nearshore/Offshore Station	R-WQ-2905	100 meter depth, 33° 20.77', 118° 40.26'
Nearshore/Offshore Station	R-WQ-2906	100 meter depth, 33° 21.26', 118° 39.24'
Nearshore/Offshore Station	R-WQ-3001	10 meter depth, 33° 21.62', 118° 43.93'
Nearshore/Offshore Station	R-WQ-3002	30 meter depth, 33° 21.79', 118° 43.34'
Nearshore/Offshore Station	R-WQ-3003	60 meter depth, 33° 21.96', 118° 42.88'
Nearshore/Offshore Station	R-WQ-3004	100 meter depth, 33° 22.28', 118° 42.06'
Nearshore/Offshore Station	R-WQ-3005	100 meter depth, 33° 22.86', 118° 41.10'
Nearshore/Offshore Station	R-WQ-3006	100 meter depth, 33° 23.44', 118° 40.01'
Nearshore/Offshore Station	R-WQ-3051	13 meter depth, 33° 23.66', 118° 44.18'
Nearshore/Offshore Station	R-WQ-3052	30 meter depth, 33° 24.03', 118° 43.99'
Nearshore/Offshore Station	R-WQ-3053	60 meter depth, 33° 24.15', 118° 43.80'
Nearshore/Offshore Station	R-WQ-3054	100 meter depth, 33° 24.66', 118° 43.14'
Nearshore/Offshore Station	R-WQ-3055	100 meter depth, 33° 25.32', 118° 42.30'
Nearshore/Offshore Station	R-WQ-3056	100 meter depth, 33° 25.99', 118° 41.38'
Nearshore/Offshore Station	R-WQ-3101	10 meter depth, 33° 25.81', 118° 46.26'
Nearshore/Offshore Station	R-WQ-3102	30 meter depth, 33° 26.12', 118° 45.90'
Nearshore/Offshore Station	R-WQ-3103	60 meter depth, 33° 26.46', 118° 45.44'
Nearshore/Offshore Station	R-WQ-3104	100 meter depth, 33° 26.99', 118° 44.72'
Nearshore/Offshore Station	R-WQ-3105	100 meter depth, 33° 27.67', 118° 43.73'
Nearshore/Offshore Station	R-WQ-3106	100 meter depth, 33° 28.53', 118° 42.76'

as follows:

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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	R-WQ-2504	33 meter depth, 33° 08.57', 118° 38.48'
Nearshore/Offshore Station	R-WQ-2505	44 meter depth, 33° 09.02', 118° 36.75'
Nearshore/Offshore Station	R-WQ-2506	60 meter depth, 33° 09.54', 118° 34.86'
Nearshore/Offshore Station	R-WQ-2604	32 meter depth, 33° 12.18', 118° 38.46'
Nearshore/Offshore Station	R-WQ-2605	47 meter depth, 33° 12.55', 118° 36.88'
Nearshore/Offshore Station	R-WQ-2606	62 meter depth, 33° 12.93', 118° 35.29'
Nearshore/Offshore Station	R-WQ-2704	50 meter depth, 33° 15.60', 118° 39.02'
Nearshore/Offshore Station	R-WQ-2705	100 meter depth, 33° 15.87', 118° 37.88'
Nearshore/Offshore Station	R-WQ-2706	80 meter depth, 33° 16.14', 118° 36.73'
Nearshore/Offshore Station	R-WQ-2802	30 meter depth, 33° 17.34', 118° 41.60'
Nearshore/Offshore Station	R-WQ-2803	60 meter depth, 33° 17.81', 118° 40.11'
Nearshore/Offshore Station	R-WQ-2804	100 meter depth, 33° 18.08', 118° 39.46'
Nearshore/Offshore Station	R-WQ-2902	30 meter depth, 33° 19.79', 118° 42.42'
Nearshore/Offshore Station	R-WQ-2903	60 meter depth, 33° 20.14', 118° 41.91'
Nearshore/Offshore Station	R-WQ-2904	100 meter depth, 33° 20.34', 118° 41.27'

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Station Type	Monitoring Location Name	Monitoring Location Description
Nearshore/Offshore Station	R-WQ-3002	30 meter depth, 33° 21.79', 118° 43.34'
Nearshore/Offshore Station	R-WQ-3003	60 meter depth, 33° 21.96', 118° 42.88'
Nearshore/Offshore Station	R-WQ-3004	100 meter depth, 33° 22.28', 118° 42.06'
Nearshore/Offshore Station	R-WQ-3052	30 meter depth, 33° 24.03', 118° 43.99'
Nearshore/Offshore Station	R-WQ-3053	60 meter depth, 33° 24.15', 118° 43.80'
Nearshore/Offshore Station	R-WQ-3054	100 meter depth, 33° 24.66', 118° 43.14'
Nearshore/Offshore Station	R-WQ-3102	30 meter depth, 33° 26.12', 118° 45.90'
Nearshore/Offshore Station	R-WQ-3103	60 meter depth, 33° 26.46', 118° 45.44'
Nearshore/Offshore Station	R-WQ-3104	100 meter depth, 33° 26.99', 118° 44.72'

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 Districts shall participate in the Central Region Cooperative Water Quality Survey steering and technical committees. Recommendations for changes in survey design that significantly alter the JWPCP's 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	R-WQ-L1	Palos Verdes Point, 33° 46.12', 118° 25.82'
Nearshore Station	R-WQ-L2	Long Point, 33° 44.09', 118° 24.22'
Nearshore Station	R-WQ-L3	Portuguese Point, 33° 44.06', 118° 22.72'
Nearshore Station	R-WQ-L4	Bunker Point, 33° 43.40', 118° 21.12'
Nearshore Station	R-WQ-L5	Royal Palms, 33° 42.85', 118° 19.93'
Nearshore Station	R-WQ-L6	West of Point Fermin, 33° 42.36', 118° 18.53'
Nearshore Station	R-WQ-L7	Cabrillo Beach, 33° 41.83', 118° 17.10'

as follows:

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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). 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	R-B-0A	305 meter depth, 33° 49.10', 118° 27.25'
Bottom Station	R-B-0B*	152 meter depth, 33° 48.70', 118° 26.50'
Bottom Station	R-B-0C*	61 meter depth, 33° 48.43', 118° 25.83'
Bottom Station	R-B-0D*	30 meter depth, 33° 48.17', 118° 25.36'
Bottom Station	R-B-1A	305 meter depth, 33° 44.72', 118° 26.99'
Bottom Station	R-B-1B*	152 meter depth, 33° 44.97', 118° 26.81'
Bottom Station	R-B-1C*	61 meter depth, 33° 45.44', 118° 26.46'
Bottom Station	R-B-1D*	30 meter depth, 33° 45.90', 118° 26.12'
Bottom Station	R-B-2A	305 meter depth, 33° 43.62', 118° 25.72'
Bottom Station	R-B-2B	152 meter depth, 33° 43.95', 118° 25.55'
Bottom Station	R-B-2C	61 meter depth, 33° 44.26', 118° 25.39'
Bottom Station	R-B-2D	30 meter depth, 33° 44.47', 118° 25.28'
Bottom Station	R-B-3A	305 meter depth, 33° 43.14', 118° 24.66'
Bottom Station	R-B-3B*	152 meter depth, 33° 43.43', 118° 24.44'
Bottom Station	R-B-3C*	61 meter depth, 33° 43.80', 118° 24.15'
Bottom Station	R-B-3D*	30 meter depth, 33° 43.99', 118° 24.03'
Bottom Station	R-B-4A	305 meter depth, 33° 42.70', 118° 23.38'
Bottom Station	R-B-4B	152 meter depth, 33° 43.00', 118° 23.24'

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

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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/L	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually
Organic nitrogen	mg/L	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 the bottom station table for the Infaunal Community Survey above) in years one through four of the permit and all 44 bottom stations in year five of the permit as follows:

Table 19. Sediment Chemistry Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved sulfides	mg/ Kg	0.1 square meter Van Veen grab (upper 2 centimeters, porewater)	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
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]	pg/ 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 local 303(d) list	µg/ Kg	0.1 square meter Van Veen grab (upper 2 centimeters)	Annually

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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 and for the 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.

A regional survey of benthic conditions within the Southern California Bight tentatively is scheduled for 2008 (Bight'08) and subsequently every five years. The final survey design will be determined cooperatively by the participants as represented on the Regional Steering Committee. The Districts will provide support to the Bight'08 benthic survey and subsequent 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, Benthos and Chemistry)
Field sampling at sea
Infaunal sample analysis
Sediment chemistry analysis
Data management

The level of participation shall be consistent with that provided by the Districts to the 2003 Regional Benthic Survey (Bight'03) and shall include the field collection, laboratory infaunal analysis and chemical analysis of a minimum of 30 benthic sediment samples.

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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 are used for regular assessment of temporal trends in community structure along a fixed grid of sites within the vicinity of the discharge. Data collected on trash and debris 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	R-T-T0/23	23 meter depth, 33° 48.19', 118° 25.04' (trawl mid-point)
Bottom Station	R-T-T0/61	61 meter depth, 33° 48.57', 118° 25.84' (trawl mid-point)
Bottom Station	R-T-T0/137	137 meter depth, 33° 48.83', 118° 26.36' (trawl mid-point)
Bottom Station	R-T-T0/305	305 meter depth, 33° 49.23', 118° 27.09' (trawl mid-point)
Bottom Station	R-T-T1/23	26 meter depth, 33° 44.65', 118° 25.09' (trawl mid-point)

Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	R-T-T1/61	61 meter depth, 33° 44.16', 118° 25.23' (trawl mid-point)
Bottom Station	R-T-T1/137	137 meter depth, 33° 44.84', 118° 25.34' (trawl mid-point)
Bottom Station	R-T-T1/305	305 meter depth, 33° 43.55', 118° 25.64' (trawl mid-point)
Bottom Station	R-T-T4/23	27 meter depth, 33° 42.79', 118° 20.48' (trawl mid-point)
Bottom Station	R-T-T4/61	61 meter depth, 33° 42.33', 118° 20.92' (trawl mid-point)
Bottom Station	R-T-T4/137	137 meter depth, 33° 44.06', 118° 21.05' (trawl mid-point)
Bottom Station	R-T-T4/305	305 meter depth, 33° 42.00', 118° 21.49' (trawl mid-point)
Bottom Station	R-T-T5/23	23 meter depth, 33° 42.29', 118° 18.98' (trawl mid-point)
Bottom Station	R-T-T5/61	61 meter depth, 33° 41.45', 118° 19.31' (trawl mid-point)
Bottom Station	R-T-T5/137	137 meter depth, 33° 41.11', 118° 19.61' (trawl mid-point)
Bottom Station	R-T-T5/305	305 meter depth, 33° 40.85', 118° 19.85' (trawl mid-point)

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 captures 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 or 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 structure [9] 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 tentatively is scheduled for 2008 (Bight'08) and subsequently every five years. The final survey design will be determined cooperatively by the participants as represented on the Regional Steering Committee. The Districts will provide support to the Bight'08 and subsequent 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

R E V I S E D T E N T A T I V E

Trawl sample analysis
Data management

The level of participation shall be consistent with that provided by the Districts to the 2003 Regional Survey (Bight'03) and shall include the field collection and processing of trawls at a minimum of 20 sites.

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 are 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	R-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.
Bottom Station	R-BA-Z2	**Intermediate zone**: inshore of the 150 meter depth contour and between a line bearing 160° magnetic off Long Point and a line bearing 245° magnetic off Point Vicente.
Bottom Station	R-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.

as follows:

Table 23. Bioaccumulation Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total DDT [5]	µg/kg	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of white croaker [10]	annually
DDT derivatives [6]	µg/kg	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of white croaker [10]	annually
Total PCB [7]	µg/kg	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually

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Parameter	Units	Sample Type	Minimum Sampling Frequency
		Composite of muscle tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of white croaker [10]	annually
PCB derivatives [8]	µg/kg	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of hornyhead turbot	annually
		Composite of muscle tissue from 10 individuals of white croaker [10]	annually
% moisture	%	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of white croaker [10]	annually
% lipid	%	Composite of liver tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of hornyhead turbot [10]	annually
		Composite of muscle tissue from 10 individuals of white croaker [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 (SL) 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 Project (SMBRP). The Districts 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	R-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.

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Station Type	Monitoring Location Name	Monitoring Location Description
Bottom Station	R-BA-Z2	**Intermediate zone**: inshore of the 150 meter depth contour and between a line bearing 160° magnetic off Long Point and a line bearing 245° magnetic off Point Vicente.
Bottom Station	R-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.

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

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.

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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. Should such a survey occur during the permit period, the Discharger shall provide support to a Regional 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)
Field sampling at sea
Tissue chemical analysis
Data management

The Districts' participation shall be consistent with that provided by the Discharger to similar regional bioaccumulation 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.

A 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 Districts provided support to the Bight'03 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)
Field sampling at sea
Tissue chemical analysis

This level of participation was consistent with that provided by the Districts to the 1998 Regional Predator Risk Survey. The next regional survey is expected to occur in 2008 and the Districts' 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 Districts 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

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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 Districts will carry out special studies to address unexplained deterioration of local beds.

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

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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.

[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] 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.

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VII. OTHER MONITORING REQUIREMENTS

A. Outfall and Diffuser Inspection

This survey answers the question: Are the outfall structures in serviceable condition ensuring their continued safe operation? The data collected will be used for a periodic assessment of the integrity of the outfall pipes and ballasting system.

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.

B. Sludge Monitoring and Reporting

The Discharger must comply with all requirements of 40 CFR 257, 258, 501, and 503, including all applicable monitoring, record keeping, and reporting requirements.

The Discharger must comply with the monitoring and reporting requirements outlined in Attachment I in this Order, [*Biosolids/Sludge Management]*.

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 report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 136.

3. 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 Waste Discharge Requirements.

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

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 in the monthly monitoring report following the analysis.

6. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; or where no methods are specified for a given pollutant, by methods approved by the Regional Water Board, State Board and/or USEPA. The laboratory conducting analyses shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Regional Water Board for that particular parameter. A copy of the laboratory certification shall be submitted with the annual summary report.

7. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR 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 them 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.

8. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this monitoring program using approved analytical methods, the results of those analyses shall be reported. These results shall be reflected in the calculation of the average used in demonstrating compliance with average effluent, receiving water, etc., limitations.

9. 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 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.

   a. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR 136 (revised May 14, 1999), unless alternate methods have been approved by USEPA pursuant to 40 CFR 136, or improved methods have been determined by the Executive Officer and/or USEPA.

   b. Detection methods used for enterococcus shall be those presented in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

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B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs in accordance with the requirements described in subsection B.5 below. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through VII. Addtionally, the Discharger shall report in the SMR the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C of this Order. The Discharger shall submit monthly, quarterly, semiannual, annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

Table 26. Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 15th 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	April 1

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 136.

   For each numeric effluent limitation identified in Table B of the 2001 Ocean Plan, the Discharger shall select one or more Minimum Levels (ML) and their associated analytical methods from

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Appendix II of the 2001 Ocean Plan (Appendix II). Any deviation from MLs in Appendix II must be approved by the Regional Water Board and/or the State Water Board. The "reported" ML is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from Appendix II.

The Discharger must select all MLs from Appendix II that are below the effluent limitation. If the effluent limitation is lower than all the MLs in Appendix II, the Discharger must select the lowest ML from Appendix II.

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."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

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

5. The Discharger shall submit hard copy SMRs when required by subsection B.1 above in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

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

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

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320 West 4th Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

C. Discharge Monitoring Reports (DMRs)

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

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

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. 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 and receiving water bacterial monitoring data. The annual report shall contain graphical and tabular summaries of the monitoring analytical data. The annual report shall also contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Discharger shall submit a hard copy annual report to the Regional Water Board in accordance with the requirements described in subsection B.5 above.

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, 2007.

   By August 1 of every other year, a biennial receiving water monitoring report instead of the annual summary report shall be prepared and submitted to the Regional Water Board .
   This report shall include an in-depth discussion of the results from the Receiving Water Monitoring programs conducted during the previous two calendar years. The report may be limited to discussion of those components of the Receiving Water Monitoring Program that are local in nature. Results of regional surveys need not be included. Temporal and spatial trends in the data shall be analyzed, with particular reference to comparisons between stations with respect to distance from the outfall and comparisons to data collected during previous years. Appropriate statistical tests and indices, subject to approval of the Executive Officer, shall be calculated and included in the biennial report. The first biennial report shall be due on August 1, 2008 covering the period from the permit effective date in 2006 through December 31, 2007.

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Submission of reports of the results of regional monitoring programs in which the Regional Water Board and discharger are co-participants will not be the responsibility of the Discharger.

3. **Outfall Inspection Report**

A summary of the Outfall Inspection findings shall be submitted by August 1 of the year following an outfall inspection survey. This written report, augmented with videographic and/or photographic images, will provide a description of the observed external condition of the discharge pipes from shallow water to their respective termini.

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Figure 1. Shoreline Monitoring Stations

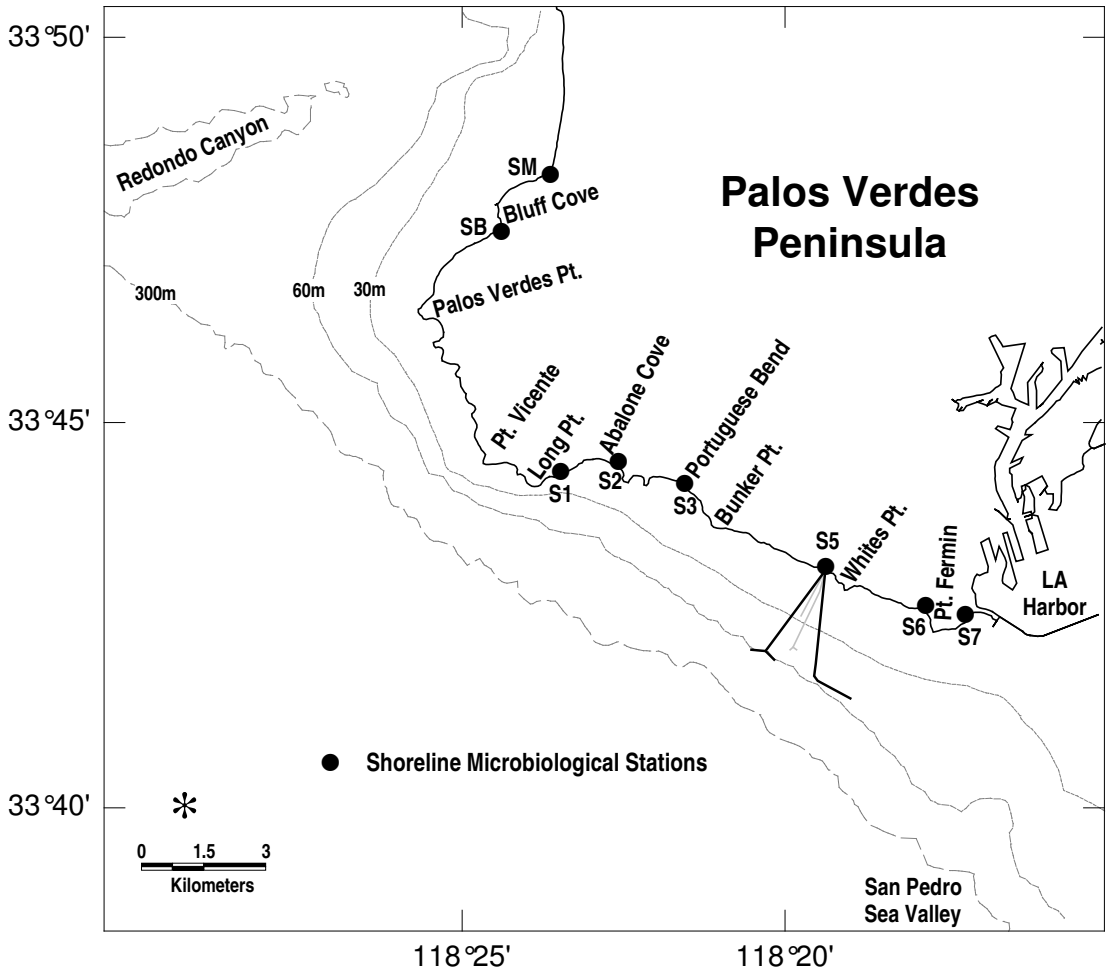

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Figure 2. Inshore Monitoring Stations

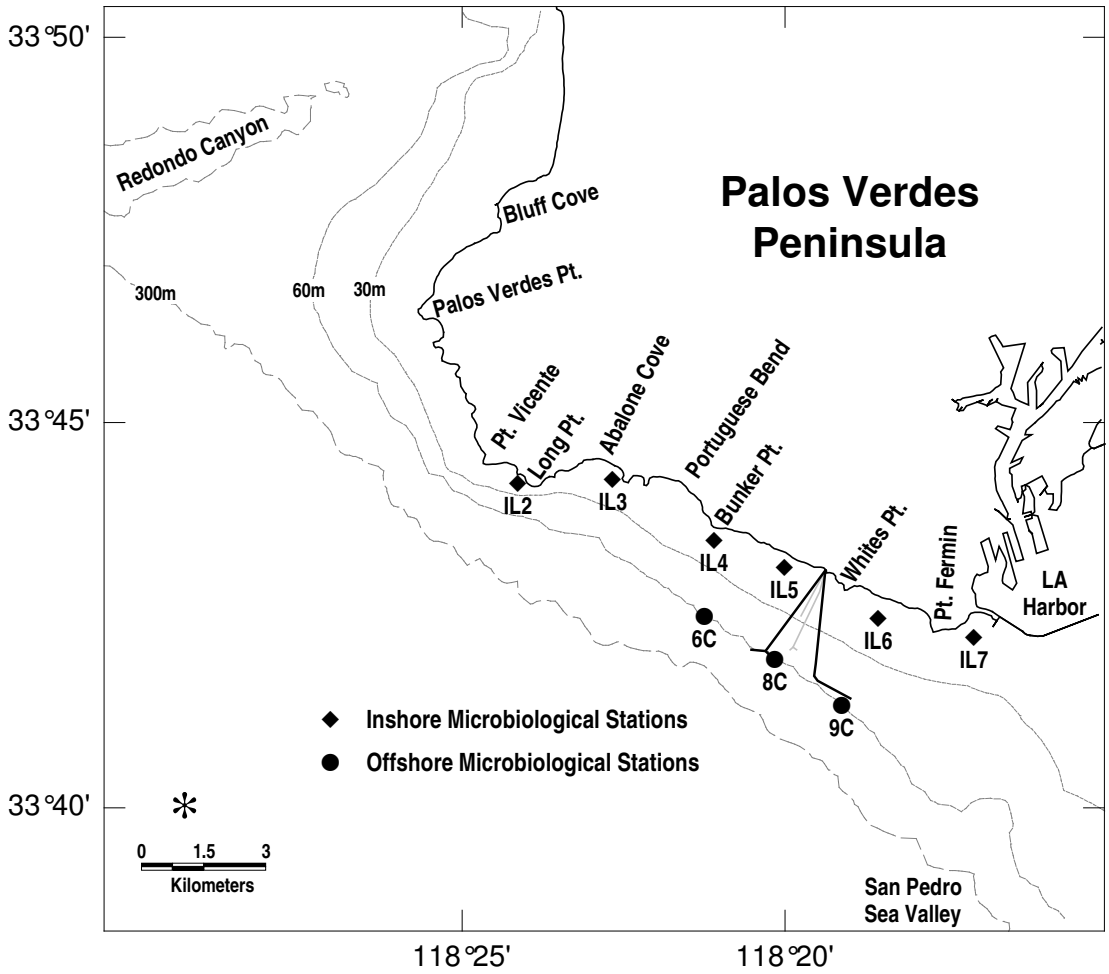

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Figure 3. Nearshore/Offshore Water Quality Monitoring Stations

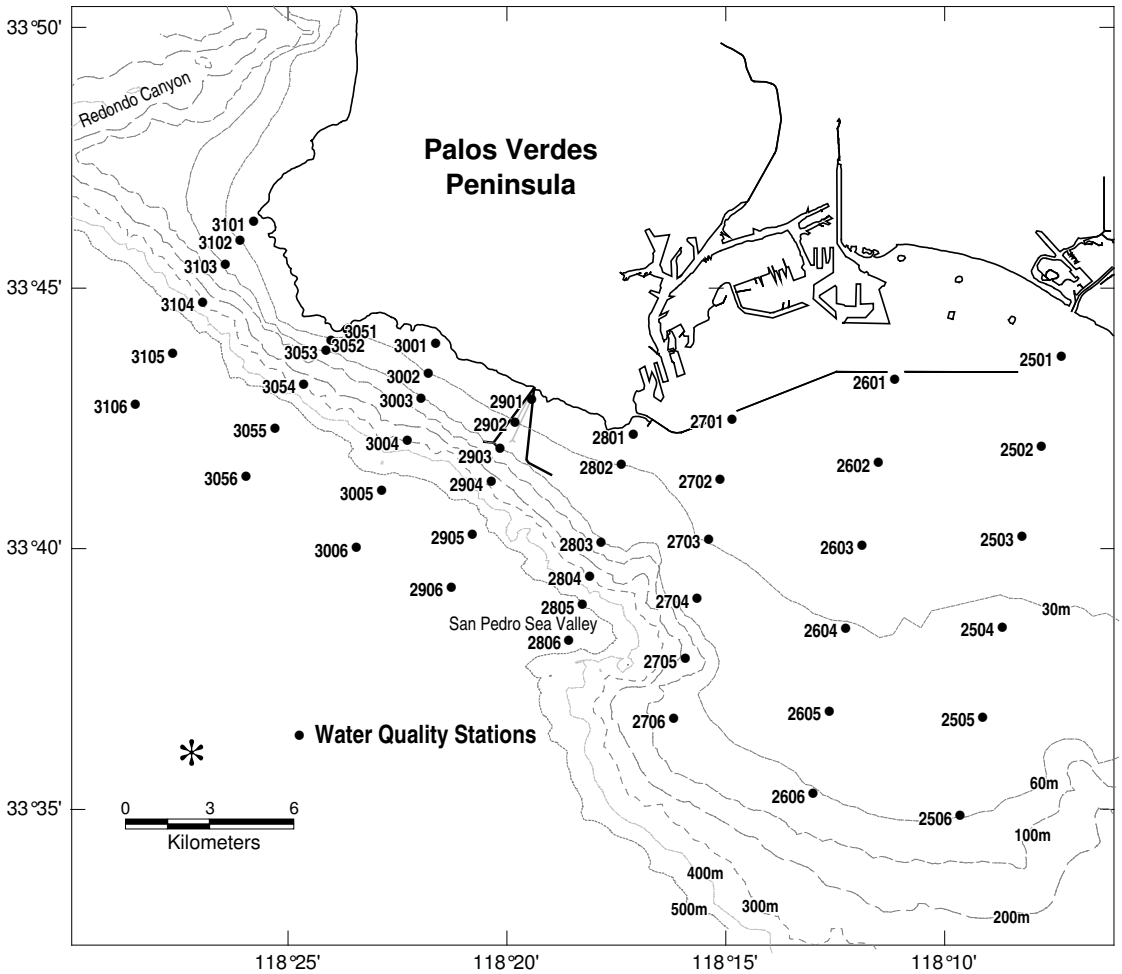

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Figure 4. Nearshore Light Energy Profiling Stations

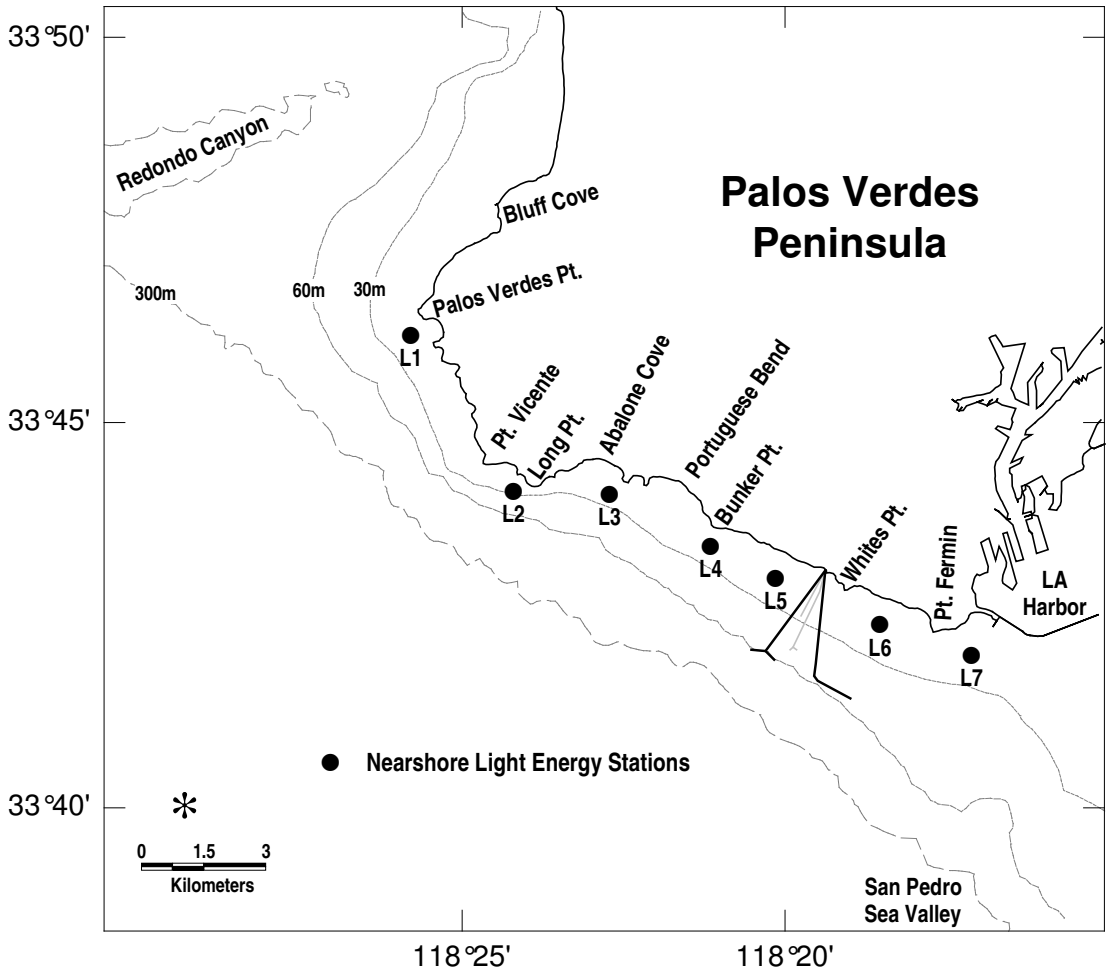

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Figure 5. Benthic Infaunal and Sediment Chemistry Sampling Stations

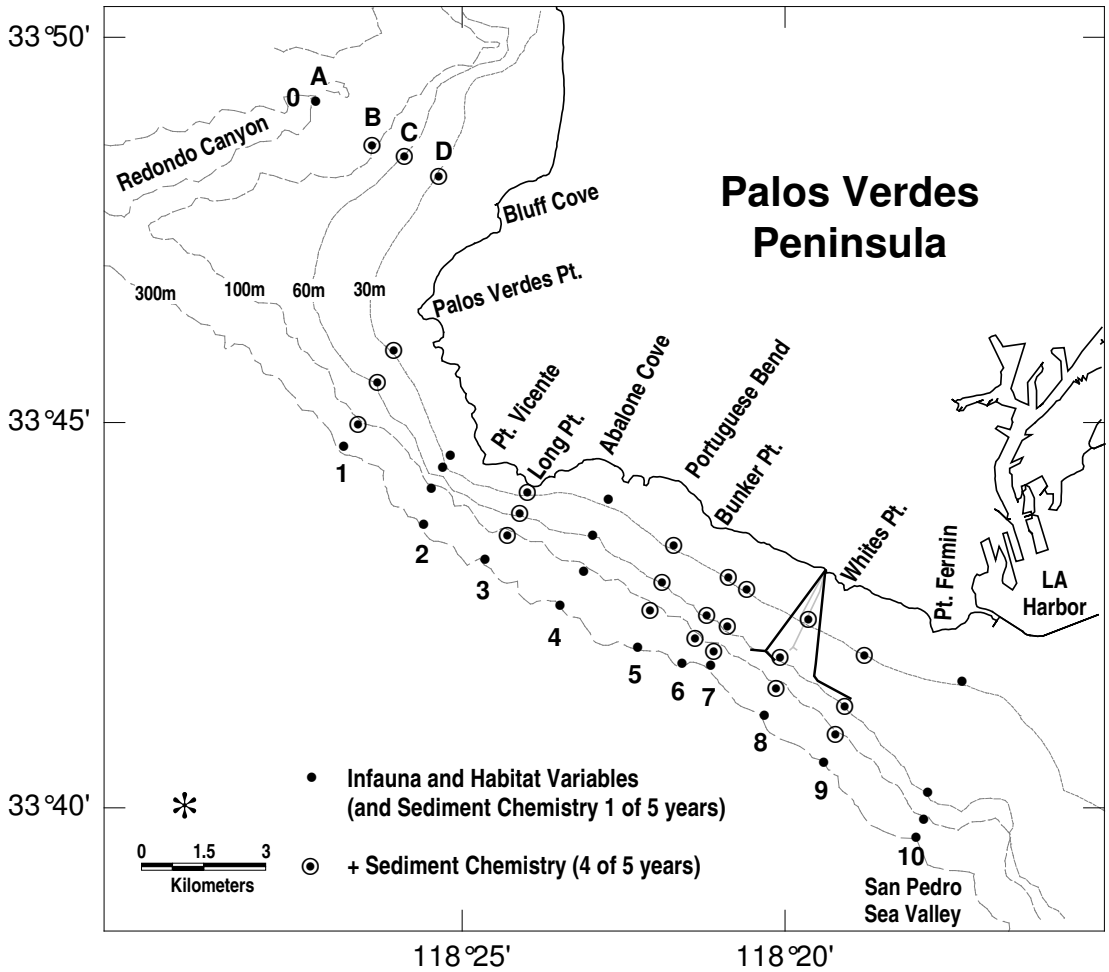

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Figure 6. Local Demersal Fish and Invertebrate Stations

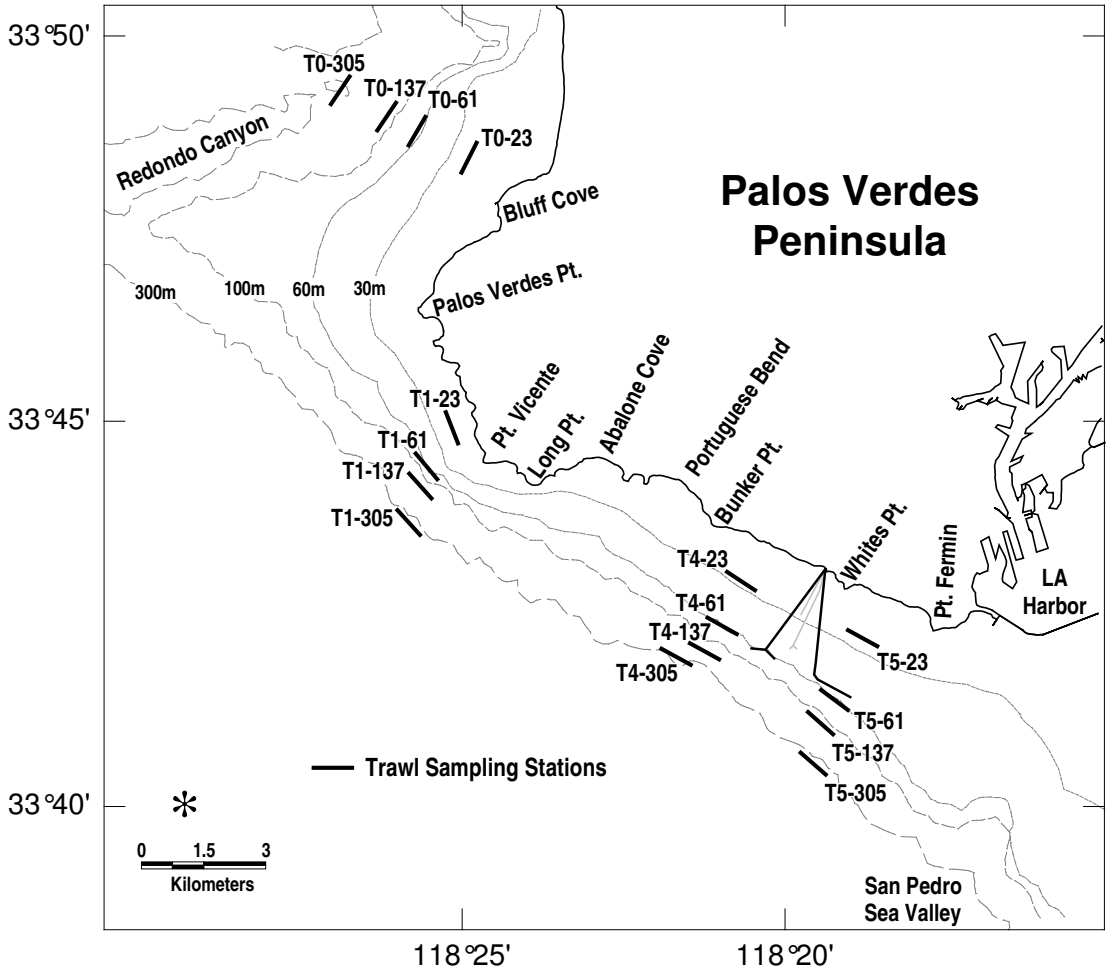

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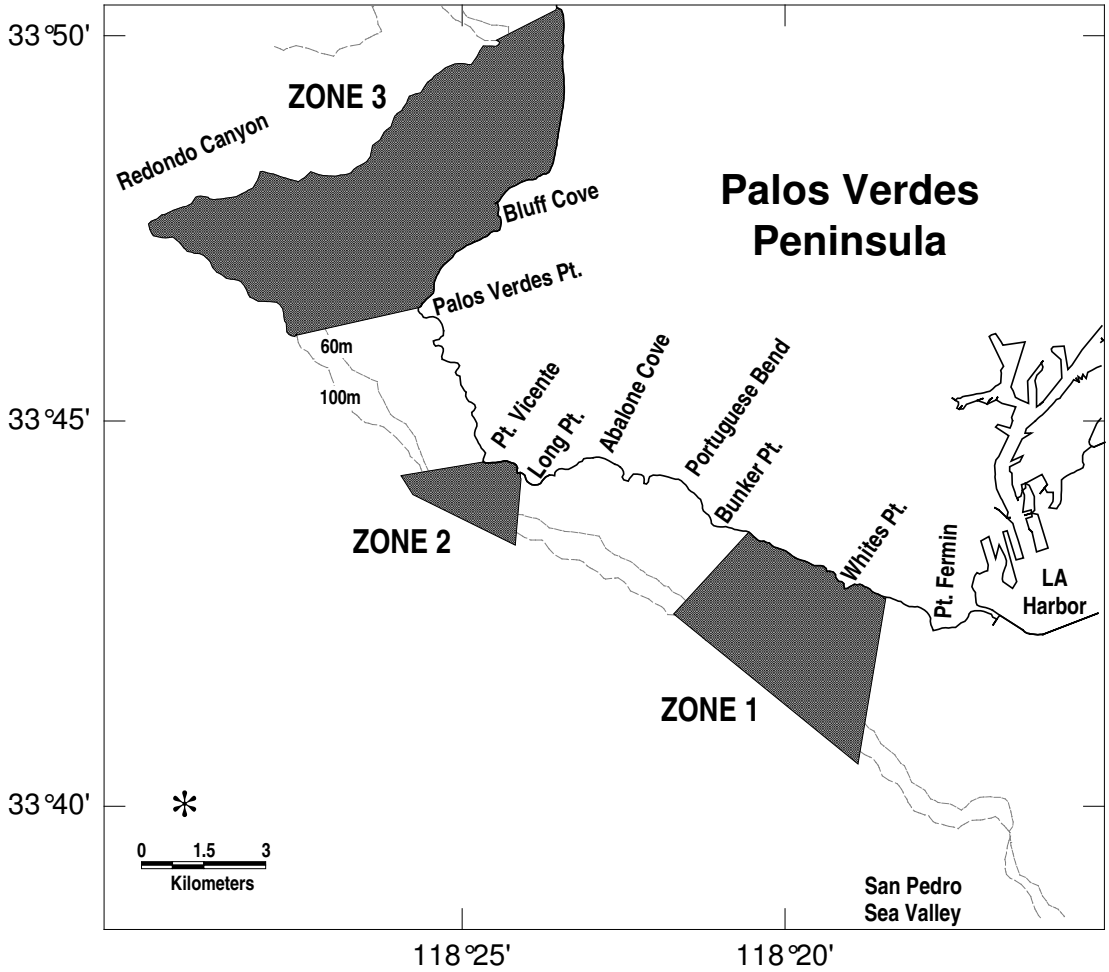
Figure 7. Local Bioaccumulation Sampling Zones



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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	**4B190107013**
Discharger	**County Sanitation Districts of Los Angeles County**
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) 699-7411 x 2803**
Authorized Person to Sign and Submit Reports	**Ann Heil, Supervising Engineer, (562) 699-7411 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**
Facility Design Flow	**400 million gallons per day**
Watershed	**Santa Monica Bay**
Receiving Water	**Pacific Ocean**
Receiving Water Type	**Ocean**

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A. The County Sanitation Districts of Los Angeles County (hereinafter Discharger or Districts) is the owner and operator of the Joint Water Pollution Control Plant (hereinafter Facility or JWPCP), a Municipal POTW.

B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States, at Whites Point, off the Palos Verdes Peninsula and is currently regulated by Order No. 97-090 which was adopted on June 16, 1997. 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 adopted 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, 2001. The application was deemed complete on May 6, 2002. A

site visit was conducted on January 26, 2006, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The County Sanitation Districts of Los Angeles County owns and operates the Joint Water Pollution Control Plant, located at 24501 South Figueroa Street in Carson, California. This Order establishes discharge prohibitions, limitations, and conditions to regulate the discharge from JWPCP to the Pacific Ocean; the discharge was currently regulated by Order No. 97-090 (NPDES Permit No. CA0053813) that expired on May 10, 2002 and administratively extended until the adoption of this Order.

On June 8, 1994, a Consent Decree [No. 92 0061 RG (JRx)] was entered in federal court records between the Districts and the USEPA Region 9 and the Regional Water Board. The Consent Decree primarily requires the Districts to construct additional secondary treatment facilities and achieve compliance with full secondary treatment at JWPCP by December 31, 2002. The completion of full secondary treatment facilities was achieved prior to the deadline of December 31, 2002. Since January of 2003 JWPCP has operated as a full secondary plant and has continuously maintained compliance with secondary treatment requirements.

JWPCP is part of a Joint Outfall System with 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 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. 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. JWPCP has a dry weather average design treatment capacity of 400 million gallons per day (mgd) and a peak design capacity of 540 mgd. For the period from January 2003 (JWPCP in full secondary treatment mode) to August 2005, effluent discharge flow from JWPCP has averaged 322 mgd with a maximum daily flow of 492 mgd on February 21, 2005.

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 onsite. The digested solids are screened, and dewatered using scroll centrifuges. The dewatered cake contains approximately 25% solids (Class B biosolids). JWPCP generates approximately 11,000 wet tons of Class B biosolids per week. More than half of the biosolids are managed by composting operations in Riverside and Kern County. One quarter of the biosolids are sent to southwestern Arizon for air drying and direct land application. The remaining biosolids are lime stabilized for Class A land application in Kern County, incinerated in a cement kiln in San Bernardino County, and co-disposed with municipal solid waste in Los Angeles County.

Digester gas (containing approximately 65% methane), produced from anaerobic digestion of sludge, is used onsite to fuel a combined cycle power plant (gas turbines followed by boilers and a steam turbine)

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which generates 22 MW of electricity for plant equipment and steam for digester heating. The power plant allows JWPCP to be essentially self-sufficient with respect to its energy requirements and even produces surplus electricity for export to Southern California Edison Co. sufficient to power approximately 1,500 homes.

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 Whites Point off the Palos Verdes Peninsula.

JWPCP has fifteen discharge points (Discharge Serial Nos. 001 through 015). Four outfalls (Discharge Serial Nos. 001 through 004) are located at Whites Point, off the Palos Verdes Peninsula. Discharge Serial Nos. 001 and 002 are routinely used for discharge of treated wastewater. Discharge Serial No. 003 is used only during times of heavy rains to provide hydraulic relief for flow in the outfall system. Discharge Serial No. 004 serves as a standby outfall to provide additional hydraulic relief during the very heaviest flows. These four outfalls are described as follows:

Discharge Point	Description
Serial No. 001	**Whites Point 120-inch ocean outfall** (Latitude 33 ° 41' 52" N, Longitude 118° 19' 27" W) This outfall routinely discharges approximately 65% of the effluent from the JWPCP. It discharges south of the shoreline off Whites 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.
Serial No. 002	**Whites Point 90-inch ocean outfall** (Latitude 33 ° 42' 02" N, Longitude 118° 20' 14" W) This outfall routinely discharges approximately 35% of the effluent from the JWPCP. It discharges southwest of the shoreline off Whites 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.
Serial No. 003	**Whites 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 Whites Point shoreline between Discharge Points 001 and 002 and about 160 ft below the ocean surface. The outfall is about 6500 ft long and connect to one of three legs of a y-shaped diffuser upstream of the y-intersection. Each leg is approximately 200 ft long.
Serial No. 004	**Whites 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 heasiest flow. When used, it discharges off the Whites 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 Serial Nos. 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 Serial Nos. 005, 007-012, 014, and 015).

In addition to the JWPCP effluent, the waste brine generated by the West Basin Municipal Water Districts'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 NPDES permit.

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

Effluent limitations contained in the existing Order (Order No. 97-090) for discharges from JWPCP and representative monitoring data for conventional and nonconventional pollutants from January 2003 to August 2005 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. 97-090			Monitoring Data (From Jan. 2003 to Aug. 2005)		
	Average Monthly	Average Weekly	Maximum Daily	Highest 30-day Average Discharge	Highest 7-day Average Discharge	Highest Daily Discharge
BOD_5 (mg/L)	30	45	---	12	17	46
(lbs/day)	96,400	145,000	---	32,413	49,596	123,520
TSS (mg/L)	30	45	---	21	26	54
(lbs/day)	96,400	145,000	---	57,325	77,946	186,764
O&G (mg/L)	---	---	---	< 5	< 5	< 5
(lbs/day)	---	---	---	< 13,858	< 14,686	< 18,262
Settleable Solids (ml/L)	0.5	0.75	1.5	0.1	0.1	0.1
Turbidity (NTU)	75	100	225	9	11	22
pH (pH units)	6.0 to 9.0			6.09 to 7.70		
Temperature (^oF)	<100			71.2 to 89.7		

Order No 97-090 established effluent limitations for toxic pollutants based on water quality objectives of the Ocean Plan (1990). A summary of existing effluent limitations and monitoring data of toxic pollutants for the period from November 2002 to August 2005 are showed below.

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

Parameters	units	Effluent Limitation in Order No. 97-090			Monitoring Data (From Nov. 2002 to Aug. 2005)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Marine Aquatic Life Protection								
Arsenic	µg/L	--	--	--	<1	<1	1	2.1
Cadmium	µg/L	167	668	1670	<0.25	< 1	1	1
Chromium (VI)	µg/L	334	1336	3340	<100	<100	--	--
Copper	µg/L	169	676	1690	< 6	< 6	2.3	12
Lead	µg/L	--	--	--	<0.25	< 8	0.3	11
Mercury	µg/L	6.6	26.4	66	< 0.5	< 0.5	--	--
Nickel	µg/L	835	3340	8350	< 25	< 25	7	37
Selenium	µg/L	--	--	--	--	--	4.7	11.9
Silver	µg/L	91	364	910	<0.25	< 5	5	12
Zinc	µg/L	2012	8048	20120	< 25	< 25	13	32
Total Cyanide	µg/L	167	668	1670	< 4	< 4	4	8
Chlorine Residual (Daily) (Outfall 001)	µg/L	334	1336	10020	< 100	< 100	100	4500
Chlorine Residual (Daily) (Outfall 002)	µg/L	334	1336	10020	< 100	< 100	100	3100

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Parameters	units	Effluent Limitation in Order No. 97-090			Monitoring Data (From Nov. 2002 to Aug. 2005)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Ammonia	mg/L	--	--	--	--	--	28.4	35.6
Acute Toxicity	TUa	1.5	2	2.5	--	--	0	1
Chronic Toxicity (survival)	TUc	--	--	167	--	--	42	42
Phenols (unchlorinated)	µg/L	--	--	--	< 10	< 50	--	--
2,4-Dimethylphenol	µg/L	--	--	--	< 2	< 10	--	--
2,4-Dinitrophenol	µg/L	--	--	--	< 5	< 25	--	--
2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	< 5	< 25	--	--
2-Nitrophenol	µg/L	--	--	--	< 10	< 50	--	--
4-Nitrophenol	µg/L	--	--	--	< 10	< 50	--	--
Phenols (chlorinated)	µg/L	167	668	1670	< 10	< 50	--	--
2-Chlorophenol	µg/L	--	--	--	< 5	< 25	--	--
2,4-Dichlorophenol	µg/L	--	--	--	< 5	< 25	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--	< 1	< 5	--	--
Pentachlorophenol	µg/L	--	--	--	< 5	< 25	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	< 10	< 50	--	--
Endosulfan	µg/L	1.5	6	15	< 0.01	< 0.4	--	--
Endosulfan I	µg/L	--	--	--	< 0.01	< 0.04	--	--
Endosulfan II	µg/L	--	--	--	< 0.01	< 0.04	--	--
Endosulfan sulfate	µg/L	--	--	--	< 0.01	< 0.4	--	--
Endrin	µg/L	0.4	1.6	4	< 0.01	< 0.04	--	--
HCH	µg/L	0.7	2.8	7	< 0.01	< 0.01	0.01	0.01
alpha-BHC	µg/L	--	--	--	< 0.01	< 0.01	--	--
Lindane (Gamma-BHC)	µg/L	--	--	--	< 0.01	< 0.01	0.01	0.01
beta-BHC	µg/L	--	--	--	< 0.01	< 0.01	--	--
delta-BHC	µg/L	--	--	--	< 0.01	< 0.01	--	--
Human Health Protection – Noncarcinogens								
Acrolein	µg/L	--	--	--	< 5	< 100	--	--
Antimony	µg/L	--	--	--			1.1	2.6
Bis(2-cl-ethoxy) methane	µg/L	--	--	--	< 5	< 25	--	--
Bis(2-cl-isopropyl) ether	µg/L	--	--	--	< 2	< 10	--	--
Chlorobenzene	µg/L	--	--	--	<0 .5	< 0.5	--	--
Chromium (III) (using total Cr data)	µg/L	--	--	--	< 12	< 12	13	22
Di-n-butyl-phthalate	µg/L	--	--	--	< 5	< 50	--	--
Dichlorobenzene		--	--	--	< 2	< 10	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	< 2	< 10	--	--
1,3-Dichlorobenzene	µg/L	--	--	--	< 1	< 5	--	--
Diethyl phthalate	µg/L	--	--	--	< 2	< 10	--	--
Dimethyl phthalate	µg/L	--	--	--	< 2	< 10	--	--
2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	< 5	< 25	--	--
2,4-Dinitrophenol	µg/L	--	--	--	< 5	< 25	--	--
Ethyl benzene	µg/L	--	--	--	< 0.5	< 0.5	--	--

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Parameters	units	Effluent Limitation in Order No. 97-090			Monitoring Data (From Nov. 2002 to Aug. 2005)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Fluoranthene	µg/L	--	--	--	< 1	< 5	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	< 5	< 25	--	--
Nitrobenzene	µg/L	819	--	--	< 1	< 5	--	--
Thallium	µg/L	--	--	--	< 3	< 20	--	--
Toluene	µg/L	--	--	--	< 0.5	< 0.5	0.2	0.5
Tributyltin	µg/L	0.233	--	--	< 0.001	< 0.0046	0.004	0.0264
1,1,1-Trichloroethane	µg/L	--	--	--	< 0.5	< 0.5	--	--
Human Health Protection – Carcinogens								
Acrylonitrile	µg/L	17	--	--	< 5	< 50	--	--
Aldrin	µg/L	0.004	--	--	< 0.01	< 0.01	--	--
Benzene	µg/L	985	--	--	< 0.5	< 0.5	--	--
Benzidine	µg/L	0.012	--	--	< 0.04	< 5	--	--
Beryllium	µg/L	5.5	--	--	< 0.3	< 3	--	--
Bis(2-chloroethyl) ether	µg/L	7.5	--	--	< 1	< 5	--	--
Diethylhexyl phthalate	µg/L	585	--	--	< 2	< 25	12	20.3
Carbon tetrachloride	µg/L	151	--	--	< 0.5	< 0.5	--	--
Chlordane	µg/L	0.004	--	--	< 0.02	< 0.04	--	--
cis-Chlordane	µg/L	--	--	--	< .01	< .01	--	--
trans-Chlordane	µg/L	--	--	--	< .01	< .01	--	--
trans-Nonchlor	µg/L	--	--	--	< .01	< .01	--	--
Oxychlordane	µg/L	--	--	--	< .01	< .04	--	--
cis-Chlordene	µg/L	--	--	--	< .02	< .02	--	--
trans-Chlordene	µg/L	--	--	--	< .01	< .01	--	--
cis-Nonachlor	µg/L	--	--	--	< .01	< .01	--	--
Dibromochloromethane	µg/L	--	--	--	< 0.5	< 2	0.4	2
Chloroform	µg/L	--	--	--			8	34
Total DDT	µg/L	0.029	--	--	< 0.01	< 0.01	--	--
2,4'-DDE	µg/L	--	--	--	< 0.01	< 0.01	--	--
4,4'-DDE	µg/L	--	--	--	< 0.01	< 0.01	--	--
2,4'-DDD	µg/L	--	--	--	< 0.01	< 0.01	--	--
4,4'-DDD	µg/L	--	--	--	< 0.01	< 0.01	--	--
2,4'-DDT	µg/L	--	--	--	< 0.01	< 0.01	--	--
4,4'-DDT	µg/L	--	--	--	< 0.01	< 0.01	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	< 1	< 5	--	--
3,3'-Dichlorobenzidine	µg/L	1.353	--	--	< 0.04	< 5	--	--
1,2-Dichloroethane	µg/L	22	--	--	< 0.5	< 0.5	--	--
1,1-Dichloroethene	µg/L	--	--	--	< 0.5	< 0.5	--	--
Bromodichloromethane	µg/L	--	--	--	< 0.5	< 0.5	0.9	6
Methylene chloride	µg/L	75	--	--			2	12
1,3-Dichloropropene		--	--	--	< 0.5	< 0.5	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	< 0.5	< 0.5	--	--
trans-1,3-Dichloropene	µg/L	--	--	--	< 0.5	< 0.5	--	--

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Parameters	units	Effluent Limitation in Order No. 97-090			Monitoring Data (From Nov. 2002 to Aug. 2005)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Dieldrin	µg/L	0.007	--	--	< 0.01	< 0.04	--	--
2,4-Dinitrotoluene	µg/L	--	--	--	< 5	< 25	--	--
1,2-Diphenylhydrazine	µg/L	27	--	--	< 1	< 5	--	--
Halomethanes	µg/L	--	--	--	< 0.5	< 0.5	0.4	2.6
Bromoform	µg/L	--	--	--	< 0.5	< 0.5	0.5	0.6
Bromomethane	µg/L	--	--	--	< 0.5	< 1	--	--
Chloromethane	µg/L	--	--	--	< 0.5	< 0.5	0.4	2.6
Heptachlor	µg/L	--	--	--	< 0.01	< 0.01	--	--
Heptachlor epoxide	µg/L	--	--	--	< 0.01	< 0.04	--	--
Hexachlorobenzene	µg/L	0.035	--	--	< 1	< 5	--	--
Hexachlorobutadiene	µg/L	--	--	--	< 1	< 5	--	--
Hexachloroethane	µg/L	--	--	--	< 1	< 5	--	--
Isophorone	µg/L	--	--	--	< 1	< 5	--	--
N-Nitrosodimethylamine	µg/L	--	--	--	< 5	< 25	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--	< 5	< 25	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	< 1	< 5	--	--
PAHs	µg/L	1.47	--	--	< 5	< 50	0.02	0.06
Acenaphthylene	µg/L	--	--	--	< 5	< 50	--	--
Anthracene	µg/L	--	--	--	< 0.02	< 5	--	--
Benzo(a)anthracene	µg/L	--	--	--	< 0.016	< 5	0.03	0.03
Benzo(a)pyrene	µg/L	--	--	--	< 0.013	< 5	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	< 0.017	< 5	--	--
Benzo(ghi)perylene	µg/L	--	--	--	< 0.02	< 5	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	< 0.008	< 5	--	--
Chrysene	µg/L	--	--	--	< 0.02	< 5	0.03	0.03
Dibenzo(a,h)anthracene	µg/L	--	--	--	< 0.02	< 5	--	--
Fluorene	µg/L	--	--	--	< 0.02	< 5	--	--
Indeno(1,2,3-c,d)pyrene	µg/L	--	--	--	< 0.017	< 5	--	--
Phenanthrene	µg/L	--	--	--	< 0.02	< 5	--	--
Pyrene	µg/L	--	--	--	< 0.02	< 5	0.02	0.02
PCBs	µg/L	0.003	--	--	< 0.1	< 0.3	--	--
AROCLOR 1242	µg/L	--	--	--	< 0.1	< 0.1	--	--
AROCLOR 1254	µg/L	--	--	--	< 0.05	< 0.05	--	--
AROCLOR 1016	µg/L	--	--	--	< 0.1	< 0.1	--	--
AROCLOR 1221	µg/L	--	--	--	< 0.1	< 0.3	--	--
AROCLOR 1232	µg/L	--	--	--	< 0.1	< 0.1	--	--
AROCLOR 1248	µg/L	--	--	--	< 0.1	< 0.1	--	--
AROCLOR 1260	µg/L	--	--	--	< 0.1	< 0.1	--	--
TCDD Equivalents	pg/L	0.65	--	--	< .61	< 9	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	< 0.5	< .5	--	--
Tetrachloroethylene	µg/L	--	--	--	< 0.5	< 0.5	0.5	7
Toxaphene	µg/L	0.035	--	--	< 0.5	< 0.5	--	--
Trichloroethylene	µg/L	--	--	--	< 0.5	< 0.5	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	< 0.5	< 0.5	--	--
2,4,6-Trichlorophenol	µg/L	49	--	--	< 10	< 50	--	--

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Parameters	units	Effluent Limitation in Order No. 97-090			Monitoring Data (From Nov. 2002 to Aug. 2005)			
		Average Monthly	Average Weekly	Max Daily	Minimum Nondetect	Maximum Nondetect	Minimum Detected	Maximum Detected
Vinyl chloride	µg/L	--	--	--	< 0.5	< 0.5	--	--
Additional Parameters								
Endrin aldehyde	µg/L	--	--	--	< 0.04	< 0.04	--	--
o-Dichlorobenzene	µg/L	--	--	--	< 0.5	< 0.5	0.3	3
m-Dichlorobenzene	µg/L	--	--	--	< 0.5	< 0.5	--	--
p-Dichlorobenzene	µg/L	--	--	--			2	3
1,1-Dichloroethane	µg/L	--	--	--	< 0.5	< 0.5	--	--
o-Xylene	µg/L	--	--	--	< 0.5	< 0.5	--	--
trans-1,2-Dichloroethylene	µg/L	--	--	--	< 0.5	< 0.5	--	--
Chloroethane	µg/L	--	--	--	< 0.5	< 0.5	--	--
2-Chloroethylvinylether	µg/L	--	--	--	< 0.5	< 0.5	--	--
1,2-Dichloropropane	µg/L	--	--	--	< 0.5	< 0.5	--	--
Freon 11 (CCL3F)	µg/L	--	--	--	< 0.5	< 1	--	--
1,2-Dibromoethane	µg/L	--	--	--	< 0.5	< 0.5	--	--
Styrene	µg/L	--	--	--	< 1	< 1	--	--
M+p-Xylene	µg/L	--	--	--	< 1	< 1	--	--
1,4-Dioxane	µg/L	--	--	--	< 10	< 50	17	17
Acenaphthene	µg/L	--	--	--	< 1	< 5	--	--
4-Bromophenyl phenylether	µg/L	--	--	--	< 5	< 25	--	--
Butylbenzyl phthalate	µg/L	--	--	--	< 5	< 50	--	--
2-Chloronaphthalene	µg/L	--	--	--	< 5	< 50	--	--
4-Chlorophenylphenylether	µg/L	--	--	--	< 5	< 25	--	--
2,6-Dinitrotoluene	µg/L	--	--	--	< 5	< 25	--	--
Di-n-octyl phthalate	µg/L	--	--	--	< 5	< 50	--	--
Naphthalene	µg/L	--	--	--	< 1	< 5	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	< 5	< 25	--	--

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D. Compliance Summary

Monitoring data from 1998 to 2004 indicate that the Discharger has consistently complied with the effluent limitations of Order No. 97-090 except for two exceedances of effluent daily maximum settleable solids limitation of 1.5 ml/L. On January 24, 2000, due to solids washout from the secondary treatment clarifier the final effluent settleable solids level exceeds the daily maximum with a value of 1.8 ml/L. On February 25, 2001, the final effluent settable solids level exceeds the daily maximum with a value of 2.2 ml/L because of extremely high flow through JWPCP caused by extended heavy rainfall.

In accordance with applicable permits, the Districts have reported a number of spills and/or overflows in the JOS service area over the years. In the last three fiscal years (2002-2003, 2003-2004, and 2004-2005), 43 spills were reported in all sewers maintained by the Districts, 25 of which were caused by high intensity rainfall in the area. The appropriate enforcement actions are being evaluated by the Regional Water Board.

<u>90-Day Bypass of Secondary Treatment in 2001:</u>

On April 1, 2001, JWPCP began bypassing secondary treatment to repair corrosion-damaged facilities. The bypass ended 71 days later on June 11, 2001. The Regional Water Board approved this bypass in Resolution No. 00-05 on April 13, 2000 according to the provision B23 of the Standard Provisions, and

40 CFR 122.41(m)(4)(I), on the basis of avoiding possible catastrophic impact resulting from the facilities' failure in the future. Pursuant to this Resolution, the Executive Officer was directed to not pursue enforcement actions against the Districts under the provisions of Order No. 97-090 but to pursue enforcement actions under the provisions of the Consent Decree.

During the bypass period, JWPCP provided enhanced advanced primary treatment to the wastewater with the application of additional amounts of ferric chloride and polymer and implemented operational adjustments to achieve the highest possible quality of effluent. However, despite the Districts efforts, the effluent discharged exceeded the interim limits for BOD, total suspended solids, settleable solids, oil and grease and acute toxicity in several occasions. On October 4, 2002, the Districts were issued an enforcement letter for the Consent Decree stipulated penalties for violations of interim limits contained in the Consent Decree during the bypass period.

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III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (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 of the CWC.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic water supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to the Pacific Ocean (Point Vicente Beach, Royal Palms Beach, and Whites 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)
Serial Nos. 001, 002, 003, and 004	Point Vicente Beach, Royal Palms Beach, and Whites Point Beach	Existing: 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). Potential: 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)	Existing: 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).
	Offshore Zone	Existing: 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).

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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. **Thermal Plan.** 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) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters.

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, and 2005. The State Water Board adopted the latest amendment on April 21. 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table 5. Ocean Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use(s)
Serial Nos. 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.

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

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

5. **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 (BOD), total suspended solids (TSS), and hydrogen ion concentration (pH). Restrictions on BOD, TSS and pH are specified in federal regulations as discussed in Finding F, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

6. **Antidegradation Policy.** Section 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 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with

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some exceptions in which limitations may be relaxed. Some effluent limitations in the 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.

8. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

R E V I S E D T E N T A T I V E

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

On July 25, 2003, USEPA approved the State's 2002 list of impaired waterbodies prepared pursuant to CWA 303(d). The 303(d) list identifies waterbodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality-limited waterbodies).

Santa Monica Bay (Offshore and Nearshore) is on the 303(d) list for the following pollutants/stressors, from point and non-point sources: chlordane (sediment), DDT (tissue & sediment, centered on Palos Verdes Shelf), polycyclic aromatic hydrocarbons (sediment), PCBs (tissue & sediment), debris, sediment toxicity, and fish consumption advisory. The 303(d) list also includes the Pacific Ocean shoreline (Point Vicente Beach, Royal Palms Beach, and Whites Point Beach) within the Palos Verdes Hydrologic Subarea as impaired for beach closures. Both DDT (Fish consumption advisory for DDT) and PCBs (Fish consumption advisory for PCBs) are also listed as impairments for Royal Palms Beach, and Whites Point Beach. TMDLs for DDT, PCBs and PAHs have not been scheduled. A TMDL for chlordane is scheduled for 2006.

E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations.** Section 133 of 40 CFR establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more strigent 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. **Pretreatment.** Discharges of pollutants that may interfere with operations of a POTW are regulated by USEPA's pretreatment regulations at 40 CFR 403. These regulations require Dischargers to develop and implement pretreatment programs that impose limitations on industrial users of the POTW.

4. **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 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 water quality and kelp bed monitoring programs in the Southern California Bight.

5. **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 Districts, as the owner of JWPCP, are 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.

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IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges 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 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 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, three options exist to protect water quality: 1) 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

A. Discharge Prohibitions

The Order authorizes the discharge of secondary treated wastewater through Discharge Serial Nos. 001 through 004. It does not authorize discharges through Discharge Serial Nos. 005 , 007-012, and 014-015. Discharge prohibitions in this Order are based on the requirements in Section III.H of the Ocean Plan (2001).

B. Technology-Based Effluent Limitations

1. Scope and Authority

Regulations promulgated in 40 CFR Section 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in Section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

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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 (BOD_5), 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 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		

Table A of the Ocean Plan (2001) 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 (2001)

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. 97-090 for BOD_5, TSS, oil and grease, settleable solids, pH, and turbidity are retained by this Order with minor modifications for settleable solids and turbidity as described below. Limitations for BOD_5, TSS, and pH are based on secondary treatment standards established by the USEPA at 40 CFR 133. The limitations for turbidity are based on limitations established by the 2001 Ocean Plan. To be consistent with the 2001 Ocean Plan, maximum daily limitation for turbidity (225 NTU) in Order No. 97-090 has been changed to instantaneous maximum limitation in this Order. Since the final limitation for settleable solids and the interim limit for oil and grease in Order No. 97-090 are more stringent than those established by the 2001 Ocean Plan, these existing limitations are carried over to this Order (Antibacksliding policy). In addition, instantaneous maximum limits 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 2001 Ocean Plan. Given the fact that monitoring data for oil and grease for the blended effluent (primary effluent plus secondary effluent) consistently met the oil and grease interim limitations and JWPCP has been upgraded to full secondary treatment since January 2003, the carryover of the oil and grease interim limitations can be well justified. All technology-based effluent limitations are not dependent upon the dilution ratio for the discharge outfall. The following Table summarizes the technology-based effluent limitations for the discharge from the Facility:

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Table 8. Summary of Technology-based Effluent Limitations (Discharge Serial Nos. 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%
O&G	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

As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and the establishment of WQBELs when necessary are intended to protect the designated uses of the receiving water, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and the 2001 Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and the Ocean Plan (2001) 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 (2001) also 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 that was amended by Resolution No. 01-018. These water quality objective from the Ocean Plan with consideration of the bacteria objective in 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.

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3. **Expression of WQBELs**

Pursuant to 40 CFR 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 (AMEL and AWEL). 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)(1), 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 2001 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. However, in the existing permit (Order No. 97-090), the calculated effluent limitations based on 6-month median objectives for the marine aquatic life toxicants in the 1990 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 2001 Ocean Plan as monthly average limitations. In addition, the weekly average and daily maximum limitations in the existing permit are respectively based on daily maximum and instantaneous maximum water quality objectives for marine aquatic life toxicants in Table B of the 1990 Ocean Plan. To be consistent with the Ocean Plan, daily maximum and instantaneous maximum limitations are prescribed but no weekly average limitations are included in this Order.

4. **Determining the Need for WQBELs**

Order No. 97-090 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 2001 Ocean Plan was reevaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in the Ocean Plan Amendment adopted by the State Water Board on April 21, 2005. This statistical RPA method 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 insufficient number of monitoring data or have 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 Districts 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 and Best Professional Judgement (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:
(see Appendices 1, 2, and 3)

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Discharge Serial Nos. 001 and 002

Chlorine residual, acute toxicity, chronic toxicity, aldrin, benzidine, chlordane, DDT, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene.

Discharge Serial No. 003

Chlorine residual, chronic toxicity, aldrin, benzidine, chlordane, DDT, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene.

Discharge Serial No. 004

Chlorine residual, chronic toxicity, aldrin, benzidine, chlordane, DDT, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, PCBs, TCDD equivalents, toxaphene, and 2,4,6-trichlorophenol.

Additional analysis for chlorine residual: Wastewater disinfection with chlorine usually produces a 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 the observed maximum daily detected effluent concentration for chlorine residual is higher than the daily maximum water quality objective for chlorine residual during the reporting period.

Additional analysis for DDT: The receiving waters in the Palos Verdes Peninsula watershed were impacted by elevated concentration of the now-banned 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 and was thus conveyed to JWPCP. DDT was ultimately discharged to the ocean through the Whites Point Outfalls. It is estimated that approximately 1800 tons of DDT were discharged between the late 1950s and the early 1970s. Since DDT is highly persistent in the environment and readily attaches to soil particles, high levels of DDT continue to threaten the Palos Verdes Shelf marine environment. The 2002 Palos Verdes Ocean Monitoring Annual Report prepared by the Discharger indicated that DDT concentration in the sediment adjacent to the Outfall was detected as high as 26,000 ug/kg and DDT concentration in the fish tissue (White Croaker muscle) at near-Outfall reached as high as 33.7 mg/kg. Due to the bioaccumulative effect of DDT through the food chain, bottom-feeding fish in the contaminated areas are particularly at risk for high DDT levels. Since 1985, fish consumption advisories and health warning have been posted in

the southern California for the consumption of bottom-feeding fish such as White Croaker from the contaminated areas. Although DDT has not been detected (MDL = 0.01 ug/L) in the JWPCP effluent since November 2002, based on recent sediment and fish tissue data for DDT mentioned above, Regional Water Board staff continue to prescribe mass emission and concentration WQBELs for DDT in this Order based upon BPJ.

For constituents that have been determined to have no reasonable potential to cause, or contribute to, or deviate from water quality objectives, numerical effluent limitations are not prescribed. Instead, a narrative limit statement to comply with all Ocean Plan objectives requirements is provided. The Discharger is required to monitor for these constituents as stated in the MRP (Attachment E) to gather data for use in reasonable potential analyses for future permit renewals and/or updates.

This Facility began full secondary treatment on November 8, 2002. Effluent data of toxic pollutants provided by the Discharger from November 2002 to August 2005 were used in the analyses. Minimum probable initial dilution ratios of 166:1 for Discharge Serial No. 001 and 002, 150:1 for Discharge Serial No. 003, and 115:1 for Discharge Serial No. 004 were considered in this evaluation.

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5. **WQBEL Calculations**

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

Ce=Co+Dm(Co-Cs)

where

Ce = the effluent limitation (µg/L)
Co = the water quality objective to be met at the completion of initial dilution (µg/L)
Cs = background seawater concentration (µg/L) (see Table below)
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

The Dm 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 Order No. 97-090, staff of the State Water Board had determined the minimum probable initial dilution for Discharge Serial Nos. 001 and 002 to be 166 to 1. In the existing permit, same dilution ratio of 166:1 has also been applied to Discharge Serial Nos. 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 Serial Nos. 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 Serial Nos. 003 and 004 to be 115 to 1. On December 8, 2005, due to the mistakes in the depth of the port on Discharge Serial No. 003 in the previous dilution report, the Discharger submitted an 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 Serial No. 003. Regional Water Board staff reviewed the calculations and approved this new dilution ratio (150:1) for Discharge Serial No. 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, 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, **Ce=Co+Dm(Co-Cs)**, effluent limitations are calculated as follows before rounding to two significant digits. All calculations are based on discharge through Discharge Serial Nos. 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)

Ce = 3 + 166 (3-2) = 169 µg/L (prescribed as Monthly Average, see Section 3 above)
Ce = 12 + 166 (12-2) = 1,672 µg/L (Daily Maximum)
Ce = 30 + 166 (30-2) = 4,678 µg/L (Instantaneous Maximum)

Chronic Toxicity

Ce = 1 + 166 (1-0) = 167 TUc (Daily Maximum)

Chlorine Residual

Ce = 2 + 166 (2-0) = 334 µg/L (prescribed as Monthly Average, see Section 3 above)
Ce = 8 + 166 (8-0) = 1,336 µg/L (Daily Maximum)
Ce = 60 + 166 (60-0) = 10,020 µg/L (Instantaneous Maximum)

Based on the implementing procedures described above, effluent limitations have been calculated for all Table B pollutants (excluding acute toxicity and radioactivity) from the Ocean Plan and incorporated into this Order. (see Appendices 1, 2, and 3)

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Because of the Reasonable Potential Analysis, many WQBELs established by Order No. 97-090 are not retained in this Order. The WQBELs that are retained have been changed to reflect the changes in water quality objectives in the 2001 Ocean Plan as compared with those in the 1990 Ocean Plan and reflect the revised dilution ratios for Discharge Serial Nos. 003 and 004, respectively.

Determination of radioactivity limitation: Since the descriptive water quality objective for radioactivity in the 2001 California Ocean Plan fails to establish an applicable narrative or numerical effluent limit for radionuclides, Regional Water Board staff used BPJ to establish radioactivity limitations for the effluent using Maximum Contaminant Levels (MCLs) for the drinking water specified in Title 22, California Code of Regulations because it is the only scientifically-based regulatory criteria available.

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6. **Whole Effluent Toxicity (WET)**

The existing permit includes technology based effluent limits for acute toxicity and freshwater acute toxicity testing requirements specified in the 1990 Ocean Plan. In 2001, the Ocean Plan was revised to include a new daily maximum acute toxicity water quality objective of 0.3 TUa, implementation procedures for developing water quality based effluent limits for acute toxicity, and acute toxicity testing protocols using marine species, rather than freshwater species. Currently, JWPCP has no acute toxicity data reported on marine species available for conducting the RPA. The 2001 Ocean Plan specifies that the Discharger must conduct chronic toxicity testing for ocean water discharges with dilution ratios ranging from 100:1 to 350:1. It also allow the Regional Water Board to require acute toxicity testing to be conducted by that discharger. 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.

Because 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 high ammonia concentration and is consistently chlorinated before discharge. Both ammonia and chlorine are very toxic to aquatic organisms. The Regional Water Board has determined that the JWPCP discharge has reasonable potential to exceed the current Ocean Plan objective for acute toxicity. Furthermore, because numeric limits for certain toxic constituents that did not show RA have been removed, the acute toxicity limit provides a backstop to preventing the discharge of toxic pollutants in toxic amounts. Therefore, this Order proposes daily maximum acute toxicity effluent limits and testing protocols consistent with the 2001 Ocean Plan for Discharge Serial Nos. 001 and 002, primary discharge outfalls. Using the new 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 limits are calculated as follows:

$$Ce = Ca + (0.1)\ Dm\ (Ca)$$

where
Ce = the effluent daily maximum limit for acute toxicity.
Ca = the concentration (water quality objective) to be met at the edge of the acute mixing zone.
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (166:1 for Discharge Serial Nos. 001 and 002).

<u>Acute Toxicity Limit for Discharge at Discharge Serial Nos. 001 and 002</u>

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

D. Final Effluent Limitations

The following table lists the effluent limitations established by this Order. Effluent limitations were determined according to the standards and equations provided in the Ocean Plan (2001). The mass emission limitations established for Discharge Serial Nos. 001 and 002 have been derived based on the average design flow of 385 mgd in the 1997 JWPCP permit.

1. **Discharge Serial Nos. 001 and 002**
   (Primary discharge outfalls)
   (Initial dilution = 166:1)

Table 11. Summary of Final Effluent Limitations for Discharge Serial Nos. 001 and 002

Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
BOD_5	mg/L	30	45	--	--
	lbs/day	96,300	144,500	--	--
	% removal	85 %			
TSS	mg/L	30	45	--	--
	lbs/day	96,300	144,500	--	--
	% removal	85 %			
Oil and grease	mg/L	15	22.5	45	75
	lbs/day	48,200	72,200	144,500	--
Settleable solids	ml/L	0.5	0.75	1.5	3.0
Turbidity	NTU	75	100	--	225
PH	pH unit	6.0 to 9.0			
Chlorine residual	µg/L	330	--	1,300	10,000
	lbs/day	1,060	--	4,170	--
Acute toxicity	TUa	--	--	5.3	--
Chronic toxicity	TUc	--	--	167	--
Radioactivity					
Gross alpha	PCi/L	--	--	15	--
Gross beta	PCi/L	--	--	50	--
Combined Radium-226 & Radium-228	PCi/L	--	--	5.0	-
Tritium	PCi/L	--	--	20,000	--
Strontium-90	PCi/L	--	--	8.0	--
Uranium	PCi/L	--	--	20	--
Aldrin	µg/L	0.0037	--	--	--
	lbs/day	0.012	--	--	--

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Discharge Serial Nos. 001 and 002

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Benzidine	µg/L	0.012	--	--	--
	lbs/day	0.039	--	--	--
Chlordane	µg/L	0.0038	--	--	--
	lbs/day	0.012	--	--	--
DDT	µg/L	0.028	--	--	--
	lbs/day	0.090	--	--	--
Dieldrin	µg/L	0.0067	--	--	--
	lbs/day	0.022	--	--	--
Heptachlor	µg/L	0.0084	--	--	--
	lbs/day	0.027	--	--	--
Heptachlor epoxide	µg/L	0.0033	--	--	--
	lbs/day	0.011	--	--	--
Hexachlorobenzene	µg/L	0.035	--	--	--
	lbs/day	0.11	--	--	--
PCBs	µg/L	0.0032	--	--	--
	lbs/day	0.010	--	--	--
TCDD equivalents	pg/L	0.65	--	--	--
	lbs/day	2.1×10^{-6}	--	--	--
Toxaphene	µg/L	0.035	--	--	--
	lbs/day	0.11	--	--	--

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2. **Discharge Serial No. 003**
(Only used for hydraulic relief during times of heavy rains or unusual high flow)
(Initial dilution = 150:1)

Table 12. Summary of Final Effluent Limitations for Discharge Serial No. 003

Discharge Serial No. 003

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
BOD_5	mg/L	30	45	--	--
	% removal	85 %			
TSS	mg/L	30	45	--	--
	% removal	85 %			
Oil and grease	mg/L	25	40	--	75
Settleable solids	ml/L	0.5	0.75	1.5	3.0
Turbidity	NTU	75	100	--	225
PH	pH unit	6.0 to 9.0			
Chlorine residual	µg/L	300		1200	9,100

Discharge Serial No. 003

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Chronic toxicity	TUc	--	--	151	--
Radioactivity					
Gross alpha	PCi/L	--	--	15	--
Gross beta	PCi/L	--	--	50	--
Combined Radium-226 & Radium-228	PCi/L	--	--	5.0	-
Tritium	PCi/L	--	--	20,000	--
Strontium-90	PCi/L	--	--	8.0	--
Uranium	PCi/L	--	--	20	--
Aldrin	µg/L	0.0033	--	--	--
Benzidine	µg/L	0.010	--	--	--
Chlordane	µg/L	0.0034	--	--	--
DDT	µg/L	0.026	--	--	--
Dieldrin	µg/L	0.0060	--	--	--
Heptachlor	µg/L	0.0076	--	--	--
Heptachlor epoxide	µg/L	0.0030	--	--	--
Hexachlorobenzene	µg/L	0.032	--	--	--
PCBs	µg/L	0.0029	--	--	--
TCDD equivalents	pg/L	0.59	--	--	--
Toxaphene	µg/L	0.032	--	--	--

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3. **Discharge Serial No. 004**
(Only used for hydraulic relief during times of heavy rains or unusual high flow)
(Initial dilution = 115:1)

Table 13. Summary of Final Effluent Limitations for Discharge Serial No. 004

Discharge Serial No. 004

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
BOD_5	mg/L	30	45	--	--
	% removal	85 %			
TSS	mg/L	30	45	--	--
	% removal	85 %			

Discharge Serial No. 004

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Oil and grease	mg/L	25	40	--	75
Settleable solids	ml/L	0.5	0.75	1.5	3.0
Turbidity	NTU	75	100	--	225
PH	pH unit	6.0 to 9.0			
Chlorine residual	µg/L	230		930	7,000
Chronic toxicity	TUc	--	--	116	--
Radioactivity					
Gross alpha	PCi/L	--	--	15	--
Gross beta	PCi/L	--	--	50	--
Combined Radium-226 & Radium-228	PCi/L	--	--	5.0	-
Tritium	PCi/L	--	--	20,000	--
Strontium-90	PCi/L	--	--	8.0	--
Uranium	PCi/L	--	--	20	--
Aldrin	µg/L	0.0026	--	--	--
Benzidine	µg/L	0.008	--	--	--
Chlordane	µg/L	0.0027	--	--	--
DDT	µg/L	0.020	--	--	--
Dieldrin	µg/L	0.0046	--	--	--
Heptachlor	µg/L	0.0058	--	--	--
Heptachlor epoxide	µg/L	0.0023	--	--	--
Hexachlorobenzene	µg/L	0.024	--	--	--
PCBs	µg/L	0.0022	--	--	--
TCDD equivalents	pg/L	0.45	--	--	--
Toxaphene	µg/L	0.024	--	--	--
2,4,6-Trichlorophenol	µg/L	34	--	--	--

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E. Performance Goals

Chapter III, Section F.2, of the 2001 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 November 2002 through August 2005 performance data (after complete mixing) using the RPA protocol contained in the 2005 Ocean Plan Amendment. Effluent data are assumed lognormally distributed. Performance goals are calculated according to the equation $C_{PG} = Co+Dm(Co-Cs)$ in the Ocean Plan and by setting $Co=UCB_{95/95}$. 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 Serial Nos. 001 and 002 is calculated as follows:

   <u>Arsenic</u>

   $Co = UCB_{95/95} = 2.9942$; $Dm = 166$; $Cs = 3$
   C_{PG} = Performance Goal = 2.994 + 166(2.9942-3) = 2.0314 µg/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 reporting limit (RL) reported in

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the 2004 Annual Report for JWPCP. However, if the maximum detected effluent concentration is less than the calculated value based on RL, the maximum detected effluent concentration is used as the performance goal.

3. For constituents with no RP, if the performance goal derived from above steps exceeds the respective calculated Ocean Plan effluent limit, the calculated effluent limit is then prescribed as the performance goal for that constituent.

The performance goals for Discharge Serial Nos. 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 persists in three successive monitoring periods, 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. For chromium (VI), chlorinated phenols, acrylonitrile, bis(2-chloroethyl) ether, n-nitrosodi-n-propylamine, and 2,4,6-trichlorophenol, since performance goals are set to calculated effluent limitations, any single exceedance of these performance goals in any monitoring period shall be reported to the Regional Board.

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F. Antidegradation

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 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 with antidegradation policies and antibacksliding provisions.

G. 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 Serial Nos. 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 flow of 338 MGD (Q). If more than 80 percent of effluent data were nondetect, the pollutant concentration (Ce) 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 (Ce) 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:

$$MT/yr = (Ce\ ug/l)\ (Q\ 10^6\ gal/day)\ (3.785\ l/gal)\ (365\ days/yr)\ (I\ MT/10^{12}\ ug)$$

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

Section 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 existing Order. The changes in monitoring frequency are summarized in the following Table.

Table 14. Influent Monitoring Programs Comparison Table

Influent Monitoring Program for JWPCP

Parameter	Monitoring Frequency (1997 Permit)	Monitoring Frequency (2006 Permit)
Nitrate nitrogen	**monthly**	**quarterly**
Nitrite nitrogen	**monthly**	**quarterly**
Organic nitrogen	**monthly**	**quarterly**
Total phosphorus (as P)	**monthly**	**quarterly**
Phenolic compounds (chlorinated)	**monthly**	**quarterly**
Phenolic compounds (non-chlorinated)	**monthly**	**quarterly**
N-Nitrosodi-n-propylamine	--	**quarterly**
Methyl-tert-butyl-ether	**--**	**quarterly**

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To be consistent with the effluent monitoring program, changes have been made in the influent monitoring program. Justifications for changes are discussed in the effluent monitoring section below.

B. Effluent Monitoring

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.

The effluent monitoring in this Order follows the effluent monitoring requirements in the existing Order. The changes in monitoring frequency for primary outfalls, Dicharge Serial Nos. 001 and 002, are summarized in the following table.

Table 15. Effluent Monitoring Programs Comparison Table

Effluent Monitoring Program for Discharge Serial Nos. 001 and 002

Parameter	Monitoring Frequency (1997 Permit)	Monitoring Frequency (2006 Permit)
Settleable solids	**Once every 8 hrs**	**daily**
TOC	**weekly**	**monthly**
Nitrate nitrogen	**monthly**	**quarterly**
Nitrite nitrogen	**monthly**	**quarterly**
Organic nitrogen	**monthly**	**quarterly**
PCBs congeners	**--**	**annually**
Phenolic compounds (chlorinated)	**monthly**	**quarterly**
Phenolic compounds (non-chlorinated)	**monthly**	**quarterly**
N-Nitrosodi-n-propylamine	**--**	**quarterly**
Methyl-tert-butyl-ether	**--**	**quarterly**

Discharge Serial Nos. 001 and 002: Because JWPCP has been operating in full secondary treatment mode since January 2003, monitoring frequencies for some nonconventional pollutants are reduced. The reduction of monitoring frequency to quarterly for phenolic compounds is based on consistent non-detected data reported for these compounds since January 2003, leading to no reasonable potential to exceed respective Ocean Plan objectives. N-nitrosodi-n-propylamine is a new toxic pollutant specified in the 2001 Ocean Plan. Methyl-tert-butyl-ether is currently a pollutant of concern. Therefore, this Order requires quarterly monitoring for both pollutants. To facilitate interpretation of sediment/fish tissue data and TMDL development, PCB congeners are required to be analyzed annually in this Order.

This Order prescribes both acute and chronic toxicity limits for the discharge, thus it requires monitoring for both acute and chronic toxicity.

Discharge Serial Nos. 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 Serial Nos. 001 and 002. Since the discharge through these two

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outfalls is expected to be short duration and the minimum dilution factors for these two outfalls fall within 100:1 to 350:1, only the chronic toxicity testing is required for these two outfalls.

C. Whole Effluent Toxicity Testing Requirements

Acute Toxicity. As required in the Ocean Plan (2001), the acute toxicity testing is using an USEPA approved protocol. Acute toxicity monitoring requirements in this Order use marine test species instead of freshwater species. Acute toxicity monitoring requirements are described in detail in section V.A of the MRP (Attachment E). In brief, the Discharger shall conduct 96-hour static renewal acute toxicity tests on flow-weighted 24-hour composite effluent samples. 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. 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. After the screening period, monitoring shall be conducted monthly using the most sensitive marine species.

Chronic Toxicity. The Ocean Plan (2001) requires the use critical life stage toxicity tests specified in Appendix III of the Ocean Plan to measure chronic toxicity. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results. Chronic toxicity testing requirements defined in Section V.B of the MRP (Attachment E) are specified on the basis of these Ocean Plan requirements.

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D. Receiving Water Monitoring

The conceptual framework for the receiving water 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. 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 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 Los Angeles County Sanitation Districts 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 (For example, endocrine disruptors and their effect on fish populations) to the Regional Water Board by December 15, 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 by the Discharger 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.

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The receiving water monitoring program contains the following components:

1. Shoreline/Inshore Microbiological monitoring: Shoreline monitoring is designed to address the question: Are densities of bacteria in water contact zones below those that ensure public safety? Inshore monitoring addresses the question: Are Ocean Plan compliance standards for bacteriological contamination being met.

2. Nearshore/Offshore Water Quality monitoring: This monitoring addresses the question: Are Ocean Plan limits for dissolved oxygen and pH being met. This monitoring also contributes to a regional understanding of seasonal patterns in nearshore water column structure.

3. 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?

4. 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: 1) Is fish tissue contamination in the vicinity of the outfall changing over time?, 2) Where seafood consumption advisories exist locally, do tissue concentrations of contaminants continue to exceed the Advisory Tissue Concentration?, and 3) What are the tissue contaminant trends relative to the Advisory Tissue Concentration in other species not currently subject to local consumption advisories? A 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?

5. 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?

E. Other Monitoring Requirements

1. Outfall and Diffuser Inspection

This survey answers the question: Are the outfall structures in serviceable condition ensuring their continued safe operation? The data collected will be used for a periodic assessment of the integrity of the outfall pipes and ballasting system.

2. Sludge Monitoring and Reporting

Pursuant to 40 CFR 257, 258, 501, and 503, including all applicable monitoring, record keeping, and reporting requirements, the Discharger must comply with the monitoring and reporting requirements outlined in Attachment I in this Order, [Biosolids/Sludge Management].

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VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 CFR 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

Title 40 CFR Section122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with Section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

This Order may be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR 122, 124, and 125.

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 Facility's increasing hydraulic capacity and growth in the service area.

b. Toxicity Reduction Requirements

If the discharge consistently exceed an effluent limitation for toxicity, the Discharger needs to conduct TIE/TRE detailed in Section V of the MRP (Attachment E). The TRE will help the Discharger identify the possible source(s) of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps to reduce toxicity to the required level.

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 Contingency Plan (SCP)

Since spill or overflow is a common event in the treatment plant service areas, this Order requires the Discharger to review and update, if necessary, SCP after each incident. The Discharger shall ensure that the up-to-date SPC 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)

Pursuant to the Ocean Plan, this Order specifies requirements for development and implementation of a PMP.

4. **Construction, Operation, and Maintenance Specifications**

These provisions ensure the Discharger at all times to properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

5. **Special Provisions for Municipal Facilities**

a. Biosolids Requirements

To implement CWA Section 405(d), on February 19, 1993, USEPA promulgated 40 CFR 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Discharger is also responsible for compliance with WDRs and NPDES permits for the generation, transport and application of biosolids issued by the State Board, other Regional Water Boards, Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the JWPCP biosolids will be

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transported and applied. Attachment I of this Order contains Biosolids/sludge Management requirements that comply with the required regulations.

b. Pretreatment Requirements

This permit contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This permit contains requirements for the implementation of an effective pretreatment program pursuant to Section 307 of the CWA; 40 CFR 35 and 403; and/or Section 2233, Title 23, California Code of Regulations. There are more than 2,800 industrial users in its service areas. Over 1,200 are significant industrial users.

c. Spill Reporting Requirements

This Order established a reporting protocol for how different types of spills, overflow or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

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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 LA Times on February 16, 2006 and by letter mailed to interested parties on February 3, 2006.

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 following address:

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

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 March 9, 2006.

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: April 6, 2006
Time: 9:00 am
Location:
The Department of Water and Power, Board Room 1555A
111 North Hope 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.

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D. Waste Discharge Requirements Petitions

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

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Attn: Elizabeth Miller Jennings, Senior Staff Counsel

E. Information and Copying

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

F. Register of Interested Persons

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

G. Additional Information

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